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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 the Phonology of Xiāng Dialects

by

HUANG, Hongjiang

B.Econ&Fin. *H.K.*

A dissertation

submitted in partial fulfillment of the requirements

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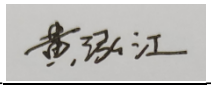
Declaration

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: 

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 Hoye 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 N ńgxiāng 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	Ānhuà Dōngpíng 安化東坪 (Xu, 2004)
AH(MC)	Ānhuà Méichéng 安化梅城 (Bao, 2006; He, 2010)
AH(JP)	Ānhuà Jièpái 安化界牌 (Lei, 2007)
AR	Ānrén Héshì 安仁禾市 (Chen, 1995)
CCX	Common Central Xiāng (Coblin, 2011)
CD	Chángdé City 常德 (Zheng, 1999)
CDC	Common Dialectal Chinese (Norman, 2006)
CG	Common Gàn (Coblin, 2015)
CN	Chángníng 常寧 (Wu, 1998)
CN(XL)	Chángníng Xīlù 常寧西路 (Yin, 2008)
CMX	Common Xiāng
CS	Chángshā City 長沙 (Hunansheng difangzhi bianzuan weiyuanhui, 2001)
CS_2	Chángshā Old 長沙老派 (Bao et al., 1999)
CS(LD)	Chángshā Luódài 長沙羅代 (Tang, 2017)
CX	Chénxī 辰溪 (Xie, 2010)
DK	Dòngkǒu Shíjiāng 洞口石江 (Wang, 2008)
DY	Dàyōng 大庸 (Hunansheng difangzhi bianzuan weiyuanhui, 2001)
GY	Guànyáng 灌陽 (Liu, 2002)
HD	Héngdōng Dàpǔ 衡東大浦 (Deng, 2012)
HS	Héngshān 衡山 (Peng, 1999)
HT	Huìtóng Ruòshǔi 會同若水 (Hu, 2006)
HY	Héngyáng City 衡陽 (Hunansheng difangzhi bianzuan weiyuanhui, 2001; Li, 1986)
JS	Jíshǒu 吉首 (Li, 2002)
LD	Lóudǐ Lǎochéng (Lóudǐ Proper) 婁底老城 (Liu, 2001)
LD(JL)	Lóudǐ Jiāolóng 婁底蛟龍 (Chen, 2006)

LD(WB)	Lóudǐ Wànbǎo 婁底萬寶 (Yu et al., 2021)
LH	Lónghúi Táohóng 隆回桃洪 (Zhang, 2005)
LP	Lípíng 黎平 (Xiong, 2014)
LX	Lúxī Xīnglóngchǎng 瀘溪興隆場 (Yin, 2007)
LY	Liányuán Qiáotóuhé 漣源橋頭河 (Chen, 1999)
MC	Middle Chinese
ML(CL)	Mìluó Chánglè 汨羅長樂 (Chen, 2006)
ML(DJ)	Mìluó Dàjīng 汨羅大荊 (Liu, 2011)
NX	Níngxiāng Huángcái 寧鄉黃材 (Deng, 2008)
PJ	Píngjiāng Cénchuān 平江岑川 (Yi, 2020)
PX	Píngxiāng City 萍鄉 (Li & Wei, 1998)
QY	Qíyáng 祁陽 (Hunansheng difangzhi bianzuan weiyuanhui, 2001; Li, 1998)
QYS	Qièyùn System 切韻音系 (Pulleyblank, 1984)
QZ	Quánzhōu 全州 (Zhu, 2011)
SF	Shuāngfēng 雙峰 (Chen, 2006)
SF_2	Shuāngfēng 雙峰 (Hunansheng gong'anting, 1993)
SF_3	Shuāngfēng 雙峰 (Beijing daxue, 2003)
SF(HS)	Shuāngfēng Hóngshāndiàn 雙峰洪山殿 (Zhu, 2010)
SF(HY)	Shuāngfēng Héyè 雙峰荷葉 (Bao, 2006)
SF(GT)	Shuāngfēng Gāntáng 雙峰甘棠 (Xu, 2006; Zhu, 2011)
SF(ZM)	Shuāngfēng Zǐménqiáo 雙峰梓門橋 (Bao, 2006)
SS	Sháoshān Rúyì 韶山如意 (Xiang, 2010)
SS(DP)	Sháoshān Dàpíng 韶山大坪 (Wang, 2017)
SY	Shàoyáng City 邵陽 (Hunansheng difangzhi bianzuan weiyuanhui, 2001; Chu, 1998)
SY(CL)	Shàoyáng Chánglè 邵陽長樂 (Yuan, 2003)
TJ	Táojiāng Gāoqiáo 桃江高橋 (Zhang et al., 1988)
WG	Wǔgāng 武岡 (Hunansheng difangzhi bianzuan weiyuanhui, 2001)
XA	Xián'ān District 咸安區 (Wang, 2015)

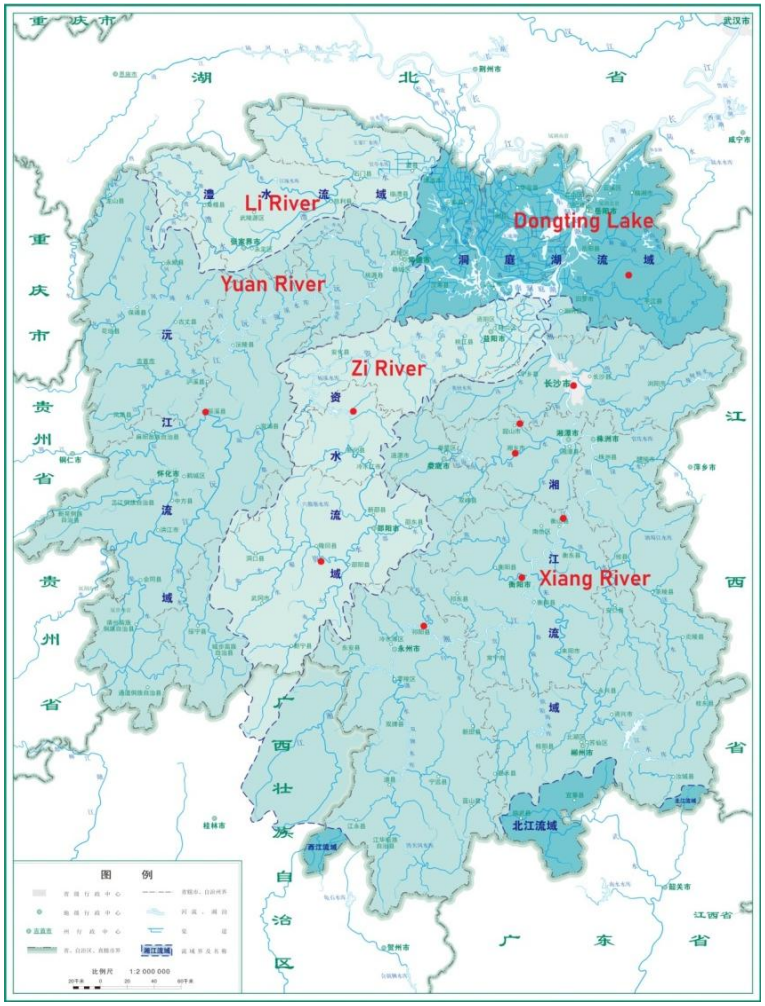
XH	Xīnhu à 新化 (Luo, 1998)
XH(BX)	Xīnhu àB áixī 新化白溪 (Liu, 2003)
XN	Xīnn íng Jīnsh í 新寧金石 (Ouyang, 2008)
XP	X ùpǔ 溆浦 (He, 1999)
XX	Xiāngxiāng 湘鄉 (Hunan difangzhi bianzuan weiyuanhui, 2001)
XX(QZ)	Xiāngxiāng Q ízǐ 湘鄉棋梓 (L. Li, 2007)
YJ	Yu ánjiāng 沅江 (Peng, 2006)
YeY	Yu èy áng City 岳陽 (Yueyangshi difangzhi bangongshi, 2002)
YeY(BX)	Yu èy áng Bǎixi áng 岳陽柏祥 (D. Li, 2007)
YeY(RJ)	Yu èy áng R óngjiāwān 岳陽榮家灣 (Bao, 2006)
YiY	Y ìy áng 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 Húnán (湖南) Province and in a small corner of the adjacent province of Guǎngxī (廣西) (General editors, 1987). The province of Húnán 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 Húnán

The topography of Húnán Province is tilted towards its northeast. It is bounded by the Mùfù Mountain (幕阜山) ranges to its east, the Nánlǐng Mountain (南嶺) ranges to its south, and the Wǔlíng Mountains (武陵山) and the Yúngùi 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 Guìzhōu (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 Hàn 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 Tǔhuà (土話) dialects that are difficult to classify within the Sinitic family (Wang, 2001). Beyond these Tǔhuà 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 Yuán River basin (Chen, 2006). There are also a few cities around Lake Dòngtíng that have been described as Xiāng-speaking, such as Yuánjiāng (沅江) and Mìluó (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 Húnán 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 Húnán 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 Chángshā. 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 zhuó 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* (湘方言調査報告, lit. an investigation report of dialets 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 Tǔhuà (such as Língling Càjiāpù 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 Huìtóng (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 gong'anting (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 layed 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 píng (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→ʊ', 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 Gàn. 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 affirmes 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 Xièshè(蟹攝), Jiǎshè(假攝), and Guǒshè(果攝) follow a pattern of [a], [o], and [ʊ] in sequence respectively (蟹、假、果攝主要元音形成[a]、[o]、[ʊ]序列). The fourth and last indicator is having five to seven tones, with MC *Qùshēng (去聲) separated into yīnqù(陰去) and yángqù(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 critieria. 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 *Rù (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 Qiáotóuhé) has undergone opposite evolutions against the dialect (Lóudǐ) 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 inidicator 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 it 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 yángrù 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 Gàn, 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 Gàn, 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 ɚ- and one syllabic nasal ṇ. 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 Shàoyáng 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 Qíyáng 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	tiɑ̃	tiɑ̃	tiɑ̃	tẽ	ʧiu	ʧõ	ʧẽ
SY(CL)	tiəu	tiã	tiã	tiã	-	tɕiəu	tʂã	tʂeŋ
QY	tiu	tiaŋ	-	tiaŋ	-	tɕiu	tɕiaŋ	tɕin
HY	-	-	-	-	tin	tɕiu	tɕian	tɕin
QYS	*truwk	*triɑŋ^{ʔ}	*triɑŋ^{ʔ}	*triɑŋ^{h}	*trim	*tɕuwk	*tɕiɑŋ^{ʔ}	*tɕin

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, Qíyáng and Héngyáng (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 Qíyáng and Héngyáng 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 comparitive 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, Báixī (白溪) dialect of Xīnhuà described by Liu (2003) is one of the noticeable counterexamples within a continuum of central Xiāng. Most of the *Yángrù syllables in Báixī's popular layer do not change together with *Yīnqù tone as expected.

Xīnhuà Báixī dialect has five tonemes: a yīnpíng (陰平), a yángpíng (陽平), a shǎngshēng (上聲), a qùshēng (去聲), and a rùshēng (入聲). There is not a specific yīnqù (陰去) because it lacks a contrastive yángqù (陽去). Interestingly, the MC *Yángrù (陽入) syllables about which Coblin cares the most have overwhelmingly stayed in the rùshēng (入聲) tone. Out of the recorded 118 *Yángrù (陽入) syllables with voiced obstruent initials, only 10 are in the qùshēng (去聲) category, with only one character 秩 bearing an aspirated affricate. For those syllables in rùshēng (入聲), many actually bear contrastive voiced initials.

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

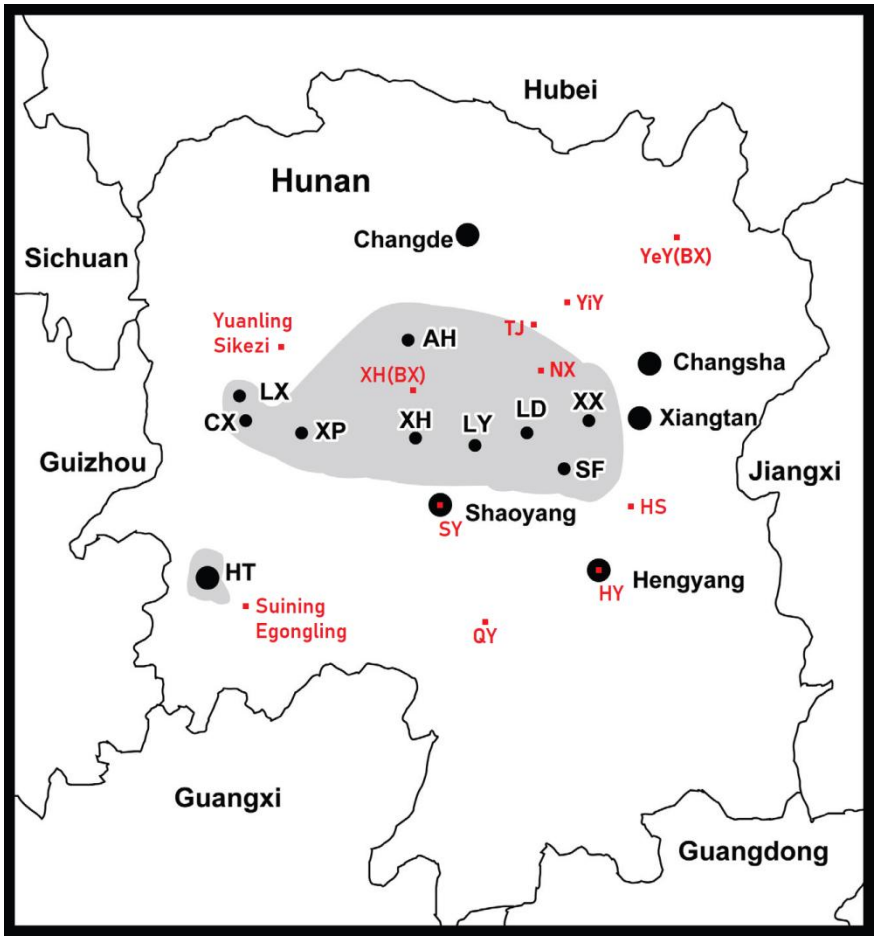
	拔	怕	霸	毒	兔	妒	鶴	貨
XH(BX)	$b^ha^{入}$	$p^ha^{入}$	$pa^{去}$	$d^hu^{入}$	$t^hu^{去}$	$tu^{去}$	$ɣo^{入}$	$xo^{去}$
QYS	*$bɛ^rt$	*p^ha^{rh}	*pa^{rh}	*dawk	*$t^hɔ^h$	*$tɔ^h$	*ɣɑk	*$xwɑ^h$

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

*Qùshēng (去聲) tone. The voiced initials indicate yángshēng (陽平) and otherwise yīnshēng (陰平). As such, syllable 拔 *bɛʳt is from *Yángrù (陽入) and 怕 *p^ha^{rh} 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 Báixī, 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 *Yángrù (陽入) syllables had merged into *Yīnqù (陰去) before they as a whole merge again into rùshēng (入聲). The existence of voiced initials in yángrù (陽入) syllables indicates that the devoicing is far from complete. Likewise, MC aspirated *Yīnqù (陰去) syllables not bearing rùshēng (入聲) prove that merger between the aspirated qùshēng (去聲) with yángrù (陽入) syllables is nowhere near concluded.

Secondly, some dialects geographically close to or even twined with the Central Xiāng Coblin delineated preserve a distinct yángrù category with voiced consonants, like that in Bǎixiáng Township of Yuèyáng (岳陽柏祥) described by D. Li (2007). Other related dialects have their vernacular *Yángrù (陽入) syllables merged either into yángpíng (陽平) like in Héngyáng, into shǎngshēng (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 Yuánlíng Sǐkèzǐ (沅陵死客子), among others (Peng, 1999; Hunansheng difangzhi bianzuan weiyuanhui, 2001; Jiang, 2012). Moreover, the *Yángrù (陽入) syllables mostly merge into yángshǎng (陽上) in Sūiníng Égōnglǐng (綏寧鵝公嶺), while two thirds of the yīnrù (陰入) syllables merge into yīnshǎng (陰上) (Hu, 2007). Dialects like Yìyáng (益陽) and Táojiāng (桃江) have both their *Yīnrù (陰入) and *Yángrù (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 *Yángrù (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 *Yángrù (陽入) initials or the merger of *Yángrù (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 to a certain level, with dialects farther from the center showing lower rates, until it 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, Liányuán (漣源) at the center of Central Xiāng has 90 lexemes from *Y ángrù (陽入) shifted to yīnqù (陰去), while Níngxiāng (寧鄉) to its east has around 40 (Deng, 2008). If one goes farther east to Chángshā, 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^{13}	tua^{13}	t^{h}ua^{13}	ya^{35}	ya^{13}	ia^{35}
SF$_2$	ɕya^{23}	tua^{23}	t^{h}ua^{23}	ya^{35}	ya^{23}	ia^{35}
SF(ZM)	ɕya^{23}	tuæ^{23}	t^{h}uæ^{23}	uæ^{35}	uæ^{23}	ia^{35}
SF(HY)	ɕya^{22}	tɕya^{22}	tɕ^{h}ya^{22}	ya^{35}	ya^{35}	ia^{35}
SF(GT)	sue^{55}	tue^{55}	t^{h}ue^{55}	ue^{35}	ue^{55}	e^{35}
SF(HS)	sue^{55}	tue^{55}	t^{h}ue^{55}	ue^{45}	ue^{55}	ie^{45}
XX	ɕya^{23}	tua^{23}	t^{h}ua^{23}	ya^{23}	ya^{23}	ia^{45}
SF$_3$ layer 1	ɕya^{23}	tua^{23}	t^{h}ua^{23}	ya^{35}	ya^{23}	ia^{35}
SF$_3$ layer 2	sue^{23}; ɕye^{23}	tue^{23}	t^{h}ue^{23}	ue^{35}	ue^{23}	e^{35}

For Shuāngfēng proper, only one source (SF$_3$) supports a separation of two layers, while the other sources are without different layers at all. In SF$_3$, 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_3 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 Zǐmén qiáo (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 Zǐmén qiáo dialect, as there is no such final like -æ, -iæ, or -yæ (by contrast, there are finals -a, -ia, -ua, -ya, as well as -ɛ, -iɛ, and -uɛ). Thus [æ] is marked in this dialect compared to [a] and [ɛ]. A cogent explanation for it would be that the final -uæ laggs 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, *tʂʰi, *dʐi, *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^{44}	tsɿ^{44}	tsɿ^{44}	tɕi^{55}	tsɿ^{45}	tsɿ^{55}
紙	tsɿ^{42}	tsɿ^{42}	tsɿ^{31}	tsɿ^{21}	tsɿ^{33}	tsɿ^{31}
止	tsɿ^{42}	tsɿ^{42}	tsɿ^{31}	tsɿ^{21}	tsɿ^{33}	tsɿ^{33}
至	tsɿ^{35}	tsɿ^{35}	tsɿ^{45}	tsɿ^{45}	tsɿ^{24}	tsɿ^{45}
製	tsɿ^{35}	tsɿ^{35}	tsɿ^{45}	tsɿ^{45}	tsɿ^{24}	tsɿ^{45}
齒	tsʰɿ^{42}	tsʰɿ^{42}	tsʰɿ^{31}	dzʰɿ^{21}	-	tsʰɿ^{31}
時	dzɿ^{13}	tsʰɿ^{13}	dzɿ^{13}	dzʰɿ^{13}	sɿ^{11}	zɿ^{112}
知	tɕi^{44}	tɕi^{44}	tɕi^{44}	tɕi^{55}	tɕi^{45}	tɕi^{55}
智	tɕi^{35}	tɕi^{35} ~ tsɿ^{35}	tɕi^{45}	tɕi^{45}	tɕi^{24}	tɕi^{45}
池	dʑi^{13}	tɕʰi^{13}	dʑi^{13}	dʑʰi^{13}	tɕi^{11}	dʑi^{112}
持	dʑi^{13}	tɕʰi^{13}	dʑi^{13}	dʑʰi^{13}	tɕi^{11}	dʑi^{112}

The only irregularity here is syllable 芝 of Xiāngxiāng Qízǐ. Héngyáng is more than a hundred kilometers away from Lǒudǐ. So is Wǔgāng. This neat division across the dialects is highly impossible to have occured 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 Gàn 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 Gàn 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 ancester. 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 Gàn do share some sort of linkage back in history. Indeed, the historical relationship between Xiāng and Gàn is largely understudied.

Considering the Tányùn (覃韻), or Tán (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 Tán (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 Tányùn (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 [ɣiã^{陽平}] 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 Tán (覃) rhyme final *-oN is unsatisfactory. The other syllable, [kiã^{上}], which means to cover something with a lid, is also contentious. In Yuánjiāng dialect, an etymon is investigated with unidentified character, [kə̃^{上}], means 蓋住, or to cover (by a lid) (Peng, 2006, p. 27). Its homophones include 粳, 哽, 埂, 梗, and 耿, none of which is of Tán (覃) rhyme. Coincidently, the final of these etymons in Xiāngxiāng is also -iã. A similar syllable recorded in Héngshān (衡山) as [kẽĩ^{上}] (Peng, 1999, p. 93) further adds to the curious pattern. This coincidence

provokes our suspicion that the [kə̃^{上}] in Yuánjiāng and [kẽĩ^{上}] in Héngshān may be cognates of [kiã^{上}] in Xiāngxiāng. In fact, Xiāngxiāng's final -iã includes syllables that have probably lowered to it from a previous final *-ẽ. This hypothetic 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^{陰平}	kia^{陽平}	kia^{陽平}	kia^{陰平}	ka^{陽平}
XX	kiã^{陰平}	kia^{陽平}	kia^{陽平}	kiã^{陰平}	ka$^{陽平}_{白}$ ~ kia$^{陽平}_{文}$
XH(BX)	tɕiɛ̃^{陰平}	tɕiɛ^{入}	tɕiɛ^{入}	kã^{陰平}	tɕia^{入}
YJ	kə̃^{陰平}	kə^{入}	tɕi^{入}	kã^{陰平}	ka$^{入}_{白}$ ~ tɕia$^{入}_{文}$
HS	kẽĩ^{陰平}	ke^{入}	tɕie^{入}	kæ̃$^{陰平}_{白}$ ~ tɬæ̃$^{陰平}_{文}$	tɑ^{入}

Shuāngfēng and Xiāngxiāng dialects have experienced the proposed shift of *-ie(ẽ) -> -ia(ã), and Shuāngfēng has de-nasalized the vowel [ã]. Conversely, dialects like Yuánjiāng are more conservative. This proves that the final -iã in Xiāngxiāng corresponds to two finals in Yuánjiāng, one being -ã, the other being -ə̃. If indeed the Xiāngxiāng [kiã^{上}] is a cognate of Yuánjiāng [kə̃^{上}], we have to reconsider its function in predicting the pattern of Tányùn (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 Tán (覃) rhyme or not. For instance, Wu states that except for Lóudǐ and Xiāngxiāng, syllables 塝 and 函 in all other dialects listed by him represent a distinct Tán (覃) layer (Wu, 2018, p. 85-87). Here the case of Héngshān shall be taken for illustration. In Héngshān dialect, syllables with QYS *-əm, *-am, and *-an have overwhelmingly evolved to the final -æ̃. 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 -æ̃	HS -uẽĩ	HS -ẽĩ	QYS final
參蠶耽貪潭譚探南楠男婪嵐 / 感堪勘坩$_1$砍坎含函涵$_1$憾庵鵪暗	坩$_2$	涵$_2$	*-əm
暫鏨慚三叅擔$_1$膽擔$_2$談毯藍籃攬覽濫 / 甘柑敢憨喊	-	-	*-am
攢讚餐殘燦傘散$_1$散$_2$單丹蛋但旦誕彈$_1$灘攤癱壇彈$_2$檀坦袒炭歎難$_1$攔欄蘭闌懶爛難$_2$ / 幹$_1$肝$_1$趕桿稈$_1$幹贛刊看鼾韓罕漢翰瀚汗$_1$旱捍焊安鞍案按岸	肝$_2$幹$_2$稈$_2$寒$_2$汗$_2$	-	*-an

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

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 Héngshān's exceptions with final -uẽĩ are residues or not.

Firstly, Wu (2018) has pointed to it that Héngshān's -uẽĩ 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 > *-uẽ > -uẽĩ. 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 > *-æ̃, is also feasible given N is a

coronal. Next, the RoC to -uẽĩ 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 -uẽĩ are of residues in nature.

Now that -uẽĩ is likely a residual form of *-uon, Wu's flaw is also unveiled. Even if Héngshān 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 Héngshān, 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 Tán (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 ealier elements are expected to have participated in each of the subsequent phonological processes, but not vise versa.

1.4 Selection of Dialects and Trancription 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 (覃) 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.

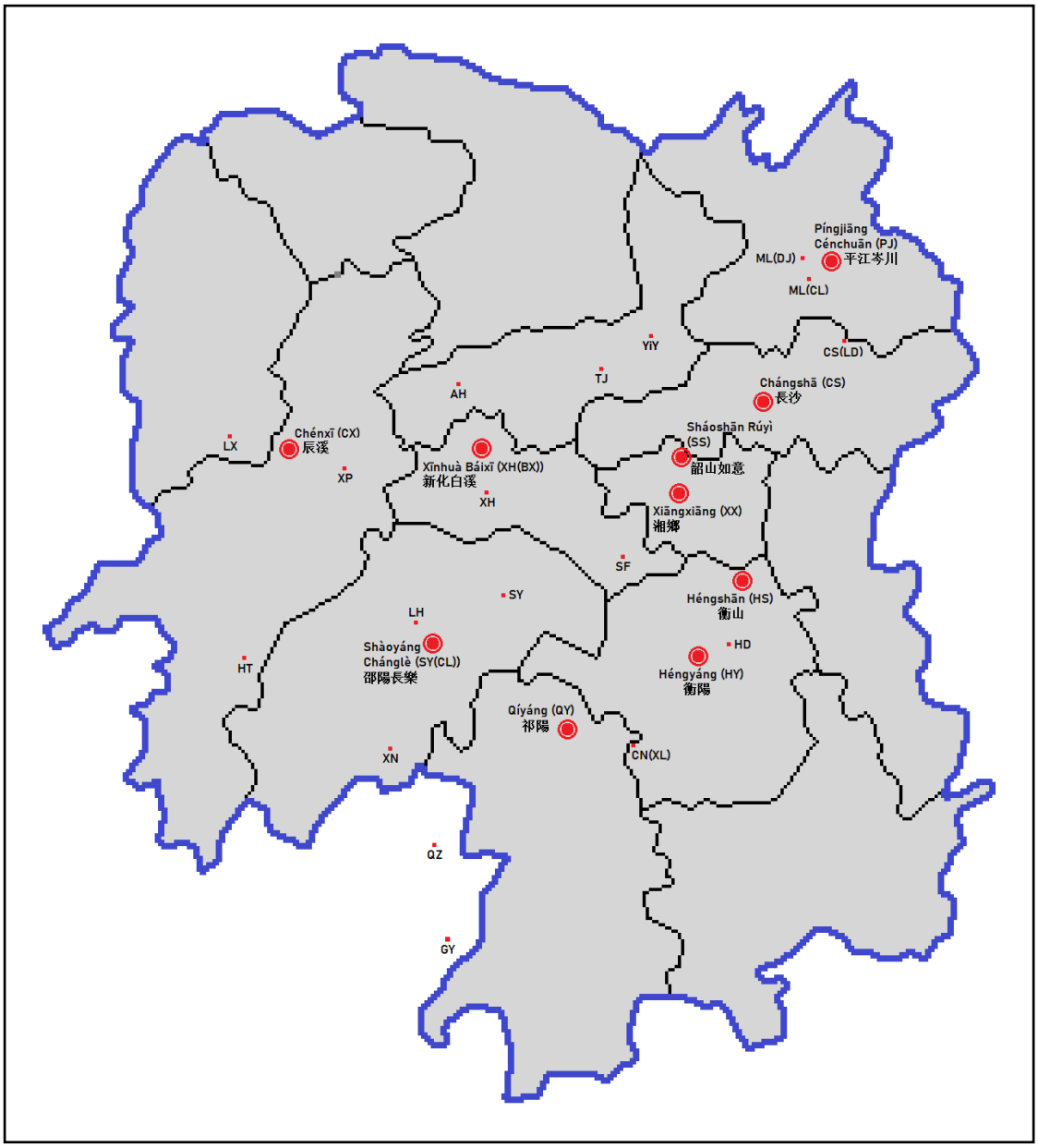
For the comparisons in Chapter 2 through Chapter 4, the convention is directly

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 them 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 refered 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 variaties are transcribed, unless specifically explained not to. The source may denote at least one of the variaties 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 Húnán 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 randon 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 vise 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^h	m	f
t	t^h	l	
ts	ts^h	s	z
tɕ	$tɕ^h$	ɳ̩	ɕ
k	k^h	ŋ	x

ø

Finals:

a	o	ə		ɿ	ai	ei	au	əu	õ	ə̃	an	ən	m̩	n̩
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	shǎngshēng	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^h	b	m	f	v
t	t^h	d	n		l
ts	ts^h	dz		s	z
tʂ	tʂ	dʐ		ʂ	ʐ
tɕ	$tɕ^h$	dʑ		ɕ	
k	k^h	ɡ	ŋ	x	

ø

Finals:

a	ɔ	o	e	ɚ			ɿ/ʅ	ai	ei	au	əu	aɯ	əɯ
ia	iɔ	io	ie		i				iei	iau	iəu	iaɯ	iəɯ
ua			ue		u			uai	uei			uaɯ	
ya			ye			y			yei				

Tones:

yīnp ńg	y ángp ńg	shǎngshēng	yīnq ù	y ángq ù
陰平	陽平	上聲	陰去	陽去
44	213	31	324	55

1.6.3 Sounds of H éngshān (衡山), HS

Initials:

p	p^h	m	f
t	t^h	l	
ts	ts^h		s
ʈ	$ʈ^h$		
tɕ	$tɕ^h$	ɳ̩	ɕ
k	k^h	ŋ	x
∅			

Finals:

ɑ	æ	o	e			ɿ	ɯ	ei	æu	ɑ̃	õ	ẽĩ	eɳ̩	m̩	ŋ̩
iɑ		io	ie	i					iæu	iɑ̃	iõ	ĩ	ieɳ̩		
uɑ	uæ				u			uei		uɑ̃		uẽĩ	ueɳ̩		
yɑ	yæ		ye			y				yɑ̃		yẽĩ	yeɳ̩		

Tones:

yīnp ńg	y ángp ńg	shǎngshēng	yīnq ù	y ángq ù	r ùshēng
陰平	陽平	上聲	陰去	陽去	入聲
33	11	13	55	44	35

1.6.4 Sounds of H éngy áng (衡陽), HY

Initials:

p	p^h	m	f
t	t^h	n	l
ts	ts^h		s

tɕ tɕ^{h} ɕ

k k^{h} ŋ x

ø

Finals:

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

Tones:

yīnp ńg	y ángp ńg	shǎngshēng	yīnq ù	y ángq ù	r ùshēng
陰平	陽平	上聲	陰去	陽去	入聲
45	11	33	24	213	22

1.6.5 Sounds of P ńgjiāng C énchuān (平江岑川), PJ

Initials:

p p^{h} b m f

t t^{h} d l

ts ts^{h} dz s

tʂ tʂ dʐ ʂ

tɕ tɕ^{h} dʑ ȵ ɕ

k k^{h} ɡ ŋ x

ø

Finals:

a	o		ɿ/ʅ	ai	ɛi	au	əu	œy	m̩	ŋ̍
ia	iɛ	i				iau	iəu			
ua		u		uai	uɛi					
ya			y							

an	en	øn	ən	aŋ	oŋ	əŋ	aʔ	ɛʔ	øʔ	ɑʔ	oʔ	əuʔ			ɿʔ
ian		in	iaŋ	ioŋ	iəŋ	iaʔ	iɛʔ				ioʔ	iəuʔ	iʔ		
uan		uøn	uən	uaŋ	uoŋ	uəŋ		uɛʔ	uøʔ	uɑʔ				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^h	b	m	f	v
t	t^h	d	l		
ts	ts^h	dz		s	z
tʃ	$tʃ^h$	dʒ	ɳ	ʃ	ʒ
k	k^h	g	ŋ	x	ɣ
∅					

Finals:

a	o	e	ɚ		ɿ	ai	ei	au	əɯ	an	ən	aŋ	oŋ	ŋ̍
ia	io	ie		i				iau	iəɯ	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^h	b	m	ɸ
t	t^h	d	n	
ts	ts^h	dz		s
tʂ	tʂ	dʐ	ɳ	ʂ
c	c^h	ɟ	ɲ	ç
k	k^h	ɡ	ŋ	x
∅				

Finals:

a	ɔ	ɛ	ʊ		ɿ/ʅ	ʮ	əɯ	ã	ẽ	õ	ən	aŋ	m̩	n̩
ia	iɔ	iɛ	iʊ	i			iəɯ	iã			iən	iaŋ		
ua		uɛ		u		uei		uã	uẽ		uən	uaŋ		

Tones:

yīnpíng	yángpíng	shǎngshēng	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^h	b	m	f	v
t	t^h	d	n		
ts	ts^h	dz		s	z
tʂ	tʂ	dʐ		ʂ	ʐ
tɕ	$tɕ^h$	dʑ	ɳ	ɕ	ʑ
k	k^h	ɡ	ŋ	h	ɦ
∅					

Finals:

a		o			ɿ/ʅ	ai	ei	au	əu	ã		ə̃	aŋ	eŋ	ŋ̍
ia	iɛ	io	i					iau	iəu	iã	iɛ̃	iə̃		ieŋ	
ua	uɛ		u			uai	uei			uã		uən		ueŋ	
	yɛ			y								yn		yeŋ	

Tones:

yīnp ńg	y ángp ńg	yīnshǎng	y ángshǎng	yīnq ù	y ángq ù
陰平	陽平	陰上	陽上	陰去	陽去
55	12	42	21	35	24

1.6.9 Sounds of Xīnhu à B áixī (新化白溪), XH(BX)

Initials:

p	p^h	b^h	m	f	
t	t^h	d^h	l		
ts	ts^h	dz^h		s	
tʂ	tʂ	dz^h		ʂ	ʐ
tɕ	$tɕ^h$	$dʑ^h$		ɕ	ʑ
k	k^h	$ɡ^h$		x	ɣ
Ø					

Finals:

a	æ		o	ə			ɿ/ʅ	au	əu	ã		õ	ən	ṇ
ia		iɛ		iə	i	iu				iɑ̃	iɛ̃		in	
ua	uæ			uə		u				uã	uɛ̃		un	
ya		yɛ	yo				y				yɛ̃	yõ	yn	

Tones:

yīnp ńg	y ángp ńg	shǎngshēng	q ùshēng	r ùshēng

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^h	b	m	ɸ	β
t	t^h	d	n		l
ts	ts^h	dz		s	
tʂ	tʂ	dʐ		ʂ	
tɕ	$tɕ^h$	dʑ	ɳ	ɕ	
k	k^h	g	ŋ	x	ɣ
∅					

Finals:

a/ã	o	ʊ/õ			ɿ/ʅ	ai		ao		õ		ʌn	aŋ	m̩	n̩	ŋ̍
ia	io	iʊ	i				iei	iao	iã	iõ	iĩ	iʌn	in	iaŋ		
ua			u			uai	uei		uã			uʌn		uaŋ		
ya				y/ỹ			yei				yĩ	yʌn				

Tones:

yīnp ńg	y ángp ńg	shǎngshēng	yīnq ù	y ángq 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^h	b	m	(ʋ)	f	v
t	t^h	d	n	l		
ts	ts^h	dz			s	z
tʃ	$tʃ^h$	dʒ			ʃ	ʒ
ʈ	$ʈ^h$	ɖ		(ɻ)		
k	k^h	g	ŋ		x	ɣ
∅						

There are in total 32 syllabic initials and an additional initial zero (∅). 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 *pɛ^{r}t

CS [pa ^{入}]; CX [pɔ ^{陽平}]; HS [pɑ ^{入}]; HY [pa ^{入}]; PJ [pɑʔ^{入}]; QY [pa ^{入}]; SS [pa ^{入}]; SY(CL) [pa ^{陰平}]; XH(BX) [pa ^{陰平}]; XX [pa ^{陽平}]

CMX *pat ^{陽入}

布 bù QYS *pɔ^h

CS [pu ^{陰去}]; CX [pu ^{陰去}]; HS [pu ^{陰去}]; HY [pu ^{陰去}]; PJ [pu ^{陰去}]; QY [pu ^{去}]; SS [pu ^{陰去}]; SY(CL) [pu ^{陰去}]; XH(BX) [pu ^{去}]; XX [pu ^{陰去}]

CMX *pu ^{陰去}

邊 biān QYS *pɛn

CS [piẽ^{陰平}]; CX [pie ^{陰平}]; HS [pĩ^{陰平}]; HY [pien ^{陰平}]; PJ [pian ^{陰平}]; QY [pian ^{陰平}]; SS [pẽ^{陰平}]; SY(CL) [piɛ̃^{陰平}]; XH(BX) [piɛ̃^{陰平}]; XX [piĩ^{陰平}]

CMX *piɛn ^{陰平}

2.1.2 CMX *p^h-.

破 pò QYS *$p^hwɑ^h$

CS [p^ho 陰去]; HS [p^hu 陰去白 ~ p^ho 陰去文]; HY [p^ho 陰去]; PJ [p^ho 陰去]; QY [p^ho 去]; SS [$p^hʊ$ 陰去]; SY(CL) [p^ho 陰去]; XH(BX) [p^ho 去]; XP [$p^hʊ$ 陰去]; XX [$p^hʊ$ 陰去]

CMX *$p^huɔ$ 陰去

怕 pà QYS *$p^haʳ^h$

CS [p^ha 陰去]; CX [$p^hɔ$ 陰去]; HS [$p^hɑ$ 陰去]; HY [p^ha 陰去]; PJ [p^ha 陰去]; QY [p^ha 去]; SS [p^hua 陰去]; SY(CL) [p^ha 陰去]; XP [$p^hɒ$ 陰去]; XH(BX) [p^ha 入]; XX [p^ho 陰去]

CMX *p^ha 陰去

Some southern dialects have a few syllables recorded as vernacular forms bearing this initial p^h-, contrary to their literary forms with the regular fricative initial f-. The plosive form is likely a residue of MC *p^h-. 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 *$p^huawŋ$

CS [xən 陰平]; CX [fəɯ 陰平]; HS [$p^hen̩$ 陰平白 ~ fen̩ 陰平文]; HY [$p^həŋ$ 陰平白 ~ xəŋ 陰平文]; PJ [fəŋ 陰平]; QY [$p^hoŋ$ 陰平白 ~ foŋ 陰平文]; SS [xuən 陰平]; SY(CL) [$p^hə̃$ 陰平白 ~ fə̃ 陰平文]; XH(BX) [xun 陰平]; XX [xuʌn 陰平]

CMX *$p^huŋ$ 陰平白 ~ *fuŋ 陰平文

2.1.3 CMX *b-. It is well preserved in some of the dialects like in Q ýyáng, and partially preserved in non-r ùshēng syllables of C énchuān, P íngjiāng. In many other dialects this initial has devoiced into either p- or p^h- under various conditions. For example in Ch ángshā, all the initials from CMX *b- have devoiced into p-. Thus the distinction between syllables originated from CMX *b- and *p- in Ch ángshā dialect is maintained only by their tones. Although the material from Xīinhu à B áixī suggests aspiration of this initial, aspiration is itself not phonemic and not reconstructed for CMX voiced initials.

盤 pán QYS *bwan

CS [põ[陽平]]; CX [be[陽平]]; HS [p[h]ẽĩ[陽平]]; HY [puen[陽平]]; PJ [bøn[陽平]]; QY [ban[陽平]]; SS [buẽ[陽平白] ~ bõ[陽平文]]; SY(CL) [bã[陽平]]; XH(BX) [b[h]õ[陽平]]; XX [biã[陽平]]

CMX *bɔn[陽平]

薄 báo ~ bó QYS *bɑk

CS [po[入]]; CX [p[h]au[陰去白] ~ po[陽平文]]; HS [p[h]o[上]]; HY [po[陽平]]; PJ [p[h]oʔ[入]]; QY [bo[入]]; SS [pʊ[入]]; SY(CL) [bo[陽去]]; XH(BX) [po[入]]; XX [p[h]ʊ[陰去]]

CMX *bɔk[陽入]

The vernacular form of 薄 in Chánxī 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[h]- : f- pair discussed in section 2.1.2.

浮 fú QYS *buw

CS [xəu[陽平]]; CX [bau[陽平白] ~ xu[陽平文]]; HS [p[h]ou[陽平白] ~ fu[陽平文]]; HY [pau[陽平白] ~ xəu[陽平文]]; PJ [bu[陽平白1] ~ fœy[陽平白2] ~ fu[陽平文]]; QY [fəɯ[陽平]]; SS [xəɯ[陽平]]; SY(CL) [bau[陽平]]; XH(BX) [fiə[陽平]]; XX [bao[陽平白] ~ ɣuai[陽平文]]

CMX *bɛu[陽平白] ~ *vɛu[陽平文]

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[陽平]]; CX [mei[陽平]]; HS [mei[陽平]]; HY [mei[陽平]]; PJ [mɛi[陽平]]; QY [mei[陽平]]; SS [mɛ[陽平]]; SY(CL) [mei[陽平]]; XH(BX) [mə[陽平]]; XX [mai[陽平]]

CMX *muɔi[陽平]

買 mǎi QYS *ma[r]j[ʔ]

CS [mai[上]]; CX [ma[上白] ~ mai[上文]]; HS [mæ[陽去白] ~ mæ[上文]]; HY [mai[上]]; PJ [mai[上]]; QY [mai[上]]; SS [mã[上]]; SY [mai[上]]; XH(BX) [mæ[上]]; XX [mã[上]]

CMX *mai 陽上

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^{h}- and *b-. The literary form will be discussed in section 2.1.5.

蚊 wén QYS *mun

CS [uən 陽平]; CX [vei 陽平]; HS [mieɳ 陰平白 ~ ueɳ 陽平文]; HY [mən 陰平白 ~ fən 陽平文]; PJ [uən 陽平]; QY [mən 陰平白 ~ vən 陽平文]; SS [uən 陽平]; SY(CL) [meŋ 陰平白 ~ veŋ 陽平文]; XH(BX [min 陰平白 ~ un 陽平文]; XX[min 陰平白 ~ uʌn 陽平文]

CMX * mən 陰平白 ~ *ʊən 陽平文

2.1.5 CMX *ʊ-. 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 *ʊ- 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 ladiodental 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 *muɑŋ^{h}

CS [uan 陰去]; CX [vaɯ 陽去]; HS [mõ 陰去白1 ~ mõ 陽去白2 ~ õ 陽去文]; HY [man 陽去白 ~ fan 陽去文]; PJ [uoŋ 陽去]; QY [vaŋ 去]; SS [uaŋ 陽去白 ~ uaŋ 陰去文]; SY(CL) [vã 陽去]; XH(BX) [õ 去]; XX [maŋ 陰去白1 ~ uaŋ 陽去白2 ~ uaŋ 陰去文]

CMX *məŋ 陽去白 ~ ʊɔŋ 陽去文

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

尾 wěi QYS *muj^{ʔ}

CS [uei ^{上}]; CX [vi ^{上}]; HS[mĩ$^{陰去}_{白}$ ~ uei $^{上}_{文}$]; HY [ui ^{上}]; PJ [uɛi ^{上}]; QY [vi ^{去}]; SS [uei ^{上}]; SY(CL) [mi $^{陰上}_{白}$ ~ vi $^{陽上}_{文}$]; XH(BX) [ṇ$^{上}_{白}$ ~ uə $^{上}_{文}$]; XX [uei ^{上}]

CMX *mi $^{陽上}_{白}$ ~ *ʋi $^{陽上}_{文}$

The vernacular form in Héngshān bears an irregular tone. The syllabic [ṇ] of Xīnhuà might be a residue from a sound change *mi > *m̩ > ṇ, as in the nearby dialect of Lěngshǔijiāng Duóshān (冷水江鐸山), this etymon is read [m̩^{上}] (Li, 2020).

2.1.6 CMX *f-. This fricative is realized in Shàoshān 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 *-ɔŋ, it commonly merges with *x-.

富 fù QYS *puw^{h}

CS [fu ^{陰去}]; CX [fu ^{陰去}]; HS [fu ^{陰去}]; HY [fu ^{陰去}]; PJ [fu ^{陰去}]; QY [fu ^{陰去}]; SS [ɸu ^{陰去}]; SY(CL) [fu ^{陰去}]; XH(BX) [xu ^{去}]; XX [ɸu ^{陰去}]

CMX *fu ^{陰去}

飛 fēi QYS *puj

CS [fei ^{陰平}]; CX [fi ^{陰平}]; HS [fei ^{陰平}]; HY [fei ^{陰平}]; PJ [fi ^{陰平}]; QY [fi ^{陰平}]; SS [xuei ^{陰去}]; SY(CL) [fi ^{陰平}]; XH [fɤ ^{陰平}]; XX [xuei ^{陰平}]

CMX *fi ^{陰平}

風 fēng QYS *puwŋ

CS [xən ^{陰平}]; CX [fəɯ ^{陰平}]; HS [feɳ ^{陰平}]; HY [xəŋ ^{陰平}]; PJ [fəŋ ^{陰平}]; QY [foŋ ^{陰平}]; SS [xuən ^{陰平}]; SY(CL) [fə̃^{陰平}]; XH(BX) [xun ^{陰平}]; XX [xuʌn ^{陰平}]

CMX *fuŋ ^{陰平}

放 fang QYS *puɑŋ^{h}

CS [fan ^{陰去}]; CX [faɯ ^{陰去}]; HS [xõ^{陰去}]; HY [fan ^{陰去}]; PJ [xəŋ $^{陰去}_{白}$ ~ foŋ $^{陰去}_{文}$]; QY [faŋ ^{陰去}]; SS [xaŋ ^{陰去}]; SY(CL) [huã^{陰去}]; XH(BX) [xõ^{去}]; XX [xaŋ ^{陰去}]

CMX *fɔŋ ^{陰去}

The P ńgjiāng vernacular final -əŋ here is an isolated irregular form. In H éngshān the syllable [xõ] with any tone has free variation of [xn̩]. They could result from *xoŋ > *xuŋ > *x^{w}ŋ́ > *xŋ́ > xn̩. The latter forms are omitted herein.

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

父 fù QYS *buăʔ

CS [fu ^{陰去}]; CX [fu ^{陽去}]; HS [fu ^{陽去}]; HY [fu ^{陽去}]; PJ [fu ^{陽去}]; QY [vu ^{去}]; SS [ɸu $^{陽去}_{白}$ ~ ɸu $^{陰去}_{文}$]; SY(CL) [vu ^{陽去}]; XH(BX) [xu ^{去}]; XX [βu ^{陽去}]

CMX *vu ^{陽去}

凡 f án QYS *buam

CS [fan ^{陽平}]; CX [fe ^{陽平}]; HS [fæ^{陽平}]; HY [fan ^{陽平}]; PJ [fan ^{陽平}]; QY [van ^{陽平}]; SS [xuã^{陽平}]; SY(CL) [vaŋ ^{陽平}]; XH(BX) [b^{h}ã^{陽平}]; XX [ɣuã^{陽平}]

CMX *ban $^{陽平}_{白}$ ~ *van $^{陽平}_{文}$

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

房 f áng QYS *buɑŋ

CS [fan ^{陽平}]; CX [faɯ ^{陽平}]; HS [xõ^{陽平}]; HY [fan ^{陽平}]; PJ [xoŋ $^{陽平}_{白}$ ~ foŋ $^{陽平}_{文}$]; QY [vaŋ ^{陽平}]; SS [xaŋ ^{陽平}]; SY(CL) [vã^{陽平}]; XH(BX) [b^{h}õ$^{陽平}_{白}$ ~ ɣõ$^{陽平}_{文}$]; XX [ɣaŋ ^{陽平}]

CMX *bɔŋ $^{陽平}_{白}$ ~ vɔŋ $^{陽平}_{文}$

The P ńgjiāng literary form is possibly a modern borrowing.

2.2 The Dentals

2.2.1 CMX *t-.

多 duō QYS *tɑ

CS [to 陰平]; CX[to 陰平]; HS [to 陰平]; HY [to 陰平]; PJ [to 陰平]; QY [to 陰平]; SS [tʊ 陰平]; SY(CL) [to 陰平]; XH(BX) [to 陰平]; XX [tʊ 陰平]

CMX *tɔ 陰平

得 děi/dé QYS *tək

CS [tə 入]; CX [tai 陽平]; HS [tie 入白 ~ tæ 入文]; HY [te 入]; PJ [tɛʔ入]; QY [te 入]; SS [tɛ 入]; SY(CL) [tiɛ 陰平]; XH(BX) [tiɛ 入]; XX [tia 陽平]

CMX *tɛk 陰入

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 Chánglè Town 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 *trɨɑŋʔ

CS [tsan 上]; CX [tʂaɯ 上]; HS [ʈõ上]; HY [tɕian 上]; PJ [tʂoŋ 上]; QY [tiaŋ 上白 ~ tʃiaŋ 上文]; SS [tʂaŋ 上]; SY(CL) [tiã陰上白 ~ tʂã陰上文]; XH(BX) [tɕyõ 上]; XX [taŋ 上]

CMX *tiɔŋ 陰上白 ~ *tʃiɔŋ 陰上文

Xiāngxiāng's [taŋ] does not correspond to this vernacular layer. The CMX post-alveolar affricates in Xiāngxiāng have hardened to [t], [t^h], and [d], leaving them superficially similar to this vernacular t-. This hardening, *tʃi- > *tʂ- > *ʈ- > 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 *tɕiɑŋʔ

CS [tsan 上]; CX [tʂaɯ 上]; HS [ʈõ上]; HY [tɕian 上]; PJ [tɕioŋ 上]; QY [tʃiaŋ 上]; SS [tʂaŋ 上]; SY(CL) [tʂã陰上文]; XH(BX) [tɕyõ 上]; XX [taŋ 上]

CMX *tʃîɔŋ 陰上 文

2.2.2 CMX *t^h-

鐵 tiě QYS *t^hɛt

CS [t^hie 入]; CX [t^hie 陽平]; HS [t^hie 入]; HY [t^hie 入]; PJ [t^hiɛʔ入]; QY [t^hie 入]; SS [t^hiɛ 入]; SY(CL) [t^hiɛ 陰平]; XH(BX) [t^hi 陰平]; XX [t^hia 陽平]

CMX *t^hiɛt 陰入

貪 tān QYS *t^həm

CS [t^han 陰平]; CX [t^he 陰平]; HS [t^hæ̃陰平]; HY [t^han 陰平]; PJ [t^høn 陰平]; QY [t^han 陰平]; SS [t^hã 陰平]; SY(CL) [t^haŋ 陰平]; XH(BX) [t^hã̃陰平]; XX [t^hiã̃陰平]

CMX *t^hɔn 陰平

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

地 d ì QYS *di^h

CS [ti 陰去]; CX [ti 陽去 ~ tie 陽去]; HS [ti 陽去]; HY [ti 陽去]; PJ [di 陽去]; QY [di 去]; SS [ti 陽去]; SY(CL) [di 陽去]; XH(BX) [d^hi 陰平白 ~ d^hi 入文]; XX [di 陽去]

CMX *di 陽去

塘 t áng QYS *dɑŋ

CS [tan 陽平]; CX [daɯ 陽平]; HS [t^hõ陽平]; HY [tan 陽平]; PJ [doŋ 陽平]; QY [daŋ 陽平]; SS [daŋ 陽平]; SY(CL) [dã陽平]; XH(BX) [d^hõ陽平]; XX [daŋ 陽平]

CMX *dɔŋ 陽平

Parallel to the t- initial in 2.2.1, some syllables of QYS Ch éngmǔ (澄母) initials in Q ýáng have voiced stop [d] as the initial in vernacular forms. The literary form in P íngjiāng C énchuān 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 Sh àoy áng is of unknown origin. These are not compared.

沉 ch én QYS *drim

CS [tsən 陽平]; CX [dʐei 陽平 ~ dzei 陰去]; HS [tieɳ 陽平白 ~ tʂʰeɳ 陽平文]; HY [tɕin 陽平]; PJ [dʐən 陽平白 ~ tʂʰən 陽平文]; QY [din 陽平白 ~ dʒin 陽平文]; SS [dʐən 陽平]; SY(CL) [dʐeŋ 陽平白 ~ dʐeŋ 陽去文]; XH(BX) [dʐʰən 陽平]; XX [dʌn 陽平]

CMX *din 陽平白 ~ *dʒin 陽平文

2.2.4 CMX *n-. This nasal stop is preserved in Chénxī 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 -iɛ̃ indicates its former presence.

腦 nǎo QYS *naw^{ʔ}

CS [lau 上]; CX [nau 上]; HS [lou 上]; HY [nau 上]; PJ [lau 上]; QY [lau 上]; SS [nɔ 上]; SY(CL) [nau 陰上]; XH(BX) [lau 上]; XX [lao 上]

CMX *nau 陽上

泥 ní QYS *nɛj

CS [ɳi 陽平]; CX [ni 陽平]; HS [ɳĩ 陽平]; HY [ni 陽平]; PJ [ɳi 陽平]; QY [ɳi 陽平]; SS [ɲẽ 陽平[; SY(CL) [nuei 陽平白 ~ iɛ̃ 陽平文]; XH(BX) [i 陽平]; XX [ɳiĩ 陽平]

CMX *nɛi 陽平白 ~ *ni 陽平文

Some syllables corresponding to QYS Rìmǔ (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 入]; CX [ʐe 陽平]; HS [ɳe 上]; HY [ɕie 陽平]; PJ [ɳiɛʔ入]; QY [ɳie 入白 ~ ʒie 入文]; SS [iɛ 入]; SY(CL) [iɛ̃ 陰去白 ~ ʑiɛ 陽去文]; XH(BX) [ʐə 入]; XX [ia 陽平]

CMX *niɛt 陽入白 ~ *ɻiɛt 陽入文

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 lái QYS *ləj

CS [lai 陽平]; CX [lai 陽平]; HS [læ 陽平]; HY [lai 陽平]; PJ [lɛi 陽平]; QY [lai 陽平]; SS [nɛ 陽平]; SY(CL) [lai 陽平]; XH(BX) [lə 陽平]; XX [lai 陽平]

CMX *lɔi 陽平

力 lì QYS *lik

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

CMX *lit 陽入

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^{45}	tsi^{35}	tɕi^{45}	tɕi^{55}	*tsi 陰去
2. 記	ci^{45}	tɕi^{35}	ki^{45}	tɕi^{55}	*ki 陰去
3. 酒	tsiəɯ^{42}	tsiəu^{42}	tɕiei^{21}	tɕiəu^{42}	*tsiu 陰上
4. 九	ciəɯ^{42}	tɕiəu^{42}	kiei^{21}	tɕiəu^{42}	*kiu 陰上
5. 前	dzẽ^{13}	dziẽ^{12}	dʑiĩ^{23}	tɕiẽ^{13}	*dziɛn 陰上
6. 鉗	ʑẽ^{13}	dʑiẽ^{12}	giĩ^{23}	tɕiẽ^{13}	*giɛn 陰上
7. 蛆	ts^{h}i^{33}	tɕ^{h}y^{55}	tɕ^{h}yei^{55}	tɕ^{h}i^{33}	*ts^{h}y 陰平
8. 區	tʂ^{h}ɥ^{33}	tɕ^{h}y^{55}	t^{h}y^{55}	tɕ^{h}y^{33}	*k^{h}y 陰平

Note that in Chángshā and Sháoshān the contrast of the last pair is also reflected in vowels, where the final *-y unrounded to -i after alveolar sibilants. The dialect of Shàoyáng Chánglè has lost the contrast before vowel [y].

2.3.1 CMX *ts-. This initial is preserved well in dialects like that of Shàoshān and Shàoyáng Chánglè. 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^{ʔ}

CS [tsəu ^{上}]; CX [tsai $^{上}_{白}$ ~ tsəu $^{上}_{文}$]; HS [tɕie ^{上}]; HY [tsəu ^{上}]; PJ [tsəu ^{上}]; QY [tsəɯ ^{上}]; SS [tsiɔ $^{上}_{白}$ ~ tsəɯ $^{上}_{文}$]; SY(CL) [tsei ^{陰上}]; XH(BX) [tso ^{上}]; XX [tsai ^{上}]

CMX *tsɛu ^{陰上}

酒 jiǔ QYS *tsuw^{ʔ}

CS [tɕiəu ^{上}]; CX [tɕiəu ^{上}]; HS [tɕiæu ^{上}]; HY [tɕiu ^{上}]; PJ [tɕiəu ^{上}]; QY [tʃiəɯ ^{上}]; SS [tsiəu ^{上}]; SY(CL) [tsiəu ^{陰上}]; XH(BX) [tɕiu ^{上}]; XX [tɕiei ^{上}]

CMX *tsiu ^{陰上}

罩 zhào QYS *tra^{r}w^{h}

CS [tsau ^{陰去}]; CX [tsau ^{陰去}]; HS [tsou ^{陰去}]; HY [tsau ^{陰去}]; PJ [tsau ^{陰去}]; QY [tsau ^{去}]; SS [tsɔ ^{陰去}]; SY(CL) [tsau ^{陰去}]; XH(BX) [tsau ^{去}]; XX [tsao ^{陰去}]

CMX *tsau ^{陰去}

2.3.2 CMX *ts^{h}-. It goes under paralleling changes with *ts-.

青 qīng QYS *ts^{h}ɛjŋ

CS [tɕ^{h}in ^{陰平}]; CX [ts^{h}ei ^{陰平}]; HS [tɕ^{h}iæ̃ $^{陰平}_{白}$ ~ tɕ^{h}ieŋ $^{陰平}_{文}$]; HY [tɕ^{h}iaŋ $^{陰平}_{白}$ ~ tɕ^{h}in $^{陰平}_{文}$]; PJ [tɕ^{h}iaŋ ^{陰平}]; QY [tʃ^{h}iaŋ $^{陰平}_{白}$ ~ tʃ^{h}in $^{陰平}_{文}$]; SS [ts^{h}iən ^{陰平}]; SY(CL) [tɕ^{h}iã $^{陰平}_{白}$ ~ ts^{h}eŋ $^{陰平}_{文}$]; XH(BX) [tɕ^{h}iɑ̃ $^{陰平}_{白}$ ~ tɕ^{h}in $^{陰平}_{文}$]; XX [tɕ^{h}iõ $^{陰平}_{白}$ ~ tɕ^{h}in $^{陰平}_{文}$]

CMX *ts^{h}iaŋ $^{陰平}_{白}$ ~ ts^{h}iŋ $^{陰平}_{文}$

初 chū QYS *tʂ^{h}ɨă

CS [ts^{h}əu ^{陰平}]; CX [ts^{h}əu ^{陰平}]; HS [ts^{h}æu ^{陰平}]; HY [ts^{h}u ^{陰平}]; PJ [ts^{h}əu ^{陰平}]; QY [ts^{h}u ^{陰平}]; SS [ts^{h}əɯ ^{陰平}]; SY(CL) [ts^{h}u ^{陰平}]; XH(BX) [ts^{h}u ^{陰平}]; XX [tɕ^{h}iei ^{陰平}]

CMX *ts^{h}u ^{陰平}

2.3.3 CMX *dz-. This initial is devoiced in some of the dialects such as Chángshā, Héngshān, and Héngyáng. Paralleling changes align with that of *ts-.

在 zài QYS *dzəjʔ

CS [tsai 陽去白 ~ tsai 陰去文]; CX [tsai 陽去]; HS [tsæ 陽去]; HY [tsai 陽去]; PJ [dzɛi 陽去]; QY [dzai 去]; SS [dzɛ 陽去白 ~ tsɛ 陰去文]; SY(CL) [dzei 陽上白 ~ dzei 陽去文]; XH(BX) [dzʰæ 陰平白 ~ dzʰæ 入文]; XX [dzai 陽去]

CMX *dzai 陽上

柴 chái QYS *dzaʳj

CS [tsai 陽平]; CX [dzai 陽平]; HS [tsʰæ 陽平]; HY [tsai 陽平]; PJ [dzai 陽平白 ~ tsʰai 陽平文]; QY [dzai 陽平]; SS [dza 陽平]; SY(CL) [dzai 陽平]; XH(BX) [dzʰæ 陽平]; XX [dza 陽平]

CMX *dzai 陽平

The literary form in Pǔngjiāng is possibly a borrowing from Mandarin.

秦 qín QYS *dzin

CS [tɕin 陽平]; CX [dʑiei 陽平]; HS [tɕʰieŋ 陽平]; HY [tɕin 陽平]; PJ [dʑin 陽平]; QY [dʒin 陽平]; SS [dziən 陽平]; SY(CL) [dzeŋ 陽平]; XH(BX) [dzʰin 陽平]; XX [dʑin 陽平]

CMX *dzin 陽平

瓷 cí QYS *dzi

CS [tsɿ 陽平]; CX [dzɿ 陽平]; HS [tsʰɿ 陽平]; HY [tsɿ 陽平]; PJ [dzɿ 陽平白 ~ tsʰɿ 陽平文]; QY [zɿ 陽平]; SS [dzɿ 陽平]; SY(CL) [dzɿ 陽平]; XH(BX) [dzʰɿ 陽平]; XX [dzɿ 陽平]

CMX *dzɿ 陽去

2.3.4 CMX *s-.

心 xīn QYS *sim

CS [ɕin 陰平]; CX [sei 陰平]; HS [ɕieŋ 陰平]; HY [ɕin 陰平]; PJ [ɕin 陰平]; QY [ʃîn 陰平]; SS [siən 陰平]; SY(CL) [seŋ 陰平]; XH(BX) [ɕin 陰平]; XX [ɕin 陰平]

CMX *sin 陰平

傘 sǎn QYS *san^{ʔ}

CS [san ^{上}]; CX [se ^{上}]; HS [sæ̃^{上}]; HY [san ^{上}]; PJ [san ^{上}]; QY [san ^{上}]; SS [sã^{上}]; SY(CL) [saŋ ^{陰上}]; XH(BX) [sã^{上}]; XX[ɕiã^{上}]

CMX *san ^{陰上}

曬 shài QYS *ʂa^{r}j^{h}

CS [sai ^{陰去}]; CX [sa ^{陰去}]; HS [sæ ^{陰去}]; HY [sai ^{陰去}]; PJ [sai ^{陰去}]; QY [sai ^{去}]; SS [sa ^{陰去}]; SY(CL) [sai ^{陰去}]; XH(BX) [sæ ^{去}]; XX [so ^{陰去}]

CMX *sai ^{陰去}

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	zɿ^{13}	dz^{h}ɿ^{13}	ʑin^{13}	dʑ^{h}in^{13}	ʑiɔ̃^{33} ~ ɕiɔ̃^{45}	dʑ^{h}iɔ̃^{33}
CMX	*zɿ ^{陽平}	*dzɿ ^{陽平}	*zin ^{陽平}	*dzin ^{陽平}	*ziɔŋ ^{陽去}	*dziɔŋ ^{陽去}

尋 xún QYS *zim

CS [tɕin ^{陽平}]; CX [ɕyei ^{陽平}]; HS [tɕ^{h}ieŋ $^{陽平_{白}}$ ~ seŋ $^{陽平_{文}}$]; HY [tɕin ^{陽平}]; PJ [dʑin ^{陽平}]; QY [dʒin ^{陽平}]; SS [dziən ^{陽平}]; SY(CL) [dzeŋ ^{陽平}]; XH [ʑin ^{陽平}]; XX [dʑin ^{陽平}]

CMX *zin ^{陽平}

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

詞 cí QYS *zɨ

CS [tsɿ ^{陽平}]; CX [dzɿ ^{陽平}]; HS [ts^{h}ɿ ^{陽平}]; HY [tsɿ ^{陽平}]; PJ [dzɿ $^{陽平_{白}}$ ~ ts^{h}ɿ $^{陽平_{文}}$]; QY [zɿ ^{陽平}]; SS [dzɿ ^{陽平}]; SY(CL) [dzɿ ^{陽平}]; XH [zɿ ^{陽平}]; XX [dzɿ ^{陽平}]

CMX *zɿ ^{陽平}

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 Píngjiāng is the inverse of that in Sháoshān. It could be explained as inter-dialect borrowing.

徐 xú QYS *zɨă

CS [ɕi 陽平]; CX [ɕy 陽平]; HY [tɕy 陽平]; PJ [dʑi 陽平白 ~ ɕi 陽平文]; QY [dʒy 陽平]; SS [si 陽平白 ~ dzi 陽平文]; SY(CL) [dʑy 陽平]; XH(BX) [ʑy 陽平]; XX [dʑyei 陽平]

CMX *ʑy 陽平

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 Chángshā, 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 Héngyáng and Qíyáng. Shàoyáng Chánglè 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)	dʑiəu^{24}	dziəu^{24}	tɕiɛ̃^{42}	tsiɛ̃^{42}	tɕiɛ^{55}	tsiɛ^{55}
CMX	*dʒiu 陽去	*dziu 陽去	*tʃiɛn 陰上	*tsiɛn 陰上	*tʃɛk 陰入	*tsɛk 陰入

2.4.1 CMX *tʃ-. Xīnhuà Báxī 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^{r}

CS [tsa ^{陰平}]; CX [tsɔ ^{陰平}]; HS [tsɑ ^{陰平}]; HY [tsa ^{陰平}]; PJ [tsa ^{陰平}]; QY [tsa ^{陰平}]; SY(CL) [tsa ^{陰平}]; XH(BX) [tʂa ^{陰平}]; XX [tso ^{陰平}]

CMX *tʃa ^{陰平}

張 zhāng QYS *trɨɑŋ

CS [tsan ^{陰平}]; CX [tʂaɯ ^{陰平}]; HS [ʈõ^{陰平}]; HY [tɕiaŋ ^{陰平}]; PJ [tʂoŋ ^{陰平}]; QY [tʃiaŋ ^{陰平}]; SS [tʂaŋ ^{陰平}]; SY(CL) [tʂã^{陰平}]; XH(BX) [tɕyõ^{陰平}]; XX [taŋ ^{陰平}]

CMX *tʃiɔŋ ^{陰平}

摘 zhāi QYS *trɛ^{r}jk

CS [tsə ^{入}]; CX [tsai ^{陽平}]; HS [tsɑ $^{入}_{白}$ ~ tsæ $^{入}_{文}$]; HY [tsua $^{入}_{白}$ ~ tsue $^{入}_{文}$]; PJ [tsaʔ^{入}]; QY [tsa $^{入}_{白}$ ~ tse $^{入}_{白}$]; SS [tsa $^{入}_{白}$ ~ tsɛ $^{入}_{文}$]; SY(CL) [tsa ^{陰平}]; XH(BX) [tʂa ^{陰平}]; XX [tsua ^{陽平} ~ tɕia ^{陽平}]

CMX *tʃak $^{陰入}_{白}$ ~ tʃɛk $^{陰入}_{文}$

皺 zhòu QYS *tʂuw^{h}

CS [tsəu ^{陰去}]; CX [tsəɯ ^{陰去}]; HS [tɕie ^{陰去}]; HY [tsəu ^{陰去}]; PJ [tsəu ^{陰去}]; QY [tsəɯ ^{去}]; SS [tsiɔ ^{陰去}]; SY(CL) [tsei ^{陰去}]; XH(BX) [tʂəu ^{去}]; XX [tsai ^{陰去}]

CMX *tʃɛu ^{陰去}

2.4.2 CMX *tʃ^{h}-.

鏟 chǎn QYS *tʂ^{h}ɛ^{r}n^{ʔ}

CS [ts^{h}an ^{上}]; CX [ts^{h}e ^{上}]; HS [ts^{h}æ̃^{上}]; HY [ts^{h}an ^{上}]; PJ [ts^{h}an ^{上}]; QY [ts^{h}an ^{上}]; SS [ts^{h}ã ^{上}]; SY(CL) [ts^{h}aŋ ^{陰上}]; XH(BX) [tʂ^{h}ã^{上}]; XX [tɕ^{h}iã^{上}]

CMX *tʃ^{h}an ^{陰上}

拆 chāi QYS *trʰaʳjk

CS [tsʰə 入]; CX [tsʰai 陽平]; HS [tsʰɑ 入白 ~ tsʰæ 入文]; HY [tsʰe 入]; PJ [tsʰaʔ入]; QY [tsʰe 入]; SS [tsʰɛ 入]; SY(CL) [tsʰa 陰平白 ~ tɕʰiɛ 陰平文]; XH(BX) [tʂʰə 入]; XX [tsʰo 陽平]

CMX *tʃʰak 陰入白 ~ *tʃʰɛk 陰入文

This initial is sometimes de-aspirated given that it has apicalized to an alveolar fricative. The tone of 齒 in Shàoyáng Chánglè is irregular.

齒 chǐ QYS *tɕʰɨʔ

CS [tsʰɿ 上]; CX [tʂʰɻ̩ 上]; HS [tsʰɿ 上]; PJ [tʂʰɻ̩ 上]; QY [tsɿ 上]; SS [tʂʰɻ̩ 上]; SY(CL) [tsɿ 陰去]; XH(BX) [tʂʰɻ̩ 上]; XX [tʂʰɻ̩ 上]

CMX *tʃʰi 陰上

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

柱 zhù QYS *druăʔ

CS [tɕy 陽去白 ~ tɕy 陰去文]; CX [tʂu 陽去]; HS [tɕy 陽去]; HY [tɕy 陽去]; PJ [dʑy 陽平]; QY [dʒy 去]; SS [dʐʮ 陽去白 ~ tʂʮ 陰去文]; SY(CL) [dʑy 陽上]; XH(BX) [dʐʰy 上]; XX [dy 陽去]

CMX *dʒy 陽上

Héngshān has a free variation [ʈu] in addition to [tɕy]. Herein only [tɕy] is taken for reconstruction.

直 zhí QYS *drik

CS [tsɿ 入]; CX [tʂʰɻ̩ 陰去]; HS [tɕʰi 上]; HY [tɕi 陽平]; PJ [tʂʰɻ̩ʔ入]; QY [dʒi 入]; SS [tʂʰɻ̩ 陰去白 ~ tʂʰɻ̩ 入文]; SY(CL) [dʐʮ 陽去]; XH(BX) [tʂɻ̩ 入]; XX [tʂʰɻ̩ 陰去]

CMX *dʒit 陽入

床 chuáng QYS *dzɻɑŋ

CS [tɕyan 陽平]; CX [dzaɯ 陽平]; HS [tsʰõ 陽平]; HY [tsuan 陽平]; PJ [dzoŋ 陽平]; QY [dzuaŋ 陽平]; SS [dzaŋ 陽平]; SY(CL) [dzuã 陽平]; XH(BX) [dzʰõ 陽平]; XX [dzaŋ 陽平]

CMX *dʒuɔŋ 陽平

2.4.4 CMX *ʃ-.

沙 shā QYS *ʂa^{r}

CS [sa ^{陰平}]; CX [sɔ ^{陰平}]; HS [sɑ ^{陰平}]; HY [sa ^{陰平}]; PJ [sa ^{陰平}]; QY [sa ^{陰平}]; SS [sua ^{陰平}]; SY(CL) [sa ^{陰平}]; XH(BX) [ʂa ^{陰平}]; XX [so ^{陰平}]

CMX *ʃa ^{陰平}

師 shī QYS *ʂi

CS [sɿ ^{陰平}]; CX [sɿ ^{陰平}]; HS [sɿ ^{陰平}]; HY [sɿ ^{陰平}]; PJ [sɿ ^{陰平}]; QY [sɿ ^{陰平}]; SS [sɿ ^{陰平}]; SY(CL) [sɿ ^{陰平}]; XH(BX) [ʂɻ ^{陰平}]; XX [sɿ ^{陰平}]

CMX *ʃɻ ^{陰平}

燒 shāo QYS *ɕiaw

CS [sau ^{陰平}]; CX [ʂau ^{陰平}]; HS [ɕiou ^{陰平}]; HY [ɕiau ^{陰平}]; PJ [ʂau ^{陰平}]; SS [ʂɔ ^{陰平}]; SY(CL) [ɕiau ^{陰平}]; XH(BX) [ɕyo ^{陰平}]; XX [ɕiao ^{陰平}]

CMX *ʃiɛu ^{陰平}

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

是 sh ì QYS *dʑiă^{ʔ}

CS [sɿ $^{陽去_{白}}$ ~ sɿ $^{陰去_{文}}$]; CX [ʂɻ ^{陽去}]; HS [sɿ ^{陽去}]; HY [sɿ ^{陽去}]; PJ [ʂɻ ^{陽去}]; QY [zɿ ^{去}]; SS [ʂɻ $^{陽去_{白}}$ ~ ʂɻ $^{陰去_{文}}$]; SY(CL) [zɿ $^{陽上_{白}}$ ~ zɿ $^{陽去_{文}}$]; XH(BX) [ʂɻ ^{去}]; XX [dzɿ ^{陽去}]

CMX *ʒi ^{陽上}

神 sh én QYS *ʑin

CS [sən ^{陽平}]; CX [ʂei ^{陽平}]; HS [ɕieɳ ^{陽平}]; HY [ɕin ^{陽平}]; PJ [ʂən ^{陽平}]; QY [ʒin ^{陽平}]; SS [ʂən ^{陽平}]; SY(CL) [ʐeŋ ^{陽平}]; XH(BX) [ʐən ^{陽平}]; XX [ɣiʌn ^{陽平}]

CMX *ʒin ^{陽平}

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 *tʃɻ and *tʃi, 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	tɕi^{45} ~ tɕi^{24}	tʂɻ^{55} ~ tʂɻ^{35}	tʂɻ^{44}	tʂɻ^{55}
2. 智	tɕi^{24}	tʂɻ^{35}	tʂɻ^{324}	tʂɻ^{45}
3. 癡	tɕʰi^{45}	-	tʂʰɻ^{44}	tʂʰɻ^{55}
4. 遲	tɕi^{11}	dʑɻ^{12}	dʑɻ^{324}	dʑɻ^{23}
5. 池	tɕi^{11}	dʑɻ^{12}	dʑɻ^{324}	dʑɻ^{23}
6. 持	tɕi^{11}	dʑɻ^{12}	dʑɻ^{324}	dʑɻ^{23}
7. 治	tɕi^{213}	dʑɻ^{24}	tʂɻ^{324}	dʑɻ^{22}
8. 支	tsɿ^{45}	tsɿ^{55}	tʂɻ^{44}	tʂɻ^{55}
9. 紙	tsɿ^{33}	tsɿ^{42}	-	tʂɻ^{21}
10. 至	tsɿ^{24}	tsɿ^{35}	tʂɻ^{324}	tʂɻ^{45}
11. 志	tsɿ^{24}	tsɿ^{35}	tʂɻ^{324}	tʂɻ^{45}
12. 翅	tsɿ^{24}	tsɿ^{55}	tʂɻ^{324}	tʂɻ^{45}
13. 屍	sɿ^{45}	sɿ^{55}	ʂɻ^{44}	ʂɻ^{55}
14. 始	sɿ^{33}	sɿ^{42}	ʂɻ^{31}	ʂɻ^{55}
15. 時	sɿ^{11}	dzɿ^{12}	ʂɻ^{213}	dʑɻ^{23}
16. 是	sɿ^{213}	zɿ^{21} ~ zɿ^{24}	ʂɻ^{55}	dzɿ^{22}
17. 示	sɿ^{213}	zɿ^{24}	ʂɻ^{55}	dzɿ^{22}

In this Table, the upper seven lexemes behave differently from the lower ten in Héngyáng and Shàoyáng. Xiāngxiāng's exceptions came from dʑɻ > dzɿ 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], [tɕ^{h}], and [dʑ]) 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 *ʈ-. None of the dialects has preserved this initial phonetically.

知 zhī QYS *triă

CS [tsɿ^{陰平}]; CX [tʂɻ^{陰平}]; HS [tɕi^{陰平}]; HY [tɕi^{陰平} ~ tɕi^{陰去}]; PJ [tʂɻ^{陰平}]; QY [tʃi^{陰平}]; SS [tʂɻ^{陰平}]; SY(CL) [tʂɻ^{陰平} ~ tʂɻ^{陰去}]; XH(BX) [tʂɻ^{陰平}]; XX [tʂɻ^{陰平}]

CMX *ʈi^{陰平}

置 zh ì QYS *trɨ^{h}

CS [tsɿ^{陰去}]; CX [tʂɻ^{陰去}]; HS [tɕi^{陰去}]; HY [tɕi^{陰去} ~ tsɿ^{陰去}]; PJ [tʂɻ^{陰去}]; QY [tʃi^{去}]; SS [tʂɻ^{陰去}]; SY(CL) [tsɿ^{陰去}]; XH(BX) [tʂ^{h}ɻ^{入}]; XX [tʂɻ^{陰去}]

CMX *ʈi^{陰去}

The form of 置 in Xīnhu à B áxī is irregular. The apicalized form in H éngy áng possibly involves inter-dialectal borrowing.

2.5.2 CMX *ʈ^{h}-. It has merged into *ts^{h}- in Ch ángshā and Sh àoy áng proper. This final is relatively rare.

癡 chī QYS *tr^{h}iă

CS [ts^{h}ɿ^{陰平}]; CX [tʂ^{h}ɻ^{陰平}]; HS [tɕ^{h}i^{陰平}]; HY [tɕ^{h}i^{陰平}]; PJ [tʂ^{h}ɻ^{陰平}]; QY [tʃ^{h}i^{陰平}]; SS [tʂ^{h}ɻ^{陰平}]; SY [ts^{h}ɿ^{陰平}]; XH(BX) [tʂ^{h}ɻ^{陰平}]; XX [tʂ^{h}ɻ^{陰平}]

CMX * ʈ^{h}i^{陰平}

2.5.3 CMX *ɖ-. This initial is fully or partially devoiced in Ch ángshā, Ch énxī, H éngy áng, and Xīnhu à B áixī. In Xīnhu à it is aspirated.

池 ch í QYS *driă

CS [tsɿ 陽平]; CX [dʐ 陽平]; HS [tɕʰi 陽平]; HY[tɕi 陽平]; PJ [dʐ 陽平]; QY [dʒi 陽平]; SS [dʐ 陽平]; SY(CL) [dʐ 陽平]; XH(BX) [dʑʰ 陽平]; XX [dʐ 陽平]

CMX *ɖi 陽平

治 zh ì QYS *drɨʰ

CS [tsɿ 陽去]; CX [tʂ 陰去]; HS [tɕi 陽去]; HY [tɕi 陽去]; PJ [dʐ 陽去]; QY [dʒi 去]; SS [tʂ 陰去]; SY(CL) [dʐ 陽去]; XH(BX) [tʂʰ 入]; XX [dʐ 陽去]

CMX *ɖi 陽去

2.5.4 CMX *ɻ-. Parallel with *ʋ- in 2.1.5, this initial is a literary form. However it is the regular correspondence to MC R ìmǔ (日母) with most popular lexemes, and has been reconstructed as the main layer of CMX. The two forms in Sh àoy áng Ch ángl è for lexeme 然 are likely both derivates of an earlier [ʑiɛ̃], evidenced from the nearby C àiqi áo dialect (Wang, 2013, p. 242).

日 r ì QYS *ɲit

CS [zɿ 入]; CX [ʐ 陰去 ~ ɚ 上]; HS [ɲĩ 入]; HY [ɕi 陽平]; PJ [ɲi ʔ 入]; QY [ɲi 入白 ~ ʒi 入文]; SS [ɲẽ 入白 ~ ʐ 入文]; SY(CL) [ȵ 陰平白 ~ ʐ 陽去文]; XH(BX) [ɳ 陰平白 ~ dʑʰ 入文]; XX [i 陽平]

CMX *nit 陽入白 ~ *ɻit 陽入文

然 r án QYS *ɲian

CS [yẽ 陽平]; CX [ʐe 陽平]; HS [ĩ 陽平]; HY [ɕien 陽平]; PJ [yan 陽平]; QY [ʒian 陽平]; SS [ẽ 陽平]; SY(CL) [iɛ̃ 陽平白 ~ ʑiɛ 陽平文]; XH(BX) [ʐə 陽平]; XX [iĩ 陽平]

CMX *ɻiɛn 陽平

The special rhotic vowel [ɚ] is reconstructed as *ɻi. It syllabicized into a syllabic approximant *ɻ before vocalizing to [ɚ]. The vernacular form of 兒 [ʐ] in Sh áoshān is likely a fortition from *ɻ.

兒 ér QYS *ɲiă

CS [ə 陽平]; CX [ɚ 陽平 ~ ɚ 陰去]; HS [ɯ 陽平]; HY [ə 陽平]; PJ [œy 陽平]; QY [ɚ 陽平]; SS [ʐʮ 陽平白 ~ ɛ 陽平文]; SY(CL) [ei 陽平]; XH(BX) [ə 陽平]; XX [ai 陽平]

CMX *ɻi 陽平

耳 ěr QYS *ɲiʔ

CS [ə 上]; CX [ɚ 上]; HS [ɯ 上]; HY [ə 上]; PJ [œy 上]; QY [ɚ 上]; SS [ɛ 上]; SY(CL) [ei 陰上]; XH(BX) [ə 上]; XX [ai 上]

CMX *ɻi 陰上

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 Sh áoshān dialect has later merged the glide *y- into u-, the corresponding palatal initials have apicalized to retroflexes.

幹 g àn QYS *kan^{h}

CS [kan 陰去]; CX [ke 陰去]; HS [kæ̃ 陰去]; HY [kan 陰去]; PJ [k øn 陰去]; QY [kan 去]; SS [kã 陰去]; SY(CL) [kaŋ 陰去]; XH(BX) [kã 去]; XX [kuã 陰去]

CMX *kɔn 陰去

見 ji àn QYS *kɛn^{h}

CS [tɕiẽ 陰去]; CX [tɕie 陰去]; HS [tɕĩ 陰去]; HY [tɕien 陰去]; PJ [tɕian 陰去]; QY [tʃian 去]; SS [cẽ 陰去]; SY(CL) [tɕiɛ̃ 陰去]; XH(BX) [tɕiɛ̃ 去]; XX [kiĩ 陰去]

CMX *kiɛn 陰去

卷 juǎn QYS *kwian^{ʔ}

CS [tɕyẽ 上]; CX [tɕye 上]; HS [ʈuẽĩ 上]; HY [tɕyen 上]; PJ [tɕyan 上]; QY [tʃyan 上]; SS [tʂuẽ 上]; SY(CL) [tɕyɛ 陰上]; XH(BX) [tɕyɛ̃ 上]; XX [tyĩ 上]

CMX *kyɛn 陰上

2.6.2 CMX *k^h-.

開 kāi QYS *k^həj

CS [k^hai 陰平]; CX [k^he 陰平]; HS [k^hæ 陰平]; HY [k^hai 陰平]; PJ [k^hɛi 陰平]; QY [k^hai 陰平]; SS [k^hɛ 陰平]; SY(CL) [k^hai 陰平]; XH(BX) [k^hə 陰平]; XX [k^huai 陰平]

CMX *k^hɔi 陰平

起 qǐ QYS *k^hɨʔ

CS [tɕ^{h}i 上]; CX [tɕ^{h}i 上]; HS [ɕi 上白 ~ tɕ^{h}i 上文]; HY [tɕ^{h}i 上]; PJ [tɕ^{h}i 上]; QY [ʃi 上白 ~ tʃ^{h}i 上文]; SS [c^{h}i 上]; SY(CL) [tɕ^{h}i 陰上]; XH(BX) [tɕ^{h}i 上]; XX [k^hi 上]

CMX *k^hi 陰上

2.6.3 CMX *ɡ-. It is devoiced in Chángshā, Héngshān, and Héngyáng dialects. In Chénxī and Bǎoxī of Xīnhuà it is partially devoiced. It is aspirated in Xīnhuà and partially so in Héngshān.

強 qiáng QYS *ɡiɑŋ

CS [tɕian 陽平]; CX [dʑiaɯ 陽平]; HS [ɬ^{h}õ 陽平]; HY [tɕian 陽平]; PJ [dʑioŋ 陽平]; QY [dʒiaŋ 陽平]; SS [ɻaŋ 陽平]; SY(CL) [dʐã 陽平]; XH(BX) [tɕ^{h}iɑ̃ 陽平]; XX [ɡiaŋ 陽平]

CMX *ɡiɔŋ 陽平

狂 kuáng QYS *ɡuɑŋ

CS [kuan 陽平]; CX [guaɯ 陽平]; HS [xõ 陽平]; HY [kuan 陽平]; PJ [ɡoŋ 陽平]; QY [guaŋ 陽平]; SS [guaŋ 陽平]; SY [guã 陽平]; XH(BX) [k^hõ 陽平]; XX [ɡaŋ 陽平]

CMX *ɡuɔŋ 陽平

舅 jiù QYS *ɡuwʔ

CS [tɕiəu 陰去]; CX [tɕiəu 陽去]; HS [ɬæu 陽去]; HY [tɕiu 陽去]; PJ [dʑiəu 陽去]; QY [dʒiəɯ 去]; SS [ɻiəɯ 陽去白 ~ ciəɯ 陰去文]; SY(CL) [dʑiəu 陽去]; XH(BX) [dʑ^{h}iu 上]; XX [ɡiei 陽去]

CMX *ɡiu 陽上

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

There is a trend in Xiāng dialects for the zero-initial syllables beginning with non-high vowels to add an epenthetic ŋ- at the onset. The contrast between a syllable of CMX *ŋ- 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 *ŋ- and initial zero

CMX	CX	HY	PJ	SS
呆 *ŋɔi 陽平	ŋai **陽**平	ŋai **陽**平	ŋai **陽**平	ŋɛ **陽**平
哀 *ɔi 陰平	ŋai 陰平	ŋai 陰平	ŋai 陰平	ŋɛ 陰平
礙 *ŋɔi 陽去	ŋai **陽**去	ŋai **陽**去	-	ŋɛ **陽**去
愛 * ɔi 陰去	ŋai 陰去	ŋai 陰去	ŋɛi 陰去	ŋɛ **陰**去
藕 *ŋɛu 陽上	ŋəu 上	ŋəu 上	ŋəu 上	ɲiɔ 上
嘔 *ɛu 陰上	ai 上	əu 上	ŋəu 上	ɲiɔ 上
岸 *ŋɔn 陽去	ŋai **陽**去	ŋan 陰去	ŋ ɵn **陽**去	uĩ**陽**去
暗 *ɔn 陰去	ŋe 陰去	ŋan 陰去	ŋ ɵn 陰去	uĩ陰去
驗 *ŋiɛn 陽去	nie **陽**去	ŋien **陽**去	ŋ̇ian **陽**去	ɲĩ**陽**去
燕 *iɛn 陰去	ie 陰去	ien 陰去	ian 陰去	ĩ陰去

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

岸 àn QYS *ŋan^{h}

CS [ŋan 陽去白 ~ ŋan 陰去文]; CX [ŋai 陽去]; HS [ŋæ̃陽去]; HY [ŋan 陰去]; PJ [ŋ ɵn 陽去]; QY [ŋan 去]; SS [ŋõ陽去白1 ~ ŋã̃陽去白2 ~ ŋã̃陰去文]; SY(CL) [ŋaŋ 陰去]; XH(BX) [ã去]; XX [uã陽去]

CMX *ŋɔn 陽去

礙 ài QYS *ŋəj^{h}

CS$_2$ [ŋai 陽去白 ~ ŋai 陰去文]; CX [ŋai 陽去]; HS [ŋæ 陽去]; HY [ŋan 陽去]; ML(CL) [ŋa 陽去白 ~ ŋa 陰去文]; QY [ŋai 去]; SS [ŋɛ 陰去]; SY(CL) [ŋai 陰去]; XH(BX) [æ 去]; XX[uai 上 ~ uai 陽去]

CMX *ŋɔi 陽去

In Shàoyáng Chánglè, this initial has hardened to the voiced velar stop [ɡ] 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 Héngshān involves certain inflectional changes associated with its tone. It is out of the scope of this dissertation and is omitted herein.

我 wǒ QYS *ŋɑʔ

CS [ŋo 上]; CX [ŋo 上]; HS [ŋo 上]; HY [ŋo 上]; PJ [ŋo 上]; QY [ŋo 上]; SS [ŋʊ 上]; SY(CL) [ɡo 陽上白 ~ ŋo 陰上文]; XH(BX) [o 上]; XX [ŋ̍ 上白 ~ ŋõ 上文]

CMX *ŋɔ 陽上

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

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

	HY	CMX
宜 QYS	ŋi^{11}	*ŋi 陽平
尼 QYS	ni^{11}	*ni 陽平
驗 QYS	ŋien^{213}	*ŋiɛn 陽去
念 QYS	nien^{213}	*niɛn 陽去
仰 QYS	ŋian^{33}	*ŋiaŋ 陽上
讓 QYS	nian^{213} 白 ~ ȵian^{213} 文	*niaŋ 陽去白 ~ *ȵiaŋ 陽去文
愚 QYS	ŋy^{11}	*ŋy 陽平
女 QYS	ny^{33}	*ny 陽上
虐 QYS	nio^{11}	*ŋiɔk 陽入
弱 QYS	nio^{11}	*niɔk 陽入

業 yè QYS *ŋɨap

CS [ŋ̍ie 入]; CX [nie 陽平]; HS [ŋ̍e 入]; HY [ŋie 陽平]; PJ [ŋ̍iɛʔ 入]; QY [ŋ̍ie 入]; SS [ɲiɛ 入]; SY(CL) [iɛ̃ 陰平]; XH(BX) [iɛ̃ 去]; XX [ŋiã 陽平]

CMX *ŋiɛt 陽入

Shàoyáng and Xīnhuà's -iɛ̃ 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^{13}	ŋəu^{22}	əu^{55}	əu^{35}
XX	ŋõ^{23}	ŋõ^{22}	u^{55}	u^{45}
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 M ìluó Ch ángl è, The syllable 外 bears a velar nasal ŋ- in its popular layer.

外 w ài QYS *ŋwaj^{h}

CS [uai$^{陽去_{白}}$ ~ uai$^{陰去_{文}}$]; CX [uai^{陽去}]; HS [uæ^{陽去}]; HY [uai^{陽去}]; ML(CL) [ŋa^{陽去} ~ ua^{陽去}]; PJ [uai^{陽去}]; QY [ɣuai^{去}]; SS [uɛ$^{陽去_{白}}$ ~ uɛ$^{陰去_{文}}$]; SY(CL) [uei^{陰去}]; XH(BX) [uə^{去}]; XX [uai^{陽去}]

CMX *ŋuɔi^{陽去}

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^{r}

CS [ŋa$^{陽平_{白}}$ ~ ia$^{陽平_{文}}$]; CX [ŋɔ^{陽平}]; HS [ŋɑ$^{陽平_{白}}$ ~ iɑ$^{陽平_{文}}$]; HY [ŋa$^{陽平_{白}}$ ~ ia$^{陽平_{文}}$]; PJ [ŋa$^{陽平_{白}}$ ~ ia$^{陽平_{文}}$]; QY [ŋa$^{陽平_{白}}$ ~ ia$^{陽平_{文}}$]; SS [ŋa$^{陽平_{白}}$ ~ ia$^{陽平_{文}}$]; SY(CL) [ga$^{陽平_{白}}$ ~ ŋa$^{陽平_{文}}$]; XH(BX) [a$^{陽平_{白}}$ ~ ia$^{陽平_{文}}$]; XX [ŋõ^{陽平}]

CMX *ŋa$^{陽平_{白}}$ ~ *ia$^{陽平_{文}}$

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 [ʂ]. In

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

灰 hūi QYS *xwəj

CS [fei 陰平]; CX [xuei 陰平]; HS [fei 陰平]; HY [fei 陰平]; PJ [fi 陰平白 ~ fɛi 陰平文]; QY [xuei 陰平]; SS [xuei 陰平]; SY(CL) [huei 陰平]; XH(BX) [xuə 陰平]; XX [xuai 陰平]

CMX * xuɔi 陰平

香 xiāng QYS *xiɑŋ

CS [ɕian 陰平]; CX [ɕiaɯ 陰平]; HS [ɕiõ陰平]; HY [ɕian 陰平]; PJ [ɕioŋ 陰平]; QY [ʃiaŋ 陰平]; SS [ɕiaŋ 陰平]; SY(CL) [ʂã陰平]; XH(BX) [ɕyõ陰平]; XX [ɕiaŋ 陰平]

CMX *xiɔŋ 陰平

Most Xiāng dialects have merged the CMX syllables *xu with *fu. However, Xīnn ńg (新寧), Ānhu à Ji èp âi (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^{44}	xu^{53}	fu^{44}	fu^{53}
GY	xu^{13}	xu^{55}	fu^{13}	fu^{55}
CMX	*xu 陰平	*xu 陰上	*fu 陰平	*fu 陰上

2.6.6 CMX *ɣ-. This initial is generally preserved in Xiāngxiāng and Q ýy áng. It went through dramatic sound changes in dialects like Ch ángshā and H éngy áng, where it devoices 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^{33}	xu^{35}	fu^{33}	fu^{35}
CMX	*ɣu 陽平	*ɣu 陽去	*vu 陽平	*vu 陽去

鞋 xié QYS *ɣaʳj

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

CMX *ɣai 陽平

熊 xióng QYS *wuwŋ

CS [ɕin 陽平]; CX [ɕiəɯ 陽平]; HS [ɕyeŋ 陽平]; HY [ɕin 陽平]; PJ [ɕiəŋ 陽平]; QY [ʒioŋ 陽平]; SS [ɕiən 陽平]; SY(CL) [ʂõŋ 陽平]; XH(BX) [tɕʰyn 陽平]; XX [ɣin 陽平]

CMX *ɣiuŋ 陽平

Xīnhuà's merger of *ɣ- into *ɡ- 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 Qúyáng 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 huà QYS *ɣwaʳjʰ

CS [fa 陽去白 ~ fa 陰去文]; CX [xua 陽去]; HS [uɑ 陽去白 ~ fɑ 陽去文]; HY [fa 陽去 ~ ua 陽去]; PJ [fa 陽去]; QY [ua 去白 ~ ua 去文]; SS [ua 陽去白 ~ ua 陰去文]; SY(CL) [va 陽去]; XH(BX) [xua 入]; XX [o 陽去]

CMX *ɣua 陽去

回 huí QYS *ɣwəj

CS [fei 陽平]; CX [uei 陽平白 ~ xuei 陽平文]; HS [fei 陽平]; HY [fei 陽平]; PJ [fɛi 陽平]; QY [ɣuei 陽平]; SS [xuei 陽平]; SY(CL) [uei 陽平]; XH(BX) [ɣuə 陽平]; XX [ɣuai 陽平]

CMX *ɣuɔi 陽平

位 wèi QYS *ɣwiʰ

CS [uei 陽去白 ~ uei 陰去文]; CX [uei 陽去]; HS [uei 陽去]; HY [ui 陽去]; PJ [uɛi 陽去]; QY [ɣuei 去];

SS [uei 陽去白 ~ uei 陰去文]; SY(CL) [uei 陰去]; XH(BX) [uə 去]; XX [uei 陽去]

CMX *ɣuɛi 陽去

王 wáng QYS *ɣuɑŋ

CS [uan 陽平]; CX [uaɯ 陽平]; HS [õ陽平]; HY [uan 陽平]; PJ [uoŋ 陽平]; QY [ɣuaŋ 陽平]; SS [uaŋ 陽平]; SY(CL) [vã陽平]; XH(BX) [õ陽平]; XX [uaŋ 陽平]

CMX *ɣuɔŋ 陽平

In Hóngshān the lexeme 王 has another free variation [ŋ̍陽平]. 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 *ʔaˈp

CS [ŋa 入白 ~ ia 入文]; CX [ɔ 陰平]; HS [ɑ 入白 ~ iɑ 入文]; HY [ŋa 入白 ~ ia 入文]; PJ [ŋɒʔ入]; QY [ia 入]; SS [ŋã入白 ~ ia 入文]; SY(CL) [a 陰平]; XH(BX) [ia 入]; XX [ŋã陽平]

CMX *at 陰入白 ~ *iat 陰入文

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

移 yí QYS *jiă

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

CMX *i 陽平

遠 yuǎn QYS *wuanʔ

CS [yẽ上]; CX [ye 上]; HS [yẽi上]; HY [yen 上]; PJ [yan 上]; QY [yan 上]; SS [uẽ上]; SY(CL) [yɛ 陰上]; XH(BX) [yɛ̃上]; XX [yĩ上]

CMX *yɛn 陰上

彎 wān QYS *ʔwaʳn

CS [uan 陰平]; CX [ue 陰平]; HS [uæ̃陰平]; HY [uen 陰平]; PJ [uan 陰平]; QY [uan 陰平]; SS [uã陰平]; SY(CL) [uã陰平]; XH(BX) [uã陰平]; XX [uã陰平]

CMX *uan 陰平

2.8 Summary of CMX Initials

As the reconstruction process shows, the CMX initial system is stratified. The vernacular forms observed for initials *p^h-, *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.

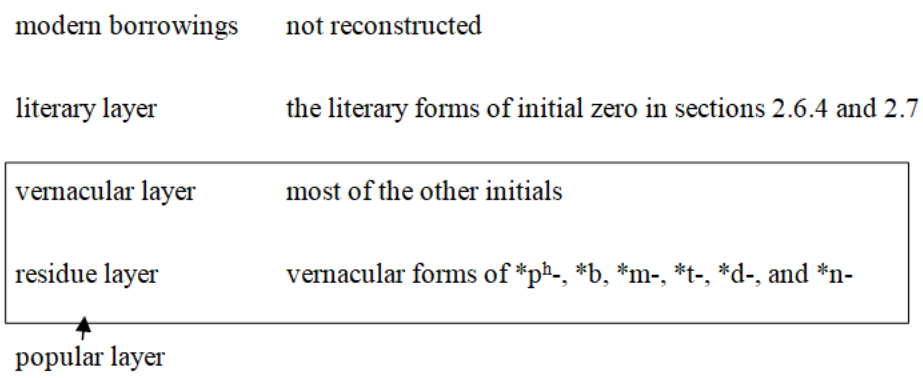


Figure 2.1: a diagram for layers of CMX initials

3. Syllabic Finals of Common Xiāng

All the reconstructed syllabic finals in CMX are elaborated below:

Finals without consonantal codas

a	ɔ	ɛ			ɿ/ʅ	ai	ɔi	ɛi	au	ɛu
(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	ɔt		ət	ak	ɔk	ɛk	
(ian)		iɛn	in	iaŋ	(iɒŋ)	iɔŋ	iŋ	iuŋ	(iat)		iɛt	it	iak	iɔk		iuk
uan	uɔn		un	uaŋ		uɔŋ	uəŋ	uŋ	uat	uɔt		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 Chéɲxī and -o in Xiāngxiāng. Sháoshān's diphthong is described as [ụa] after labials by the source. It might have come from *-a > *-ɔ > *-uɔ > *-ua, yet the origin requires further examination.

罵 mà QYS *ma^{rh}

CS [ma $^{陽去}_{白}$ ~ ma $^{陰去}_{文}$]; CX [mɔ ^{陽去}]; HS [mɑ ^{陽去}]; HS [ma ^{陽去}]; PJ [ma ^{陽去}]; QJ [ma ^{去}]; SS [mua $^{陽去}_{白}$ ~ mua $^{陰去}_{文}$]; SY(CL) [ma ^{陰平}]; XH(BX) [ma $^{陽平}_{白}$ ~ ma $^{去}_{文}$]; XX [mõ^{陽去}]

CMX *ma ^{陽去}

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

茶 chá QYS *dra^{r}

CS [tsa ^{陽平}]; CX [dzɔ ^{陽平}]; HS [ts^{h}ɑ ^{陽平}]; HY [tsua $^{陽平}_{白}$ ~ tsa $^{陽平}_{文}$]; PJ [dza ^{陽平}]; QY [dza ^{陽平}]; SS [dza $^{陽平}_{白}$ ~ dzua $^{陽平}_{文}$]; SY(CL) [dza ^{陽平}]; XH(BX) [dʐ^{h}a ^{陽平}]; XX [dzo ^{陽平}]

CMX *dʒa 陽平

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^{r}

CS [ka 陰平白 ~ tɕia 陰平文]; CX [ka 上 ~ kɔ 陰平 ~ tɕia 陰平]; HS [kɑ 陰平白 ~ tɑ 陰平文]; HY [ka 陰平白 ~ tɕia 陰平文]; PJ [ka 陰平白 ~ tɕia 陰平文]; QY [ka 陰平白 ~ tʃia 陰平文]; SS [ka 陰平白 ~ cia 陰平文]; SY(CL) [ka 陰平白 ~ tɕia 陰平文]; XH(BX) [tɕia 陰平]; XX [ka 陰去 ~ ko 陰去白 ~ kio 陰去文]

CMX *ka 陰去白 ~ *kia 陰去文

Specifically, Chénxī and Xiāngxiāng seemingly have an additional layer for this lexeme 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^{31}] 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$^{r?}$

CS [xa 陽去白1 ~ ɕia 陽去白2 ~ ɕia 陰去文]; CX [xa 上白 ~ ɕia 陽去文]; HS [xɑ 陽去白 ~ ɕiɑ 陽去文]; HY [xa 陽去白 ~ ɕia 陽去文]; PJ [xa 陽去]; QY [ɣa 去白 ~ ʃia 去文]; SS [ɕa 陽去白 ~ ɕa 陰去文]; SY(CL) [ɦa 陽上白 ~ ʑia 陽去文]; XH(BX) [ʑia 入]; XX [ɣo 陽去白 ~ ɣio 陽去文]

CMX *ɣa 陽上白 ~ *ɣia 陽去文

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^{rh}

CS [tɕia 陰去]; CX [tɕia 陰去]; HS [tɑ 陰去]; HY [tɕia 陰去]; PJ [tɕia 陰去]; QY [tʃia 去]; SS [cia 陰

去]; SY(CL) [tɕia 陰去]; XH(BX) [tɕia 去]; XX [kio 陰去]

CMX *kia 陰去

衙 yá QYS *ŋa^{r}

CS [ia 陽平]; CX [ia 陽平]; HS [iɑ 陽平]; HY [ia 陽平]; PJ [ia 陽平]; QY [ia 陽平]; SS [ŋa 陽平白 ~ ia 陽平文]; SY(CL) [ia 陽平]; XH(BX) [ia 陽平]; XX [ŋõ 陽平]

CMX *ŋa 陽平白 ~ *ia 陽平文

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

抓 zhuā QYS *tʂa^{r}w

CS [tɕya 陰平]; CX [tsua 陰平]; HS [yɑ 上白1 ~ ʈuɑ 上白2 ~ ʈuɑ 陰平文]; HY [tsua 陰平]; PJ [tsa 陰平]; QY [tsua 陰平]; SS [tʂua 陰平白 ~ tsua 陰平文]; SY [tsua 陰平]; XH(BX) [tɕya 陰平]; XX [tso 陰平]

CMX *tʃua 陰平

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

瓜 guā QYS *kwa^{r}

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

CMX *kua 陰平

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

Table 3.1: contrast between *-ya and *-yɔ

	HY	LX	PJ	QY	CMX
茄	tɕia^{11}	dʑya^{24}	dʑia^{23}白	dʒia^{11}	*ɡya 陽平白
瘸	tɕya^{11}	-	dʑya^{23}	dʒya^{11}	*ɡyɔ 陽平白
靴	ɕya^{45}白	ɕio^{33}白	ɕya^{55}	ʃya^{45}白	*xyɔ 陰平白

茄 qié QYS *gɑ

CS [tɕie 陽平]; CX [dʑya 陽平]; HS [ʈʰuɑ 陽平]; HY [tɕia 陽平]; PJ [dʑia 陽平白 ~ tɕiʰɛ 陽平文]; QY [dʒia 陽平]; SS [ɟia 陽平]; SY(CL) [dʑia 陽平白 ~ dʑiɛ 陽平文]; XH(BX) [dʑia 陽平]; XX [do 陽平 ~ gio 陽平]

CMX *gya 陽平白 ~ *giɛ 陽平文

The consonant of the literary form of 茄 in Pángjiāng Cénchuān is irregular.

3.1.5 CMX *-ɔ. Chénxī's regular realization is -o, and lowers to -ɔ only in yīnqù (陰去) and yángqù (陽去) tones. The detail will be covered in section 5.1.4.

籮 luó QYS *lɑ

CS [lo 陽平]; CX [lo 陽平 ~ lɔ 陰去]; HS [lo 陽平]; HY [lo 陽平]; PJ [lo 陽平]; QY [lo 陽平]; SS [lʊ 陽平]; SY(CL) [lo 陽平]; XH(BX) [lo 陽平]; XX [lʊ 陽平]

CMX *lɔ 陽平

個 gè QYS *kɑʰ

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

CMX *kɔ 陰去

3.1.6 CMX *-iɔ. 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 *-iɔ and *-ia/-a is observed mainly in western Húnán Province, shown in Table 3.2. The vernacular form [sio^{42}] for syllable 灑 in Lúxī Xīnglóngchǎng may represent an unidentified etymon, and is not compared here. Chénxī raises the final to -io in shǎng (上) tone, otherwise retains -iɔ.

Table 3.2: contrast between *-iɔ and *-ia

	捨	灑	爺	衙	野	雅
CX	ʂo^{31}	sa^{31}	iɔ^{213}白	ia^{213}	io^{31}白	ia^{31}
LX	ʂo^{42}	sa^{42}文	io^{24}白	ia^{24}	io^{42}白	ia^{42}
CMX	*ʃiɔ 陰上	*ʃa 陰上	*iɔ 陽平白	*ia 陽平	*iɔ 陰上白	*ia 陰上

姐 jiě QYS *tsiɑʔ

CS [tɕie 上]; CX [tɕio 上白 ~ tɕie 上文]; HS [tɕiɑ 上白 ~ tɕie 上文]; HY [tɕia 上白 ~ tɕie 上文]; PJ [tɕia 上]; QY [tʃia 上白 ~ tʃie 上文]; SS [tsia 上白 ~ tsiɛ 上文]; SY(CL) [tsi 上白 ~ tsiɛ 上文]; XH(BX) [tɕia 上白 ~ tɕiɛ 上文]; XX [tɕia 陰去白 ~ tɕio 上文]

CMX *tsiɔ 上白 ~ *tsiɛ 上文

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

扯 chě QYS *tɕʰiɑʔ

CS [tsʰə 上]; CX [tʂʰo 上]; HS [tʂʰɑ 上白 ~ tɕʰie 上文]; HY [tɕʰia 上白 ~ tɕʰie 上文]; PJ [tʂʰa 上]; QY [tʃʰia 上白 ~ tʃʰie 上文]; SS [tʂʰua 上白 ~ tʂʰɛ 上文]; SY(CL) [tʂʰa 上白 ~ tɕʰiɛ 上文]; XH(BX) [tʂʰa 上]; XX [tʰo 上]

CMX *tʃʰiɔ 上白 ~ *tʃʰiɛ 上文

爺 yé QYS *jiɑ

CS [ia 陽平白 ~ ie 陽平文]; CX [iɔ 陽平白 ~ ie 陽平文]; HS [iɑ 陽平白 ~ ie 陽平文]; HY [ia 陽平白 ~ ie 陽平文]; PJ [ia 陽平白 ~ iɛ 陽平文]; QY [ia 陽平白 ~ ie 陽平文]; SS [ia 陽平白 ~ iɛ 陽平文]; SY(CL) [ia 陽平]; XH(BX) [iɛ 陽平]; XX [io 陽平]

CMX *iɔ 陽平白 ~ *iɛ 陽平文

3.1.7 CMX *-uɔ. In Húnán Province, this final contrasts *-ɔ in a few dialects like Héngshān 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 *-uɔ monophthongized into Héngshān *-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^{11} 白 ~ lo^{11} 文	ku^{33} 白 ~ ko^{33} 文	fu^{13} 白 ~ xo^{13} 文	lo^{11}	ko^{33}
QZ	luo^{13}	kuo^{33}	xuo^{53}	lo^{13}	ko^{33}
CMX	*luɔ 陽平	*kuɔ 陰平	*xuɔ 陰上	*lɔ 陽平	*kɔ 陰平

婆 pó QYS *bwɑ

CS [po 陽平]; CX [bo 陽平]; HS [p^{h}u 陽平 白 ~ p^{h}o 陽平 文]; HY [po 陽平]; PJ [bu 陽平]; QY [bo 陽平]; SS [bʊ 陽平]; SY(CL) [bo 陽平]; XH(BX) [b^{h}o 陽平]; XX [bʊ 陽平]

CMX *buɔ 陽平

鎖 suǒ QYS *swɑ^{ʔ}

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

CMX *suɔ 陰上

過 guò QYS *kwɑ^{h}

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

CMX *kuɔ 陰去

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

靴 xuē QYS *xuɑ

CS [ɕye 陰平]; CX [ɕye 陰平]; HS [ɕyɑ 陰平]; HY [ɕya 陰平 白 ~ ɕye 陰平 文]; PJ [ɕya 陰平]; QY [ʃya 陰平 白 ~ ʃye 陰平 文]; SS [ʂua 陰平]; SY(CL) [ɕyɛ 陰平]; XH(BX) [ɕia 陰平]; XX [ɕio 陰平]

CMX *xyɔ 陰平 白 ~ *xyɛ 陰平 文

瘸 qué QYS *gɥɑ

CS [tɕya 陽平 ~ tɕye 陽平]; CX [tɕya 陽平]; HS [ʈ^{h}uɑ 陽平]; HY [tɕya 陽平]; NX [tʂua 陽平]; PJ [dʑya 陽平]; QY [dʒya 陽平]; SY [dʑia 陽平]; XH [ʑya 陽平]; XX [do 陽平]

CMX *ɡyɔ 陽平白 ~ *ɡyɛ 陽平文

3.1.9 CMX *-ɛ. It is an ancient residue found only in a few vernacular forms of QYS Y úy ùn (魚韻) syllables, usually with dorsal initials. It is usually unfronted to -ə, and may undergo *-ə > *-ɯ > -i subsequently. Lexeme 鋸 has yet another vernacular final *-ai, evidenced from Ch énxī, H éngshān, and Xiāngxiāng. Thus, three layers are reconstructed, though their exact relashionship requires further study.

鋸 j ù QYS *kɨă^{h}

CS [kə 陰去白 ~ tɕy 陰去文]; CX [ka 陰去白1 ~ ki 陰去白2 ~ tɕy 陰去文]; HS [kæ 陰去白 ~ tɕy 陰去文]; HY [tɕy 陰去]; PJ [tɕi 陰去白 ~ tɕy 陰去文]; QY [tʃy 去]; SS [kɛ 陰去白 ~ tʂɥ 陰去文]; SY(CL) [tɕy 陰去]; XH(BX) [tɕy 去]; XX [ka 陰去白1 ~ ki 陰去白2 ~ ty 陰去文]

CMX *kai 陰去白1 ~ *kɛ 陰去白2 ~ *ky 陰去文

去 q ù QYS *k^{h}ɨă^{h}

CS [k^{h}ə 陰去白 ~ tɕ^{h}y 陰去文]; CX [k^{h}e 陽平白 ~ tɕ^{h}y 陰去文]; HS [k^{h}ɯ 陰去白1 ~ xɯ 陰去白2 ~ tɕ^{h}y 陰去文]; HY [k^{h}e 去白 ~ tɕ^{h}y 陰去]; PJ [tɕ^{h}i 陰去]; QY [k^{h}e 去白 ~ tʃ^{h}y 去文]; SS [c^{h}i 陰去白 ~ tʂ^{h}ʮ 陰去文]; SY(CL) [tɕ^{h}i 陰去白 ~ tɕ^{h}y 陰去文]; XH(BX) [tɕ^{h}i 入白 ~ tɕ^{h}y 入文]; XX [k^{h}i 陰去白 ~ t^{h}y 陰去文]

CMX *k^{h}ɛ 陰去白 ~ *k^{h}y 陰去文

3.1.10 CMX *-iɛ. This final contains syllables in literary readings that are possibly borrowed from some northern source. The corresponding popular finals are *-ya and *-iɔ 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 *tɕiɑ^{ʔ}

CS [tsə 上]; CX [tʂe 上]; HS [ʈæ 上白 ~ ʈe 上文]; HY [tɕie 上]; PJ [tʂa 上]; QY [tʃie 上]; SS [tʂɛ 上]; SY(CL) [tɕiɛ 陰上]; XH(BX) [tʂə 上]; XX [tia 上]

CMX *tʃiɔ 陰上白 ~ *tʃiɛ 陰上文

瀉 xi è QYS *siɑ^{h}

CS [ɕie 入]; CX [ɕie 陰去]; HS [ɕiɑ 陰去白 ~ ɕie 陰去文]; HY [ɕia 陰去白 ~ ɕie 陰去文]; PJ [ɕia 陰去白 ~

ɕie 陰去文]; QY [ʃie 去]; SS [siɛ 入]; SY(CL) [siɛ 陰去]; XH(BX) [ɕie 去]; XX [ɕio 陰去]

CMX *siɔ 陰去白 ~ *siɛ 陰去文

The tones for Sh áoshān and Ch ángshā'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 lexemes have vernacular final *-ɛi (to be discussed in 3.3.6).

比 bǐ QYS *pji^{ʔ}

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

CMX *pi 陰上

旨 zhǐ QYS *tɕi^{ʔ}

CS [tsɿ 上]; CX [tʂɻ 上]; HS [tsɿ 上]; HY [tsɿ 上]; PJ [tʂɻ 上]; QY [tsɿ 上]; SS [tʂɻ 上]; SY(CL) [tsɿ 上]; XH(BX) [tʂɻ 上]; XX [tʂɻ 上]

CMX *tʃi 陰上

基 jī QYS *kɨ

CS [tɕi 陰平]; CX [tɕi 陰平]; HS [tɕi 陰平]; HY [tɕi 陰平]; PJ [tɕi 陰平]; QY [tʃi 陰平]; SS [ci 陰平]; SY(CL) [tɕi 陰平]; XH(BX) [tɕi 陰平]; XX [ki 陰平]

CMX *ki 陰平

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

CMX *fi 陰平

肥 féi QYS *buj

CS [fei 陽平], CX [vi 陽平]; HS [fei 陽平]; HY [fei 陽平]; PJ [fi 陽平]; QY [vi 陽平]; SS [xuei 陽平]; SY(CL) [vi 陽平]; XH [bʰi 陽平白 ~ vɤ 陽平文]; XH(BX) [ɣuə 陽平]; XX [ɣuei 陽平]

CMX *bi 陽平白 ~ vi 陽平文

3.2.2 CMX *-u. In dialects like Chángshā and Chénxī, there is a vowel breaking rule: ∅ → ə / [+coronal, +consonantal] __ u, resulting in -əu. Héngshān undergoes a further change to -æu, while Shàoshān changes to -əɯ. 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 Péngjiāng.

墓 mù QYS *mɔʰ

CS [mo 陰去]; CX [mu 陽去]; HS [mu 陽去]; HY [mu 陽去]; PJ [mo 陽去]; QY [mu 去]; SS [mʊ 陽去白 ~ mʊ 陰去文]; SY(CL) [mə̃陰去]; XH(BX) [mo 去]; XX [mõ陽去]

CMX *mu 陽去

組 zǔ QYS *tsɔʔ

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

CMX *tsu 陰上

故 gù QYS *kɔʰ

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

CMX *ku 陰去

3.2.3 CMX *-iu. This final contains a glide i- and a nucleus [u]. Héngyáng, 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 *tɕʰuwˀ

CS [tsʰəu ˩˧]; CX [tʂʰəu ˩˧]; HS [tʵʰæu ˩˧]; HY [tɕʰiu ˩˧]; PJ [tʂʰəu ˩˧]; QY [tʃʰiəɯ ˩˧]; SS [tʂʰəɯ ˩˧]; SY(CL) [tɕʰiəu ˩˧]; XH(BX) [tʂʰəu ˩˧]; XX [tʵʰiei ˩˧]

CMX *tʃʰiu ˩˧

修 xiū QYS *suw

CS [ɕiəu ˥]; CX [ɕiəu ˥]; HS [ɕiæu ˥]; HY [ɕiu ˥]; PJ [ɕiəu ˥]; QY [ʃiəɯ ˥]; SS [siəɯ ˥]; SY(CL) [siəu ˥]; XH(BX) [ɕiu ˥]; XX [ɕiei ˥]

CMX *siu ˥

油 yóu QYS *juw

CS [iəu ˧˥]; CX [iəu ˧˥]; HS [iæu ˧˥]; HY [iu ˧˥]; PJ [iəu ˧˥]; QY [iəɯ ˧˥]; SS [iəɯ ˧˥]; SY(CL) [iəu ˧˥]; XH(BX) [iu ˧˥]; XX [iei ˧˥]

CMX *

3.2.4 CMX *-y. This final is well preserved in Héngyáng, Qíyáng, and Shàoyáng. In Chángshā, Héngshān, Sháoshān, and Péngjiāng, the final has unrounded to -i after CMX alveolar initials. Under the same environment, it has diphthongized to -iu in Xīnhuà, and changed to -yei in Xiāngxiāng. In Chénxī, it has unfronted to -u following local retroflex initials. Notably, Xùpǔ dialect has apicalized and unrounded this *-u after CMX post-alveolar initials to -ɿ. Sháoshān's *-y following post-alveolars, velars, and initial zero has apicalized to -ʮ.

取 qǔ QYS *tsʰuǎˀ

CS [tɕʰi ˨˩]; CX [tɕʰy ˨˩]; HS [tɕʰi ˨˩]; HY [tɕʰy ˨˩]; PJ [tɕʰi ˨˩]; QY [tʃʰy ˨˩]; SS [tsʰi ˨˩]; SY(CL) [tɕʰy ˩˧]; XH(BX) [tɕʰiu ˨˩]; XP [tɕʰy ˨˩]; XX [tɕʰyei ˨˩]

CMX *tsʰy ˩˧

樹 shù QYS *dʑuăʔ

CS [ɕy 陽去白 ~ ɕy 陰去文]; CX [ʂu 陽去]; HY [ɕy 陽去]; PJ [ɕy 陽去]; QY [ʒy 去]; SS [ʂɥ 陽去白 ~ ʂɥ 陰去文]; SY(CL) [ʑy 陽去]; XH(BX) [ʐy 陰平白 ~ ʐy 入文]; XP [ʂɻ 陽去]; XX [ɣy 陽去]

CMX *ʒy 陽去

居 jū QYS *kiă

CS [tɕy 陰平]; CX [tɕy 陰平]; HS [tɕy 陰平]; HY [tɕy 陰平]; PJ [tɕy 陰平]; QY [tʃy 陰平]; SS [tʂɥ 陰平]; SY(CL) [tɕy 陰平]; XH(BX) [tɕy 陰平]; XP [tɕy 陰平 ~ tɕy 陽去]; XX [ty 陰平]

CMX *ky 陰平

A few lexemes 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 *-yɛi. Please refer to section 3.3.8.

吹 chūi QYS *tɕʰwiă

CS [tɕʰyei 陰平]; CX [tʂʰu 陰平白 ~ tʂʰuei 陰平文]; HS [tɕʰy 陰平白 ~tsʰei 陰平文]; HY [tɕʰy 陰平白 ~tsʰui 陰平文]; PJ [tɕʰy 陰平]; QY [tsʰuei 陰平]; SS [tʂʰuei 陰平]; SY(CL) [tɕʰy 陰平白 ~tsʰuei 陰平文]; XH(BX) [tsʰə 陰平]; XP [tʂʰɻ 陽去白 ~ tsʰuei 陰平文]; XX [tʰy 陰平白 ~ tʰyei 陰平文]

CMX *tʃʰy 陰平白 ~ *tʃʰyɛi 陰平文

3.2.5 CMX *-ɿ/-ɻ. 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 *-ɻ always follows a post-alveolar sibilant.

子 zǐ QYS *tsɨʔ

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

CMX *tsɿ 陰上

四 sì QYS *siʰ

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

[sɿ 陰去]; XH(BX) [sɿ 去]; XX [sɿ 陰去]

CMX *sɿ 陰去

事 shì QYS *dʐɨʰ

CS [sɿ 陽去白 ~ sɿ 陰去文]; CX [sɿ 陽去]; HS [sɿ 陽去]; HY [sɿ 陽去]; PJ [sɿ 陽去]; QY [zɿ 去]; SS [sɿ 陽去白 ~ sɿ 陰去文]; SY(CL) [zɿ 陽去]; XH(BX) [ʂɿ 去]; XX [dzɿ 陽去]

CMX *ʒɿ 陽去

士 shì QYS *dʐɨˀ

CS [sɿ 陰去]; CX [sɿ 陽去]; HS [sɿ 陽去]; HY [sɿ 陽去]; PJ [sɿ 陽去]; QY [zɿ 去]; SS [sɿ 陰去]; SY(CL) [zɿ 陽去]; XH(BX) [ʂɿ 去]; XX [dzɿ 陽去]

CMX * ʒɿ 陽去

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^{21}	tsɿ^{31}	tsɿ^{42}	tsɿ^{31}	tsɿ^{53}	*tsɿ
思	sɿ^{33}	sɿ^{33}	sɿ^{33}	sɿ^{44}	sɿ^{55}	*sɿ
擠	tɕi^{21}	tɕi^{31}	tsi^{42}	tɕi^{31}	tɕi^{53}	*tsi
西	ɕi^{33}	ɕi^{33}	si^{33}	ɕi^{44}	ɕi^{55}	*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	ʂɿ^{33}	ʂɿ^{33}	ʂɿ^{33}	sɿ^{44}	sɿ^{55}	*ʂi
士	ʂɿ^{45}	ʂɿ^{45}	ʂɿ^{11}	sɿ^{44}	sɿ^{21}	*dʐɨ
屍	ʂɿ^{33}	ʂɿ^{33}	ʂɿ^{33}	ʂɿ^{44}	ʂɿ^{55}	*ɕi
市	ʂɿ^{45}	ʂɿ^{45}	ʂɿ^{11}	ʂɿ^{55}	ʂɿ^{21}	*dʐɨ

In Table 3.5, the situation is more of interest. All of these four syllables bear the same final -ɿ in Xīnhuà, Xīnhuà Báixī, and Mǐluó Dàjīng. By contrast, the first two syllables, namely 師 and 士, bear a different final -ɿ in Chénxī and Pǔngjiāng. 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 cognates across several selected Xiāng dialects.

Table 3.6: three types of apical contrasts

	XH(BX)	CX	PJ	HY	QY	CMX
1. 知	$tʂɿ^{33}$	$tʂɿ^{44}$	$tʂɿ^{55}$	$tɕi^{45}$	$tʃi^{45}$	*ṭi
2. 癡	$tʂ^{h}ɿ^{33}$	$tʂ^{h}ɿ^{44}$	$tʂ^{h}ɿ^{55}$	$tɕ^{h}i^{45}$	$tʃ^{h}i^{45}$	*ṭ^{h}i
3. 治	$tʂ^{h}ɿ^{24}$	$tʂɿ^{55}$	$dʐɿ^{21}$	$tɕi^{213}$	$dʒi^{214}$	*ḍi
4. 芝	$tʂɿ^{33}$	$tʂɿ^{44}$	$tʂɿ^{55}$	$tsɿ^{45}$	$tsɿ^{45}$	*tʃi
5. 翅	$tʂɿ^{45}$	$tʂɿ^{324}$	$tʂ^{h}ɿ^{34}$	$tsɿ^{24}$	$tsɿ^{214}$	*tʃ^{h}i
6. 市	$ʂɿ^{45}$	$ʂɿ^{55}$	$ʂɿ^{21}$	$sɿ^{213}$	$zɿ^{214}$	*ʒi
7. 滓	$tʂɿ^{31}$	$tsɿ^{31}$	$tsɿ^{53}$	$tsɿ^{33}$	$tsɿ^{54}$	*tʃɿ
8. 獅	$ʂɿ^{33}$	$sɿ^{44}$	$sɿ^{55}$	$sɿ^{45}$	$sɿ^{45}$	*ʃɿ
9. 士	$ʂɿ^{45}$	$sɿ^{55}$	$sɿ^{21}$	$sɿ^{213}$	$zɿ^{214}$	*ʒɿ

Table 3.6 draws our attention to the fact that the lexemes 滓, 獅 and 士 are among a group that is most prone to apicalization across different dialects. Lying in between are the lexemes 芝, 翅, and 市, which are less prone. Lexemes 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 lexemes 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 lexemes 4 through 6. It is then inevitable to introduce a new set of phonemes for the lexemes 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, Sháoshān, and Xiāngxiāng dialects.

拜 pài QYS *pɛ^{r}j^{h}

CS [pai ^{陰去}]; CX [pa ^{陰去}]; HS [pæ ^{陰去}]; HY [pai ^{陰去}]; PJ [pai ^{陰去}]; QY [pai ^{去}]; SS [pa ^{陰去}]; SY(CL) [pai ^{陰去}]; XH(BX) [pæ ^{去}]; XX [pa ^{陰去}]

CMX *pai ^{陰去}

街 jiē QYS *ka^{r}j

CS [kai ^{陰平}]; CX [ka ^{陰平} ~ kai ^{陰平}]; HS [kæ ^{陰平}]; HY [kai ^{陰平}]; PJ [kai $^{陰平}_{白}$ ~ tɕiɛ $^{陰平}_{文}$]; QY [kai ^{陰平}]; SS [ka ^{陰平}]; SY(CL) [kai ^{陰平}]; XH(BX) [kæ ^{陰平}]; XX [ka ^{陰平}]

CMX *kai $^{陰平}_{白}$ ~ *kiai $^{陰平}_{文}$

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 *ɣɛ^{r}j

CS [xai ^{陽平}]; CX [ɕie ^{陽平}]; HS [xæ ^{陽平}]; PJ [xai ^{陽平}]; QY [ɣai ^{陽平}]; SY [ɣai ^{陽平}]; XH(BX) [ɕie ^{陽平}]; XP [ha ^{陽平}]; XX [ɣa $^{陽平}_{白}$ ~ ɣia $^{陽平}_{文}$]

CMX *ɣai $^{陽平}_{白}$ ~ ɣiai $^{陽平}_{文}$

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

乖 guāi QYS *kwɛ^{r}j

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

CMX *kuai 陰平

懷 huái QYS *ɣwɛr̥j^{h}

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

CMX *ɣuai 陽平

3.3.4 CMX *-ɔi. This final does not follow labials. It commonly changes to -ai in most of the dialects. P ńgjiāng C énchuān fronted the vowel [ɔ] to [ɛ], resulting in -ɛi. Sh áoshān 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 Xīnhu à B áixī 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 *dəj^{h}

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

CMX *dɔi 陽去

來 lái QYS *ləj

CS [lai 陽平]; CX [lai 陽平]; HS [læ 陽平]; HY [lai 陽平]; PJ [lɛi 陽平]; QY [lai 陽平]; SS [nɛ 陽平]; SY(CL) [nai 陽平]; XH(BX) [lə 陽平]; XX [lai 陽平]

CMX *lɔi 陽平

改 gǎi QYS *kəj^{ʔ}

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

CMX *kɔi 陰上

3.3.5 CMX *-uɔi. This final can principly 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 *-uɔi following labials is that they behave like those other *-uɔi 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 *-uɛi in section 3.3.7.

配 pèi QYS *$p^hwəj^h$

CS [$p^hei^{陰去}$]; CX [$p^hei^{陰去}$]; HS [$p^hei^{陰去}$]; HY [$p^hei^{陰去}$]; PJ [$p^hɛi^{陰去}$]; QY [$p^hei^{陰去}$]; SS [$p^hɛ^{陰去}$]; SY(CL) [$p^hei^{陰去}$]; XH(BX) [$p^hə^{去}$]; XX [$p^hai^{陰去}$]

CMX *$p^huɔi^{陰去}$

堆 dūi QYS *twəj

CS [$tei^{陰平}$]; CX [$tuei^{陰平}$]; HS [$tei^{陰平}$]; HY [$tui^{陰平}$]; PJ [$tɛi^{陰平}$]; QY [$tuei^{陰平}$]; SS [$tɛ^{陰平}$]; SY(CL) [$tuei^{陰平}$]; XH(BX) [$tə^{陰平}$]; XX [$tuai^{陰平}$]

CMX *$tuɔi^{陰平}$

匯 huì QYS *ɣwəj$^{?}$

CS [$fei^{陽去}$]; CX [$xuei^{陽平}$]; HS [$fei^{陽去}$]; HY [$fei^{陽去}$]; PJ [$fɛi^{陽去}$]; QY [$ɣuei^{陽去}$]; SS [$xuei^{陽去}_{白}$ ~ $xuei^{陰去}_{文}$]; SY(CL) [$vei^{陽去}$]; XH(BX) [$xuə^{去}$]; XX [$ɣuai^{陽去}$]

CMX *$ɣuɔi^{陽去}$

3.3.6 CMX *-ɛi. This initial contrasts *-i in Chángshā, Péngjiāng, Qíyáng, Xīnhuà Báixī, and Shàoyáng Chánglè. However no dialect is known to contrast every pair, as sound change of *-ɛi > -i is very common. Syllables containing *-ɛi 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 *-ɛi and *-i

	CS	PJ	QY	XH(BX)	CMX
迷 QYS *mɛj	mei^{13}	mi^{23}	mi^{11}	mi^{13}	*mɛi ^{陽平}
彌 QYS *mjiă	mi^{13}	mi^{23}	mi^{11}	min^{13}	*mi ^{陽平}
廢 QYS *puaj^{h}	fei^{55}	fɛi^{34}	fi^{214}	fə^{45}	*fɛi ^{陰去}
費 QYS *p^{h}uj^{h}	fei^{55}	fi^{34}	fi^{214}	xuə^{45}	*fi ^{陰去}
製 QYS *tɕiaj^{h}	tsɿ^{55}	tʂɻ^{34}	tʃi^{214}	tʂɻ^{45}	*tʃɛi ^{陰去}
至 QYS *tɕi^{h}	tsɿ^{55}	tʂɻ^{34}	tsɿ^{214}	tʂɻ^{45}	*tʃi ^{陰去}

閉 p ì QYS *pɛj^{h}

CS [pei ^{陰去}]; CX [pi ^{陰去}]; HS [pi ^{陰去}]; HY [pi ^{陰去}]; PJ [pi ^{陰去}]; QY [pi ^{去}]; SS [pɛ ^{陰去}]; SY(CL) [pi ^{陰去}]; XH(BX) [pi ^{去}]; XX [pi ^{陰去}]

CMX *pɛi ^{陰去}

備 b èi QYS *bi^{h}

CS [pei ^{陰去}]; CX [pi $^{陽去}_{白}$ ~ pei $^{陽去}_{文}$]; HS [pi $^{陽去}_{白}$ ~ pei $^{陽去}_{文}$]; HY [pi ^{陽去}]; PJ [bi ^{陽去}]; QY [bi ^{去}]; SS [pɛ ^{陰去}]; SY(CL) [bi ^{陽去}]; XH(BX) [b^{h}i ^{入}]; XX [bi ^{陽去}]

CMX *bɛi ^{陽去}

The literary readings in Ch énxī and H éngshān are possibly modern borrowings.

肺 f èi QYS *puaj^{h}

CS [fei ^{陰去}]; CX [fi ^{陰去}]; HS [fei ^{陰去}]; HY [fei ^{陰去}]; PJ [fɛi ^{陰去}]; QY [fi ^{去}]; SS [xuei ^{陰去}]; SY(CL) [fi ^{陰去}]; XH(BX) [fə ^{去}]; XX [xuei ^{陰去}]

CMX *fɛi ^{陰去}

細 x ì QYS *sɛj^{h}

CS [ɕi ^{陰去}]; CX [ɕi ^{陰去}]; HS [ɕi ^{陰去}]; HY [ɕi ^{陰去}]; PJ [ɕi ^{陰去}]; QY [ʃi ^{去}]; SS [si ^{陰去}]; SY(CL) [sai $^{陰去}_{白}$ ~ si $^{陰去}_{文}$]; XH(BX) [ɕi ^{去}]; XX [ɕi ^{陰去}]

CMX *sɛi $^{陰去}_{白}$ ~ *si $^{陰去}_{文}$

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

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

衰 shuāi QYS *ʂwi

CS [ɕyai 陰平]; CX [suai 陰平]; HS [sæ 陰平]; HY [suai 陰平]; PJ [sai 陰平]; QY [suai 陰平]; SS [sɛ 陰平]; SY [suai 陰平]; XB(BX) [sæ 陰平]; XX [suai 陰去]

CMX *ʃuɛi 陰去

葵 kuí QYS *gjwi

CS [kuei 陽平]; CX [guei 陽平]; HS [k^{h}uei 陽平]; HY [kui 陽平]; PJ [guɛi 陽平]; QY [guei 陽平]; SS [guei 陽平]; SY(CL) [guei 陽平]; XH(BX) [g^{h}uə 陽平]; XX [guei 陽平]

CMX *guɛi 陽平

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

Table 3.8: contrast between *yɛi and *uɛi

	CX	YiY	CMX
銳	yei^{55}	ye^{53}	*yɛi 陰去
慰	uei^{55}	uəi^{53}	*uɛi 陰去

歲 sùi QYS *swiaj^{h}

CS [sei 陰去]; CX [ɕy 陰去白 ~ suei 陰去文]; HS [ɕi 陰去白 ~ sei 陰去文]; HY [sui 陰去]; PJ [ɕi 陰去]; QY [suei 去]; SS [sɛ 陰去]; SY(CL) [ʂʅ 陰去白 ~ suei 陰去文]; XH(BX) [sə 去]; XX [ɕyei 陰去]

CMX *sy 陰去白 ~ *syɛi 陰去文

錘 chuí QYS *drwiă

CS [tɕyei 陽平]; CX [dʐu 陽平]; HS [tɕ^{h}y 陽平白 ~ ts^{h}ei 陽平文]; HY [tsui 陽平]; PJ [dʑy 陽平]; QY [dzuei 陽平]; SS [dʐuei 陽平]; SY [dzuei 陽平]; XH(BX) [dz^{h}ə 陽平]; XX [dy 陽平白 ~ dyei 陽平文]

CMX *dʒy 陽平白 ~ *dʒyɛi 陽平文

水 shuǐ QYS *ɕwi^{ʔ}

CS [ɐyei 上]; CX [ʂu 上白 ~ ʂuei 上文]; HS [ɐy 上白 ~ sei 上文]; HY [ɐy 上白 ~ sui 上文]; PJ [ɐy 上]; QY [suei 上]; SS [ʂuei 上]; SY(CL) [ɐy 陰上]; XH(BX) [ɐy 上]; XX [xy 上]

CMX *ʃy 陰上白 ~ *ʃyɛi 陰上文

3.4 Finals Ended with the Coda -u

3.4.1 CMX *-au. This final is raised to -ou in Héngshān and monophthongized to -ɔ in Sháoshān.

寶 bǎo QYS *paw^{ʔ}

CS [pau 上]; CX [pau 上]; HS [pou 上]; HY [pau 上]; PJ [pau 上]; QY [pau 上]; SS [pɔ 上]; SY(CL) [pau 陰上]; XH(BX) [pau 上]; XX [pao 上]

CMX *pau 陰上

巢 cháo QYS *dzaʳw

CS [tsau 陽平]; CX [dzau 陽平]; HS [ts^{h}ou 陽平]; HY [tsau 陽平]; PJ [dzau 陽平]; QY [dzau 陽平]; SS [dzɔ 陽平]; SY(CL) [dzau 陽平]; XH(BX) [dz^{h}au 陽平]; XX [dzao 陽平]

CMX *dzau 陽平

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

教 jiào QYS *kaʳw

CS [tɕiau 陰去]; CX [kau 陰去白 ~ tɕiau 陰去文]; HS [kou 陰去白 ~ ʈou 陰去文]; HY [kau 陰去白 ~ tɕiau 陰去文]; PJ [kau 陰去白 ~ tɕiau 陰去文]; QY [tʃiau 去]; SS [kɔ 陰去白 ~ ciɔ 陰去文]; SY(CL) [kau 陰去白 ~ tɕiau 陰去文]; XH(BX) [tɕiə 去]; XX [kao 陰去白 ~ kiao 陰去文]

CMX *kau 陰去白 ~ *kiau 陰去文

敲 qiāo QYS *k^{h}aʳw

CS [k^{h}au 陰平]; CX [k^{h}au 陰平]; HS [k^{h}ou 陰平白 ~ ʈ^{h}ou 陰平文]; HY [k^{h}au 陰平]; PJ [k^{h}au 陰平白 ~ tɕ^{h}iau 陰平文]; QY [k^{h}au 陰平]; SS [k^{h}ɔ 陰平]; SY(CL) [k^{h}au 陰平白 ~ tɕ^{h}iau 陰平文]; XH(BX) [k^{h}au 陰平白 ~ tɕ^{h}iə 陰平文]; XX [k^{h}ao 陰平]

CMX *k^{h}au 陰平文 ~ k^{h}iau 陰平白

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 *-iɛu in Hùit óng and Sūin íng Wǔy áng (綏寧武陽) (Zhou, 2010). Table 3.9 lists four of these pairs in Hùit óng dialect. Vernacular forms of the four syllables on the left are omitted.

Table 3.9: contrast between *-iau and *-iɛu

	交	狡	教	孝	撓	繳	叫	曉
HT	tɕiau^{212}	tɕiau^{24}	tɕiau^{45}	ɕiɑu^{45}	tɕiɛu^{212}	tɕiɛu^{24}	tɕiɛu^{45}	ɕiɛu^{24}
CMX	*kiau 陰平	*kiau 陰上	*kiau 陰去	*xiau 陰去	*kiɛu 陰平	*kiɛu 陰上	*kiɛu 陰去	*xiɛu 陰上

3.4.3 CMX *-ɛu. This final is subject to later sound changes in most of the dialects. In Ch énxī and Xiāngxiāng, its route is possibly *-ɛu > *-ɛy > *-ɛi > ai. However, the bilabial nasal [m] in Ch énxī probably have assimilated the following *-ɛu early prior to the sound change, diverted it into CMX *-uŋ which later became -əɯ. H éngshān dialect has deleted the coda *-u, and then added a glide i- when preceded by coronals. In dialects like Hùit óng, Sh áoshān, and Ch ángl è of Sh àoy áng, the CMX *-ɛu has merged with either CMX *-iɛu or *-iu. These dialects sometimes borrow from other dialects forming a literary layer. In P íngjiāng, this final only merges with CMX *-iɛu when it follows bilabial nasal [m].

畝 mǔ QYS *mow^{ʔ}

CS [məu 上]; CX [məɯ 上]; HS [mæ 上]; HT [miɛu 上]; HY [məu 上白 ~ miau 上文]; PJ [miau 上]; QY [mu 上]; SS [məɯ 上]; SY(CL) [miəu 陰上白 ~ məu 陰上文]; XH(BX) [miə 上]; XX [mai 上]

CMX *mɛu 陽上

偷 tōu QYS *t^{h}ow

CS [t^{h}əu 陽平]; CX [t^{h}ai 陰平]; HS [t^{h}ie 陰平]; HT [t^{h}iɛu 陰平白 ~ t^{h}ou 陰平文]; HY [t^{h}əu 陰平]; PJ [t^{h}əu 陰平]; QY [t^{h}əɯ 陰平]; SS [t^{h}iɔ 陰平白 ~ t^{h}əɯ 陰平文]; SY(CL) [t^{h}ei 陰平白 ~ t^{h}iəu 陰平文]; XH(BX) [t^{h}iə 陰平]; XX [t^{h}ai 陰平]

CMX *t^{h}ɛu 陰平

樓 lóu QYS *low

CS [ləu 陽平]; CX [lai 陽平]; HS [lie 陽平]; HT [liɛu 陽平]; HY [ləu 陽平]; PJ [ləu 陽平]; QY [ləɯ 陽平]; SS [nəɯ 陽平]; SY(CL) [nei 陽平白 ~ niəu 陽平文]; XH(BX) [liə 陽平]; XX [lai 陽平]

CMX *lɛu 陽平

厚 hòu QYS *ɣow?

CS [xəu 陽去白 ~ xəu 陰去文]; CX [xai 陽去]; HS [xe 陽去]; HT [xiɛu 陽去]; HY [xəu 陽去]; PJ [xəu 陽去]; QY [ɣəɯ 去]; SS [ɕiɔ 陽去白 ~ xəɯ 陰去文]; SY(CL) [ɦei 陽上白 ~ ɦəu 陽去文]; XH(BX) [xə 陰平白 ~ xə 入文]; XX [ɣai 陽去]

CMX *ɣɛu 陽上

3.4.4 CMX *-iɛu. Hùitóng 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 *-ɛu have experienced paralleling changes in Chánglè.

表 biǎo QYS *piaw?

CS [piau 上]; CX [piau 上]; HS [piou 上]; HT [piɛu 上]; HY [piau 上]; PJ [piau 上]; QY [piau 上]; SS [piɔ 上]; SY(CL) [pei 陰上白 ~ piau 陰上文]; XH(BX) [piə 上]; XX [piao 上]

CMX *piɛu 陰上

消 xiāo QYS *siaw

CS [ɕiau 陰平]; CX [ɕiau 陰平]; HS [ɕiou 陰平]; HT [ɕiɛu 陰平]; HY [ɕiau 陰平]; PJ [ɕiau 陰平]; QY [ʃiau 陰平]; SS [siɔ 陰平]; SY(CL) [sei 陰平白 ~ ɕiau 陰平文]; XH(BX) [ɕiə 陰平]; XX [ɕiao 陰平]

CMX *siɛu 陰平

趙 zhào QYS *driaw^{ʔ}

CS [tsau 陰去]; CX [tʂau 陽去]; HS [ʈou 陽去]; HT [tʂɛu 陽去]; HY [tɕiau 陽去]; PJ [dʐau 陽去]; QY [dʒiau 去]; SS [dʐɔ 陽去白 ~ tʂɔ 陰去文]; SY(CL) [dʑiau 陽去]; XH(BX) [tɛ^{h}yo 入]; XX [dao 陽去]

CMX *dʒiɛu 陽去

窯 yáo QYS *jiaw

CS [iau 陽平]; CX [iau 陽平]; HS [iou 陽平]; HT [iɛu 陽平]; HY [iau 陽平]; PJ [iau 陽平]; QY [iau 陽平]; SY(CL) [ʑiau 陽平]; XH(BX) [iə 陽平]; XX [iao 陽平]

CMX *iɛu 陽平

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 -ɯ. The remainders have ceded to open syllables.

3.5.1 CMX *-an. The nucleus is raised to [æ] in Héngshān and [e] in Chénxī. Héngshān'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 -iã. The sound change could have been *-an > *-æn > *-ãe > *-ɛ̃ > *-iɛ̃ > -iã.

慢 màn QYS *ma^{r}n^{h}

CS [man 陽去白 ~ man 陰去文]; CX [me 陽去]; HS [mæ̃陽去]; HY [man 陽去]; PJ [man 陽去]; QY [man 去]; SS [mã陽去白 ~ mã陰去文] SY(CL) [maŋ 陰平]; XH(BX) [mã陰平白 ~ mã去文]; XX [miã陽去]

CMX *man 陽去

談 tán QYS *dam

CS [tan 陽平]; CX [de 陽平]; HS [t^{h}æ̃陽平]; HY [tan 陽平]; PJ [dan 陽平]; QY [dan 陽平]; SS [dã陽平]; SY(CL) [daŋ 陽平]; XH(BX) [d^{h}ã陽平]; XX [diã陽平]

CMX *dan 陽平

山 shān QYS *ʂɛʳn

CS [san 陰平]; CX [se 陰平]; HS [sæ̃ 陰平]; HY [san 陰平]; PJ [san 陰平]; QY [san 陰平]; SS [sã 陰平]; SY(CL) [saŋ 陰平]; XH(BX) [ʂã 陰平]; XX [ɕiã 陰平]

CMX *ʃan 陰平

閒 xián QYS *ɣɛʳn

CS [xan 陽平]; CX [xe 陽平 ~ ɕie 陽平]; HS [xæ̃ 陽平]; HY [xan 陽平]; PJ [xan 陽平白 ~ ɕian 陽平文]; QY [ɣan 陽平]; SS [ɕiã 陽平]; SY(CL) [ɦaŋ 陽平]; XH(BX) [ɣã 陽平]; XX [ɣiã 陽平]

CMX *ɣan 陽平白 ~ ɣian 陽平文

3.5.2 CMX *-ian. This is a final restricted to the literary layer relative to *-an. Tóojiāng dialect preserves its contrast against CMX final *-iɛn to be introduced in section 3.5.6. The contrast is also found in Mǐluó Chánglè, Héngshān, and Shàoshān, 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 *-iɛn

	簡	艦	間	雁	檢	見	嫌	厭
TJ	tɕian^{53}	tɕian^{55}	tɕian^{13}	ian^{55}	tɕie^{53}	tɕie^{55}	tɕie^{13}	ie^{55}
ML(CL)	tɕĩ^{24}	tɕĩ^{45}	ɕiã^{13}	iã^{21}	tɕĩ^{24}	tɕĩ^{45}	ɕĩ^{13}	ĩ^{45}
CMX	*kian 陰上	*kian 陰去	*ɣian 陽平	*ian 陽去	*kiɛn 陰上	*kiɛn 陰去	*ɣiɛn 陽平	*iɛn 陰去

間 jiàn QYS *kɛʳnʰ

CS [kan 陰去]; CX [ke 陰去]; HS [kæ̃ 陰去白 ~ tæ̃ 陰去文]; HY [kan 陰去白 ~ tɕien 陰去文]; PJ [kan 陰去白 ~ tɕian 陰去文]; QY [kan 去]; SS [kã 陰去]; SY(CL) [kaŋ 陰去]; XH(BX) [kã 去]; XX [kiã 陰去]

CMX *kan 陰去白 ~ *kian 陰去文

3.5.3 CMX *-uan.

閂 shuān QYS *ʂwaʳn

CS [ɕyan 陰平]; CX [sue 陰平]; HS [sæ̃ 陰平]; HY [suen 陰平]; PJ [san 陰平]; QY [suan 陰平]; SS

[sã陰平]; SY(CL) [suã陰平]; XH(BX) [sõ陰平]; XX [suã陰平]

CMX *ʃuan 陰平

關 guān QYS *kwaˈn

CS [kuan 陰平]; CX [kue 陰平]; HS [kʰuæ̃陰平白 ~ kuæ̃陰平文]; HY [kuen 陰平]; PJ [kuan 陰平]; QY [kuan 陰平]; SS [kuã陰平]; SY [kuã陰平]; XH(BX) [kuã陰平]; XX [kuã陰平]

CMX *kuan 陰平

3.5.4 CMX *-ɔn. This final does not follow labials. It is fronted to -øn in P ńgjiāng 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 othervise 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 Sháoshān also has a few changed to -uẽ/-õ, in their vernacular layers respectively. In other dialects, this CMX *-ɔn commonly merges with *-an.

男 nán QYS *nəm

CS [lan 陽平]; CX [ne 陽平]; HS [læ̃陽平]; HY [nan 陽平]; PJ [løn 陽平]; QY [lan 陽平]; SS [nã陽平]; SY(CL) [naŋ 陽平]; XH(BX) [lã陽平]; XX [niã陽平]

CMX *nɔn 陽平

柑 gān QYS *kam

CS [kan 陰平]; CX [kue 陰平白 ~ ke 陰平文]; HS [kæ̃陰平]; HY [kan 陰平]; PJ [køn 陰平]; QY [kan 陰平]; SS [kã陰平]; SY(CL) [kaŋ 陰平]; XH(BX) [kã陰平]; XX [kuã陰平]

CMX *kɔn 陰平

感 gǎn QYS *kəmʔ

CS [kan 上]; CX [ke]; HS [kæ̃上]; HY [kan 上]; PJ [køn 上]; QY [kan 上]; SS [kã上]; SY(CL) [kaŋ 陰上]; XH(BX) [kã上]; XX [kuã上]

CMX *kɔn 陰上

看 kàn QYS *k^{h}an^{h}

CS [k^{h}an ^{陰去}]; CX [k^{h}e ^{陰去}]; HS [k^{h}æ̃^{陰去}]; HY [k^{h}ai ^{陰去}]; PJ [k^{h}an ^{陰去}]; QY [k^{h}an ^{去}]; SS [k^{h}uẽ$^{陰去}_{白1}$ ~ k^{h}õ$^{陰去}_{白2}$ ~ k^{h}ã$^{陰去}_{文}$]; SY(CL) [k^{h}aŋ ^{陰去}]; XH(BX) [k^{h}ã^{入}]; XX [k^{h}uã^{陰去}]

CMX *k^{h}ɔn ^{陰去}

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^{ʔ}

CS [mõ^{上}]; CX [me ^{上}]; HS [mẽĩ^{上}]; HY [muen ^{上}]; PJ [m øn ^{上}]; QY [man ^{上}]; SS [muẽ$^{上}_{白1}$ ~ mõ$^{上}_{白2}$ ~ mã$^{上}_{文}$]; SY(CL) [beŋ $^{陽平}_{白}$ ~ mã$^{陰上}_{文}$]; XH(BX) [mõ^{上}]; XX [miã^{上}]

CMX *muɔn ^{陽上}

The vernacular form of 滿 in Sh àoy áng Ch ángl è is irregular, probably of a different etymon.

團 tu án QYS *dwan

CS [tõ^{陽平}]; CX [due ^{陽平} ~ due ^{陰去}]; HS [t^{h}ẽĩ^{陽平}]; HY [tuen ^{陽平}]; PJ [d øn ^{陽平}]; QY [duan ^{陽平}]; SS [duẽ$^{陽平}_{白}$ ~ dõ$^{陽平}_{文}$]; SY(CL) [duã^{陽平}]; XH(BX) [d^{h}õ^{陽平}]; XX [duã^{陽平}]

CMX *duɔn ^{陽平}

官 guān QYS *kwan

CS [kõ^{陰平}]; CX [kue ^{陰平}]; HS [kuẽĩ^{陰平}]; HY [kuen ^{陰平}]; PJ [ku øn ^{陰平}]; QY [kuan ^{陰平}]; SS [kõ^{陰平}]; SY(CL) [kuã^{陰平}]; XH(BX) [kuẽ^{陰平}]; XX [kuã^{陰平}]

CMX *kuɔn ^{陰平}

墈 kàn QYS *k^{h}ɘm^{h}

CS [k^hõ^{陰去}]; HS [k^huẽĩ$^{陰平}{}_{白}$ ~ k^hæ̃$^{陰去}{}_{文}$]; HY [k^huen ^{陰去}]; HT [k^huɛ̃^{陰去}]; ML(CL) [k^hø̃^{陰去}]; QY [k^huan ^{陰去}]; SY [k^huã^{陰去}]; XH [k^hõ^{陰去}]; XP [k^huɛ̃^{上} ~ k^huɛ̃^{陰去}]; XX [k^huã^{陰去}]

CMX *k^huɔn ^{陰去}

As introduced in the beginning, this 墈 is one of the pivotal lexemes 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 both have been included. The literary form in Hóngshān is clearly a modern borrowing not used in everyday speech.

There is a certain level of mixture between *-uɔn and *-ɔn in Pínɡjiāng. This phenomenon will be discussed in detail in Chapter 5.

寬 kuān QYS *k^hwan

CS [k^hõ^{陰平}]; CX [k^hue ^{陰平}]; HS [k^huẽĩ^{陰平}]; HY [k^huen ^{陰平}]; PJ [k^hɵn ^{陰平}]; QY [k^huan ^{陰平}]; SS [k^huẽ$^{陰平}{}_{白}$ ~ k^hõ$^{陰平}{}_{文}$]; SY(CL) [k^huã^{陰平}]; XH(BX) [k^huɛ̃^{陰平}]; XX [k^huã^{陰平}]

CMX *k^huɔn ^{陰平}

3.5.6 CMX *-iɛn. 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 tʂɻ can derive from *tʃiɛn > *tʂɛn > *tʂɛ̃ > *tʂə̃ > *tʂə > tʂɻ. The local retroflex sibilants have caused the addition of a glide u- in Pínɡjiāng and Shàoshān.

面 miàn QYS *mjian^{h}

CS [miẽ$^{陽去}{}_{白}$ ~ miẽ$^{陰去}{}_{文}$]; CX [mie ^{陽去}]; HS [mĩ^{陽去}]; HY [mien ^{陽去}]; PJ [mian ^{陽去}]; QY [mian ^{去}]; SS [mẽ$^{陽去}{}_{白}$ ~ mẽ$^{陰去}{}_{文}$]; SY(CL) [miɛ̃^{陰平}]; XH(BX) [miɛ̃$^{陰平}{}_{白}$ ~ miɛ̃$^{去}{}_{文}$]; XX [miĩ^{陽去}]

CMX *miɛn ^{陽去}

展 zhǎn QYS *trian^{ʔ}

CS [tsə̃^{上}]; CX [tʂe ^{上}]; HS [tɕĩ^{上}]; HY [tɕien ^{上}]; PJ [tʂuan ^{上}]; QY [tʃian ^{上}]; SS [tʂuẽ^{上}]; SY(CL) [tɕiɛ̃^{陰上}]; XH(BX) [tʂə ^{上}]; XX [tʂɻ ^{上}]

CMX *tʃîɛn 陰上

謙 qiān QYS *kʰɛm

CS [tɕʰiẽ陰平]; CX [tɕʰie 陰平]; HS [tɕʰĩ̃陰平]; HY [tɕʰien 陰平]; PJ [tɕʰian 陰平]; QY [tʃʰian 陰平]; SS [cʰẽ陰平]; SY(CL) [tɕʰiɛ̃陰平]; XH(BX) [tɕʰiɛ̃陰平]; XX [kʰiĩ陰平]

CMX *kʰiɛn 陰平

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

聯 lián QYS *ljian

CS$_2$ [liẽ陽平]; CX [dye 陽平白 ~ die 陽平文]; HS [lĩ陽平 ~ ŋ̍̃陽平]; HY [lie 陽平]; PJ [lian 陽平]; QY [lian 陽平]; SS [nẽ陽平]; SY(CL) [niɛ̃陽平]; XH(BX) [liɛ̃陽平]; XX [niĩ陽平]

CMX *lyɛn 陽平

專 zhuān QYS *tɕwian

CS [tɕyẽ陰平]; CX [tɕye 陰平]; HS [ʈuẽĩ陰平]; HY [tɕyen 陰平]; PJ [tɕyan 陰平]; QY [tʃyan 陰平]; SS [tʂuẽ陰平]; SY(CL) [tɕyɛ 陰平]; XH(BX) [tɕyɛ̃陰平]; XX [tyĩ陰平]

CMX *tʃyɛn 陰平

軟 ruǎn QYS *ɲwian^{ʔ}

CS [yẽ上]; CX [ʐue 上]; HS [ɳuẽĩ上]; HY [nyen 上]; PJ [yan 上]; QY [ʒyan 去]; SS [ɳuẽ上]; SY(CL) [ʑyɛ 陽上]; XH(BX) [yɛ̃上]; XX [ŋ̍̃上 ~ yĩ上]

CMX *nyɛn 陽上白 ~ ɻyɛn 陽上文

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

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

本 běn QYS *pwən^{ʔ}

CS [pən ^{上}]; CX [pei ^{上}]; HS [pieɳ ^{上}]; HY [pin ^{上}]; PJ [pən ^{上}]; QY [pən ^{上}]; SS [pən ^{上}]; SY(CL) [peŋ ^{陰上}]; XH(BX) [pin ^{上}]; XX [pin ^{上}]

CMX *pən ^{陰上}

分 fēn QYS *pun

CS [fən ^{陰平}]; CX [fei ^{陰平}]; HS [feɳ ^{陰平}]; HY [fən ^{陰平}]; PJ [fən ^{陰平}]; QY [fən ^{陰平}]; SS [xuən ^{陰平}]; SY(CL) [feŋ ^{陰平}]; XH(BX) [ɕyn ^{陰平}]; XX [xuʌn ^{陰平}]

CMX *fən ^{陰平}

森 sēn QYS *ʂim

CS [sən ^{陰平}]; CX [sei ^{陰平}]; HS [sẽĩ^{陰平}]; HY [sen ^{陰平}]; PJ [sen ^{陰平}]; QY [sən ^{陰平}]; SS [sən ^{陰平}]; SY(CL) [seŋ ^{陰平}]; XH(BX) [ʂən ^{陰平}]; XX [ɕiã^{陰平}]

CMX *ʃən ^{陰平}

很 hěn QYS *ɣən^{ʔ}

CS [xən ^{上}]; CX [xei ^{上}]; HS [xẽĩ$^{陰平}{}_{白}$ ~ xẽĩ$^{上}{}_{文}$]; HY [xen ^{上}]; PJ [xen ^{上}]; QY [ɣən ^{上}]; SS [ɕ̃$^{上}{}_{白}$ ~ xən $^{上}{}_{文}$]; SY(CL) [ɦeŋ ^{陽上}]; XH(BX) [xən ^{上}]; XX [ɕiã^{上}]

CMX *ɣən $^{陽上}{}_{白}$ ~ xən $^{陰上}{}_{文}$

3.5.9 CMX *-in. When the preceding post-alveolar initials are realized as retroflexes, the nucleus would usually become a schwa. Notably, Shàoyáng Chánglè dialect has merged all the syllables in this group from *-in into -eŋ.

貧 pín QYS *bin

CS [pin ^{陽平}]; CX [bei ^{陽平}]; HS [p^{h}ieɳ ^{陽平}]; HY [pin ^{陽平}]; PJ [bin ^{陽平}]; QY [bin ^{陽平}]; SS [biən ^{陽平}]; SY(CL) [beŋ ^{陽平}]; XH(BX) [b^{h}in ^{陽平}]; XX [bin ^{陽平}]

CMX *bin ^{陽平}

鎮 zhèn QYS *trin^{h}

CS [tsən 陰去]; CX [tʂei 陰去]; HS [ŧeŋ̍ 陰去]; HY [tɕin 陰去]; PJ [tʂən 陰去]; QY [tʃîn 去]; SS [tʂən 陰去]; SY(CL) [tʂeŋ 陰平]; XH(BX) [tʂən 去]; XX [tʌn 陰去]

CMX *tʃîn 陰去

The tone of 鎮 in Shàoyáng Chánglè is irregular.

金 jīn QYS *kim

CS [tɕin 陰平]; CX [tɕiei 陰平]; HS [ŧeŋ̍ 陰平]; HY [tɕin 陰平]; PJ [tɕin 陰平]; QY [tʃîn 陰平]; SS [ciən 陰平]; SY(CL) [tʂeŋ 陰平]; XH(BX) [tɕin 陰平]; XX [kin 陰平]

CMX *kin 陰平

3.5.10 CMX *-un. In dialects like Chángshā and Pʼngjiāng, 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 Pʼngjiāng (see 3.5.8) so the two finals do not merge here.

輪 lún QYS *lwən

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

CMX *lun 陽平

棍 gùn QYS *kwən^{h}

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

CMX *kun 陰去

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 Héngyáng, 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 Pʼngjiāng, its roundness has been dropped after alveolars, and the final merges into *-in.

旬 xún QYS *zwin

CS [sən 陽平]; CX [suei 陽平白 ~ ɕyei 陽平文]; HS [seŋ 陽平]; HY [tsuən 陽平]; PJ [ɕin 陽平]; QY [dzən 陽平]; SS [dzən 陽平]; SY(CL) [dzuei 陽平]; XH(BX) [ɕyn 陽平]; XX [dzuʌn 陽平]

CMX *zyn 陽平

準 zhǔn QYS *tɕwinʔ

CS [tɕyn 上]; CX [tʂuei 上]; HS [ʈueŋ 上]; HY [tɕyn 上]; PJ [tɕyn 上]; QY [tsuən 上]; SS [tʂuən 上]; SY(CL) [tʂueŋ 陰上]; XH(BX) [tɕyn 上]; XX [tuʌn 上]

CMX *ʈʃyn 陰上

永 yǒng QYS *wiaʳjŋʔ

CS [yn 上]; CX [yei 上 ~ iəɯ 上]; HS [yeŋ 上]; HY [yn 上]; PJ [yn 上]; QY [yn 上]; SS [uən 上]; SY(CL) [yeŋ 陰上]; XH(BX) [yn 上]; XX [yʌn 上]

CMX *yn 陰上

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 Héngshān and Xiāngxiāng. Note that the nasalized vowels are commonly found moving in parallel with the change of their oral counterparts. In Héngshān *-aŋ merged into *-ɔŋ before nasalizing to *-ɔ̃ 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 -ɯ in Chénxī.

彭 péng QYS *baʳjŋ

CS [pən 陽平]; CX [bəɯ 陽平]; HS [pʰẽĩ 陽平]; HY [puen 陽平]; PJ [paŋ 陽平]; QY [bən 陽平]; SS [bən 陽平]; SY(CL) [beŋ 陽平]; XH(BX) [bʰən 陽平]; XX [biã 陽平]

CMX *baŋ 陽平白 ~ *bəŋ 陽平文

爭 zhēng QYS *tʂɛʳjŋ

CS [tsən 陰平]; CX [tsei 陰平]; HS [tsõ 陰平白 ~ tsẽĩ 陰平文] HY [tsen 陰平]; PJ [tsaŋ 陰平]; QY [tsən 陰平]; SS [tsən 陰平]; SY(CL) [tseŋ 陰平]; XH(BX) [tʂən 陰平]; XX [tsõ 陰平白 ~ tɕiã 陰平文]

CMX *tʃaŋ 陰平白 ~ *tʃəŋ 陰平文

Note that the material of Héngshān recorded an additional reading [tsæ̃] 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 *$k^{h}a^{r}jŋ$

CS [k^{h}ən 陰平]; CX [k^{h}ei 陰平]; HS [k^{h}õ 陰平白 ~ k^{h}eŋ̃ 陰平文]; HY [k^{h}en 陰平]; PJ [k^{h}aŋ 陰平白 ~ k^{h}en 陰平文]; QY [k^{h}ən 陰平]; SY(CL) [k^{h}ã 陰平]; XH(BX) [k^{h}õ 陰平]; XX [k^{h}õ 陰平]

CMX *k^{h}aŋ 陰平白 ~ k^{h}əŋ 陰平文

Héngshān's literary final -eŋ̃ is a modern borrowing more recent than -ẽĩ.

硬 yìng QYS *ŋɛ^{r}jŋ^{h}

CS [ŋən 陽去白 ~ ŋən 陰去文]; CX [ŋei 陽去]; HS [ŋẽĩ 陽去]; HY [ŋen 陽去]; PJ [ŋaŋ 陽去]; QY [ŋən 去]; SS [ŋən 陽去白 ~ ŋən 陰去文]; SY(CL) [ŋã 陰平白 ~ ŋeŋ̃ 陰去文]; XH(BX) [au 陰平]; XX [ŋõ 陽去白 ~ ŋiã 陽去文]

CMX *ŋaŋ 陽去白 ~ *ŋəŋ 陽去文

The form of 硬 in Xīnhuà Báixī possibly comes from a nasalized vowel or diphthong through *-ɔ̃ > *-ɔ̃ũ > *ãũ > -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 Héngshān, Shāoshān and Shàoyáng. In Xiāngxiāng it has further shifted to -iõ. The shift of this final with the nasalized vowel [õ] is parallel to Xiāngxiāng's shift of finals *-ia and *-iɔ towards -io shown in sections 3.1.2 and 3.1.6.

病 bìng QYS *biajŋ^{h}

CS [pin 陽去白 ~ pin 陰去文]; CX [pei 陽去]; HS [piæ̃ 陽去白 ~ pieŋ̃ 陽去文]; HY [pian 陽去白 ~ pin 陽去文]; PJ [biaŋ 陽去]; QY [biaŋ 去白 ~ bin 去文]; SS [biã 陽去白 ~ piən 陰去文]; SY(CL) [biã 陽去白 ~

beŋ 陽去文]; XH(BX) [pʰiɑ̃陰平白 ~ bʰin 入文]; XX [biõ陽去白 ~ bin 陽去文]

CMX *biaŋ 陽去白 ~ *biŋ 陽去文

聲 shēng QYS *ɕiajŋ

CS [sən 陰平]; CX [ʂei 陰平]; HS [ɕiæ̃陰平白 ~ ɕieɳ̩ 陰平文]; HY [ɕian 陰平白 ~ ɕin 陰平文]; PJ [ʂaŋ 陰平白 ~ ʂən 陰平文]; QY [ʃin 陰平]; SS [ʂã陰平白 ~ ʂən 陰平文]; SY(CL) [ʂeŋ 陰平]; XH(BX) [ʂən 陰平]; XX [ɕiõ陰平白 ~ ɕiʌn 陰平文]

CMX *ʃiaŋ 陰平白 ~ *ʃiŋ 陰平文

頸 jǐng QYS *kjiajŋ^{ʔ}

CS [tɕin 上]; CX [tɕiaɯ 上白 ~ tɕiei 上文]; HS [tæ̃上白 ~ teɳ̩ 上文]; HY [tɕian 上白 ~ tɕin 上文]; PJ [tɕiaŋ 上]; QY [tʃiaŋ 上白 ~ tʃin 上文]; SS [ciã上白 ~ ciən 上文]; SY(CL) [tʂã上]; XH(BX) [tɕiɑ̃上白 ~ tɕin 上文]; XX [kiõ上白 ~ kin 上文]

CMX *kiaŋ 上白 ~ *kiŋ 上文

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

橫 hénɡ QYS *ɣwaʳjŋ

CS [fən 陽平]; CX [uei 陽平]; HS [feɳ̩ 陽平]; HY [fən 陽平]; PJ [uaŋ 陽平]; QY [ɣuən 陽平]; SS [xuən 陽平]; SY(CL) [ueŋ 陽平]; XH(BX) [xun 陽平]; XX [ɣuʌn 陽平]

CMX *ɣuaŋ 陽平白 ~ *ɣun 陽平文

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 yíng QYS *ʔjwiajŋ

CS$_2$ [ian 陰平白 ~ yn 陽平文]; HS [yæ̃陰平]; HY [yn 陽平]; ML(CL) [yã陰平]; XH [iõ陰平]; XP [ĩ陽平]; XX [iõ陰平白 ~ yʌn 陽平文]

CMX *yaŋ 陰平白 ~ *yn 陽平文

3.6.5 CMX *-iɒŋ. This is a problematic final as it may not have been borrowed at the time of CMX. It contrasts final *-iɔŋ in Xīnhuà while contrasts *-iaŋ in Pínɡjiānɡ

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

Table 3.11: contrasts among *-iɒŋ, *-iɔŋ, and *-iaŋ

	XH	XH(BX)	PJ	XX
江 CMX *kiɒŋ 陰平	tɕiɔ̃^{33}	tɕiɑ̃^{33}	tɕioŋ^{55}	kiaŋ^{55}
腔 CMX *k^{h}iɒŋ 陰平	tɕ^{h}iɔ̃^{33}	tɕ^{h}iɑ̃^{33}	tɕ^{h}ioŋ^{55}	k^{h}iaŋ^{55}
姜 CMX *kiɔŋ 陰平	tɕyõ^{33}	tɕyõ^{33}	tʂoŋ^{55}	kiaŋ^{55}
享 CMX *xiɔŋ 陰上	ɕyõ^{21}	ɕyõ^{31}	ɕioŋ^{53}	ɕiaŋ^{21}
輕 CMX *k^{h}iaŋ 陰平	tɕ^{h}iɔ̃^{33}	tɕ^{h}iɑ̃^{33}	tɕ^{h}iaŋ^{55}	k^{h}iõ^{55}
頸 CMX *kiaŋ 陰上	tɕiɔ̃^{21}	tɕiɑ̃^{31}	tɕiaŋ^{53}	kiõ^{21}

降 xi áng QYS *ɣa^{r}wŋ

CS [ɕian 陽平]; CX [ɕiaɯ 陽平]; HS [tɕ^{h}iõ 陽平]; HY [xan 陽平白 ~ ɕian 陽平文]; PJ [ɕioŋ 陽平]; QY [dʒiaŋ 陽平]; SS [ʑiaŋ 陽平]; SY(CL) [iã 陽平]; XH(BX) [ɕiɑ̃ 陽平]; XX [ɣiaŋ]

CMX *ɣɔŋ 陽平白 ~ *ɣiɒŋ 陽平文

3.6.6 CMX *-ɔŋ. 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 t áng QYS *dɑŋ

CS [tan 陽平]; CX [daɯ 陽平]; HS [t^{h}õ 陽平]; HY [tan 陽平]; PJ [doŋ 陽平]; QY [daŋ 陽平]; SS [daŋ 陽平]; SY(CL) [dã 陽平]; XH(BX) [d^{h}õ 陽平]; XX [daŋ 陽平]

CMX *dɔŋ 陽平

剛 gāng QYS *kɑŋ

CS [kan 陰平]; CX [kaɯ 陰平]; HS [kõ 陰平]; HY [kan 陰平]; PJ [koŋ 陰平]; QY [kaŋ 陰平]; SS [kaŋ 陰平]; SY(CL) [kã 陰平]; XH(BX) [kõ 陰平]; XX [kaŋ 陰平]

CMX *kɔŋ 陰平

Several lexemes after velar initials show contrasts between vernacular final *-ɔŋ and literary final *-iɒŋ, 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 H égy áng.

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 *kaʳwŋʔ

CS [kan 上白 ~ tɕian 上文]; CX [kaɯ 上白 ~ tɕiaɯ 上文]; HS [kõ上白 ~ ʈõ上文]; HY [kuan 上白 ~ tɕian 上文]; PJ [koŋ 上]; QY [kaŋ 上白 ~ tʃiaŋ 上文]; SS [kaŋ 上白 ~ ciaŋ 上文]; SY(CL) [kã陰上白 ~ tʂã陰上文]; XH(BX) [kõ上白 ~ tɕiɑ̃上文]; XX [kaŋ 上白 ~ kiaŋ 上文]

CMX *kɔŋ 陰上白 ~ *kiaŋ 陰上文

3.6.7 CMX *-iɔŋ.

良 liáng QYS *liɑŋ

CS [lian 陽平]; CX [diaɯ 陽平]; HS [liõ陽平]; HY [lian 陽平]; PJ [lioŋ 陽平]; QY [liaŋ 陽平]; SS [liaŋ 陽平]; SY(CL) [niã陽平]; XH(BX) [liɑ̃陽平]; XX [niaŋ 陽平]

CMX *liɔŋ 陽平

上 shàng QYS *dʑiɑŋʔ

CS [san 陽去白 ~ san 陰去文]; CX [ʂaɯ 陽去]; HS [ɕiõ陽去]; HY [ɕian 陽去]; PJ [ʂoŋ 陽去]; QY [ʒiaŋ 去]; SS [ʂaŋ 陽去白 ~ ʂaŋ 陰去文]; SY(CL) [ʐã陽上白 ~ ʐã陽去文]; XH [ʑyõ上白 ~ ʑyõ去文]; XX [ɣiaŋ 陽去]

CMX *ʒiɔŋ 陽上

陽 yang QYS *jiɑŋ

CS [ian 陽平]; CX [iaɯ 陽平]; HS [iõ陽平]; HY [ian 陽平]; PJ [ioŋ 陽平]; QY [iaŋ 陽平]; SS [iaŋ 陽平]; SY(CL) [iã陽平]; XH(BX) [yõ陽平]; XX [iaŋ 陽平]

CMX *iɔŋ 陽平

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

雙 shuāng QYS *ʂaʳwŋ

CS [ɕyan 陰平]; CX [saɯ 陰平]; HS [sõ陰平]; HY [suan 陰平]; PJ [soŋ 陰平]; QY [suaŋ 陰平]; SS

[saŋ 陰平]; SY(CL) [suã 陰平]; XH(BX) [sõ 陰平]; XX [saŋ 陰平]

CMX *ʃuɔŋ 陰平

廣 guǎng QYS *kwɑŋˀ

CS [kuan 上]; CX [kuaɯ 上]; HS [kõ 上]; HY [kuan 上]; PJ [koŋ 上]; QY [kuaŋ 上]; SS [kaŋ 上]; SY(CL) [kuã 陰上]; XH(BX) [kõ 上]; XX [kaŋ 上]

CMX *kuɔŋ 陰上

黃 huáng QYS *ɣwɑŋ

CS [uan 陽平]; CX [uaɯ 陽平]; HS [xõ 陽平]; HY [fan 陽平 ~ uan 陽平]; PJ [foŋ 陽平]; QY [ɣuaŋ 陽平]; SS [xaŋ 陽平]; SY(CL) [vã 陽平]; XH(BX) [ɣõ 陽平]; XX [ŋ̍ 陽平白1 ~ uaŋ 陽平白2 ~ ɣaŋ 陽平文]

CMX *ɣuɔŋ 陽平

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

Table 3.12: distinct *-yɔŋ

	LH	XH	PJ	ML(CL)
框 CMX *kʰyɔŋ 陰平	tʃʰiɑ̃^{55}	tɕʰiɔ̃^{33}	kʰoŋ^{55}	tʽʰoŋ^{33}
腔 CMX *kʰiɒŋ 陰平	tʃʰõ^{55}	tɕʰiɔ̃^{33}	tɕʰioŋ^{55}	tʽʰoŋ^{33}
羌 CMX *kʰiɔŋ 陰平	tʃʰõ^{55}	tɕʰyõ^{33}	tɕʰioŋ^{55}	-
輕 CMX *kʰiaŋ 陰平	tʃʰiɑ̃^{55}	tɕʰiɔ̃^{33}	tɕʰiaŋ^{55}	tɕʰiã^{33}
縈 CMX *yaŋ 陰平	-	iɔ̃^{33}	-	yã^{33}

筐 kuāng QYS *kʰuɑŋ

CS [kʰuan 陰平]; CX [kʰuaɯ 陰平]; HS [tʂʰõ 陰平白 ~ kʰõ 陰平文]; HY [kʰan 陰平]; PJ [kʰuoŋ 陰平]; QY [tʃʰiaŋ 陰平白 ~ kʰuaŋ 陰平文]; SS [cʰiaŋ 陰平]; SY(CL) [tʂʰã 陰平]; XH(BX) [tɕʰiɑ̃ 陰平]; XX [kʰiaŋ 陰平]

CMX *k^{h}yɔŋ $^{陰平}_{白}$ ~ *k^{h}uɔŋ $^{陰平}_{文}$

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

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

	崩	奔	蹭	襯	僧	森	衡	痕
CN(XL)	peŋ^{55}	pen^{55}	ts^{h}eŋ^{35}	tɕ^{h}in^{35}	seŋ^{55}	sen^{55}	ɣeŋ^{11}	ɣen^{11}
YiY	pən^{33}	pən^{33}	ts^{h}ɤŋ^{13}	ts^{h}ən^{53}	sɤŋ^{33}	-	ɤŋ^{13}	n̩^{13}
CMX	*pəŋ ^{陰平}	*pən ^{陰平}	*ts^{h}əŋ ^{陰去}	*tʃ^{h}ən ^{陰去}	*səŋ ^{陰平}	*ʃən ^{陰平}	*ɣəŋ ^{陰平}	*ɣən ^{陰平}

The form of 襯 in western Chángnníng 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 Chángnníng, the boundary between *-əŋ and *-ən is getting blurred. However the direction of merger is rather straightforward in the corpus of Chángnníng Xīlù: only *-əŋ is merging into *-ən, but not vise 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 preveils 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 ^{陰平}]; CS [tən ^{陰平}]; CX [tei ^{陰平}]; HS [tẽĩ^{陰平}]; HY [ten ^{陰平}]; PJ [ten ^{陰平}]; QY [tən ^{陰平}]; SS [tən ^{陰平}]; SY(CL) [teŋ ^{陰平}]; XH(BX) [tiɛ̃^{陰平}]; XX [tiã^{陰平}]

CMX *təŋ ^{陰平}

層 céng QYS *dzəŋ

CN(XL) [dzeŋ ^{陽平}]; CS [tsən ^{陽平}]; CX [dzei ^{陽平}]; HS [ts^{h}ẽĩ^{陽平}]; HY [tsen ^{陽平}]; PJ [dzen ^{陽}

平]; QY [dzən 陽平]; SS [dzən 陽平]; SY(CL) [dzeŋ 陽平]; XH(BX) [dzʰən 陽平]; XX [dʑiã陽平]
CMX *dzəŋ 陽平

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

哽 gěng QYS *kaʳjŋʔ
CN(XL) [keŋ 上]; CS [kən 上]; CX [kei 上]; HS [kʰõ 上白 ~ kẽĩ 上文]; HY [ken 上]; PJ [ken 上]; QY [kən 去]; SS [kən 上]; SY [kən 上]; XH [kõ上]; XX [kõ 上白 ~ kiã 上文]
CMX *kaŋ 陰上白 ~ *kəŋ 陰上文

The tone of 哽 in Q ý áng is irregular, possibly a misreading.

3.6.11 CMX *-iŋ. This is a final found to be distinguished from *-in only in Ch ángn íng Xīl ù. 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^{55}	diŋ^{11}	iŋ^{35}	pin^{55}	din^{11}	in^{35}
CMX	*piŋ 陰平	*diŋ 陽平	*iŋ 陰去	*pin 陰平	*lin 陽平	*in 陰去

There are no CMX alveolar affricates/fricatives or post-alveolar initials found to precede this -iŋ in Ch ángn íng. Applying strictly the least upper bound strategy, the combination of these CMX initials 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. The approach is therefore risking inefficacy in catering potentially conservative dialects around Ch ángn íng that has not yet been discovered by scholars. In fact, Ch ángn íng Xīl ù itself is experiencing a process of -iŋ mixing into -in (though not vise versa). It is likely that this dialect had possessed -iŋ following coronal sibilants. Nonetheless, the study adheres to a rather conservative attitude.

Qu ánzhōu dialect may also drop a hint on the same issue. A few lexemes 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	ʑyeŋ^{13}	ʑyeŋ^{13}	ʑyeŋ^{13}	ʑyeŋ^{35}	ʑiŋ^{13}	ʑiŋ^{35}
QYS	*ʑiŋ	*ʑiŋ	*jiŋ	*ʑiŋ^{h}	*ʑin	*dʑin$^{?}$

A contrast is observed between the four lexemes on the left with the two on the right. What is interesting is that the final -yeŋ is not found for lexemes with QYS *-in (or *-im). The presence of the glide y- is possibly related to the contrast, yet the mechanism is unclear. Conversely, these 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 ́ng QYS *biajŋ

CN(XL) [biaŋ $^{陽平}_{白}$ ~ biŋ $^{陽平}_{文}$]; CS [pin ^{陽平}]; CX [bei ^{陽平}]; HS [p^{h}iæ̃ $^{陽平}_{白}$ ~ p^{h}ieŋ̍ $^{陽平}_{文}$]; HY [pian $^{陽平}_{白}$ ~ pin $^{陽平}_{文}$]; PJ [biaŋ ^{陽平}]; QY [bin ^{陽平}]; SS [biən ^{陽平}]; SY(CL) [biã $^{陽平}_{白}$ ~ beŋ $^{陽平}_{文}$]; XH(BX) [b^{h}in ^{陽平}]; XX [biõ $^{陽平}_{白}$ ~ bin $^{陽平}_{文}$]

CMX *biaŋ $^{陽平}_{白}$ ~ *biŋ $^{陽平}_{文}$

迎 y ́ng QYS *ŋiajŋ

CN(XL) [iŋ ^{陽平}]; CS [in ^{陽平}]; HY [ŋin ^{陽平}]; PJ [in ^{陽平}]; QY [in ^{陽平}]; SS [ɲiən ^{陽平}]; SY(CL) [ieŋ ^{陽平}]; XH(BX) [in ^{陽平}]; XP [ŋ̍ĩ ^{陽平}]; XX [ŋ̍in ^{陽平}]

CMX *ŋiŋ ^{陽平}

3.6.12 CMX *-uəŋ. This final is reconstructed because, in a few dialects such as Ānhu à (安化), several lexemes with final -ən are found contrasting those from CMX final *-uŋ. This contrast is almost unseen among the majority of Xiāng dialects, for example Sh àoy áng. It is illustrated in Table 3.16. Not surprisingly, the same pattern of

contrast can be observed in S ì h óng of Yu ánjiāng (沅江四季紅), which is an emigrant community originated from Ānhu à(Zang, 2007).

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

	轟	弘	宏	烘	紅	亨	恆
AH	xən^{33}	ɣən^{13}	ɣən^{13}	xoŋ^{33}	ɣoŋ^{13}	xən^{33}	ɣən^{13}
SY	xuŋ^{55}	ɣuŋ^{11}	ɣuŋ^{11}	xuŋ^{55}	ɣuŋ^{11}	xən^{55}	ɣən^{11}
CMX	*xuəŋ ^{陰平}	*ɣuəŋ ^{陽平}	*ɣuəŋ ^{陽平}	*xuŋ ^{陰平}	*ɣuŋ ^{陽平}	*xəŋ ^{陰平}	*ɣəŋ ^{陽平}

Additionally, two lexemes in Qu ánzhōu 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 > *xuoŋ > *fuoŋ > foŋ.

Table 3.17: CMX *-uəŋ in QZ

	轟	掏	烘	亨	昏
QZ	foŋ^{33}	foŋ^{33}	xoŋ^{33}	xəŋ^{33}	fəŋ^{33}
CMX	*xuəŋ ^{陰平}	*xuəŋ ^{陰平}	*xuŋ ^{陰平}	*xəŋ ^{陰平}	*xun ^{陰平}

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 ^{陽平}]; CX [niəɯ ^{陽平} ~ nəɯ ^{陽平}]; HS [leŋ ^{陽平}]; HY [ləŋ ^{陽平}]; PJ [ləŋ ^{陽平}]; QY [loŋ ^{陽平}]; SS [nən ^{陽平}]; SY(CL) [nə̃^{陽平}]; XH [yn ^{陽平}$_{白}$ ~ lən ^{陽平}$_{文}$]; XH(BX) [lən ^{陽平}]; XX [nʌn ^{陽平}]

CMX *niuŋ ^{陽平}$_{白}$ ~ nuŋ ^{陽平}$_{文}$

衝 chōng QYS *tɕ^{h}uawŋ

CS [tsʰən 陰平]; CX [tʂʰəɯ 陰平]; HS [tʲʰueɳ 陰平]; HY [tsʰəŋ 陰平]; PJ [tɕʰiəŋ 陰平]; QY [tsʰoŋ 陰平]; SS [tʂʰən 陰平]; SY(CL) [tʂʰə̃陰平]; XH [tɕʰyn 陰平]; XX [tʰʌn 陰平]

CMX *tʃʰiuŋ 陰平

共 gòng QYS *ɡuawŋʰ

CS [kən 陽去白 ~ kən 陰去文]; CX [tɕiəɯ 陽去 ~ kəɯ 陽去]; HS [keɳ 陽去]; HY [kəŋ 陽去]; PJ [ɡəŋ 陽去]; QY [ɡoŋ 去]; SS [ɡən 陽去白 ~ kən 陰去文]; SY(CL) [ɡə̃陽去]; XH(BX) [xən 入]; XX [ɡʌn 陽去]

CMX *ɡiuŋ 陽去白 ~ *ɡuŋ 陽去文

用 yòng QYS *juawŋʰ

CS [in 陽去白 ~ in 陰去文]; CX [iəɯ 陽去]; HS [yeɳ 陽去]; HY [in 陽去]; PJ [iəŋ 陽去]; QY [ioŋ 去]; SS [iən 陽去白 ~ iən 陰去文]; SY(CL) [iə̃陰平]; XH(BX) [yn 去]; XX [iʌn 陽去]

CMX *iuŋ 陽去

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

逢 féng QYS *buawŋ

CS [xən 陽平]; CX [fəɯ 陽平]; HS [feɳ 陽平]; HY [xəŋ 陰平]; PJ [fəŋ 陽平]; QY [voŋ 陽平]; SS [xuən 陽平]; SY(CL) [və̃陽平]; XH(BX) [xun 陽平]; XX [ɣuʌn 陽平]

CMX *vuŋ 陽平

送 sòng QYS *sowŋʰ

CS [sən 陰去]; CX [səɯ 陰去]; HS [seɳ 陰去]; HY [səŋ 陰去]; PJ [səŋ 陰去]; QY [soŋ 去]; SS [sən 陰去]; SY(CL) [sə̃陰去]; XH(BX) [sən 去]; XX [sʌn 陰去]

CMX *suŋ 陰去

3.7 Finals Ended with the Coda -t

The presence of voiceless stops in the coda position is attested from Píngjiāng dialect and from Luódài (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	ʂɿʔ^{入}	ʂɿʔ^{入}	ʃi^{入}	ʂɿ^{陽平}	*ʃit^{陰入}
十	ʂɿʔ^{入}	ʂɿʔ^{入}	ʒi^{入}	ʂɿ^{陽平} ~ ʂɿ^{陰去}	*ʒit^{陽入}
詩	ʂɿ^{陰平}	ʂɿ^{陰平}	sɿ^{陰平}	sɿ^{陰平}	*ʃi^{陰平}
始	ʂɿ^{上}	ʂɿ^{陽去}	sɿ^{上}	sɿ^{上}	*ʃi^{陰上}
世	ʂɿ^{陰去}	ʂɿ^{陰去}	ʃi^{去}	sɿ^{陰去}	*ʃɛi^{陰去}
時	ʂɿ^{陽平}	ʂɿ^{陽平}	zɿ^{陽平}	sɿ^{陽平}	*ʒi^{陽平}
是	ʂɿ^{陽去}	ʂɿ^{陽去}	zɿ^{去}	sɿ^{陽去}	*ʒi^{陽上}

In Table 3.18, Q ý áng dialect maintains a separate tone for the *Rùshēng (入聲) syllables in spite there is no coda left. In X ùpǔ, 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	tsʰɑʔ^{入}	tsʰɔ^{陽平}	tsʰa^{陽平}	*tʃʰat^{陰入}
拆	tsʰaʔ^{入}	tsʰai^{陽平}	tsʰo^{陽平}	*tʃʰak$^{陰入}_{白}$ ~ *tʃʰɛk$^{陰入}_{文}$
合	xøʔ^{入}	xɔ^{陰去}	xua^{陰去}	*ɣɔt^{陽入}
鶴	xoʔ^{入}	xɔ^{陽去}	xʊ^{陰去}	*ɣɔk^{陽入}
骨	kuɛʔ^{入}	kuei$^{陽平}_{白}$ ~ ku$^{陽平}_{文}$	kuei$^{陽平}_{白}$ ~ ku$^{陽平}_{文}$	*kut$^{陰入}_{白}$ ~ *kuk$^{陰入}_{文}$
谷	kuʔ^{入}	kəu$^{陽平}_{白}$ ~ ku$^{陽平}_{文}$	ku^{陽平}	*kuk^{陰入}

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 considerately 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 ˄]; CX [fɔ 陽平]; HS [fɑ ˄]; HY [fa ˄]; PJ [fɑʔ˄]; QY [pa ˄]; SS [xua ˄]; SY(CL) [fa 陰平]; XH(BX) [fa ˄]; XX [xua 陽平]

CMX *fat 陰入

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

夾 jiá QYS *kɛʳp

CS [ka ˄白 ~ tɕia ˄文]; CX [kɔ 陽平白 ~ tɕia 陰去文]; HS [kɑ ˄白 ~ ʈɑ ˄文]; HY [ka ˄白 ~ tɕia ˄文]; PJ [kɑʔ˄白 ~ tɕiaʔ˄文]; QY [ka ˄白 ~ tʃia ˄文]; SS [ka ˄白 ~ cia ˄文]; SY(CL) [ka 陰平]; XH(BX) [ɕia ˄]; XX [ka 陽平]

CMX *kat 陰入白 ~ *kiat 陰入文

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

甲 jiǎ QYS *kaʳp

CS [ka ˄白 ~ tɕia ˄文]; CX [kɔ 陽平白 ~ tɕia 陰去文]; HS [ʈɑ ˄]; HY [tɕia ˄]; PJ [kɑʔ˄]; QY [tʃia ˄]; SS [ka ˄白 ~ cia ˄文]; SY(CL) [tʂa 陰平]; XH(BX) [tɕia ˄]; XX [ka 陽平白 ~ kia 陽平文]

CMX *kat 陰入白 ~ *kiat 陰入文

壓 yā QYS *ʔaʳp

CS [ŋa ˄白 ~ ia ˄]; CX [ɔ 陽去白 ~ ia 陰去文]; HS [iɑ ˄]; HY [ŋa 陽去白 ~ ia ˄]; PJ [iaʔ˄]; QY [ia ˄]; SS [ia ˄]; SY(CL) [ia 陰平]; XH(BX) [ia ˄]; XX [ŋã陽平白 ~ ia 陽平文]

CMX *at 陰入白 ~ *iat 陰入文

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

3.7.3 CMX *-uat.

刷 shuā QYS *ʂwaʳt

CS [ɕya ˄]; CX [sua 陰去]; HS [sɑ ˄]; HY [sua ˄]; PJ [saʔ˄]; QY [sua ˄]; SS [sua ˄]; SY(CL) [sa 陰平]; XH(BX) [sa 陰平]; XX [sua 陽平]

CMX *ʃuat 陰入

刮 guā QYS *kwaʳt

CS [kua 入]; CX [kua 陰去]; HS [kuɑ 入 ~ kuɑ 陰平]; HY [kua 入]; PJ [kuɑʔ入]; QY [kua 入白 ~ ko 入文]; SS [kua 入]; SY(CL) [kua 陰平]; XH(BX) [kua 陰平]; XX [kua 陽平]

CMX *kuat 陰入

3.7.4 CMX *-ɔt. For syllables with coronal onsets, this final experienced lowering *-ɔt > *-at in most of the dialects except for Pǐngjiāng. In Shàoshān and Xiāngxiāng, it merges with *-uɔt (to be introduced in section 3.7.5) and then to -uɛ and -ua after velars in their vernacular strata. The Héngyáng final -ua is possibly a result of u-epenthesis 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	搽	摘	沙	塔
HY	tsua 白 ~ tsa 文	tsua 白 ~ tsa 文	tsua 白 ~ tsa 文	sua 白 ~ sa 文	t^ha
QY	dza	dza	tsa 入白 ~ tse 入白	sa	t^ha
CMX	*dzɔt	*dʒa	*tʃak	*ʃa	*t^hat

雜 zá QYS *dzəp

CS [tsa 入]; CX [tsɔ 陽平]; HS [ts^hɑ 上]; HY [tsua 陽平白 ~ tsa 陽平文]; PJ [ts^høʔ入]; QY [dza 入]; SS [tsa 入]; SY(CL) [tsa 陰去]; XH(BX) [tsa 入]; XX [tsa 陽平]

CMX *dzɔt 陽入

葛 gě QYS *kat

CS [ko 入]; CX [ko 陽平]; HS [ko 入]; HY [ko 入]; PJ [køʔ入]; QY [ko 入]; SS [kuɛ 入白 ~ kʊ 入文]; SY [ko 入]; XH(BX) [ko 入]; XX [kua 陽平]

CMX *kɔt 陰入

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

[ø] in Péngjiāng and [e/a] in Héngyáng. Many dialects experienced breakup of *-ɔt into -ua and -ue. The Xiāngxiāng case is parallel to that of finals *-iɛt, *-yɛt, *-ɛk, and *-uɛk to be introduced in their respective sections.

缽 bō QYS *pwat

CS [po 入]; CX [po 陽平]; HS [po 入]; HY [pe 入白 ~ po 入文]; PJ [pøʔ入]; QY [po 入]; SS [pɛ 入白 ~ pʊ 入文]; SY(CL) [po 陰平]; XH(BX) [po 入]; XX [pia 陽平]

CMX *puɔt 陰入白 ~ *pɔk 陰入文

撮 cuō QYS *ts^{h}wat ~ *tswat

CS [ts^{h}o 入]; CX [ts^{h}o 陽平 ~ ts^{h}ɔ 陰去]; HS [ts^{h}o 入 ~ tso 入]; HY [tsua 入白 ~ tsue 入文]; ML(CL) [tsøʔ入]; QY [tsua 入白 ~ tso 入文]; SY(CL) [tsa 陰平白 ~ tso 陰去文]; XH [tsa 陰平白1 ~ ts^{h}o 陰平白2 ~ tso 入文]; XX [tɕya 陽平]

CMX *tsuɔt 陰入白1 ~ *ts^{h}uɔt 陰入白2 ~ *tsɔk 陰入文

活 huó QYS *ɣwat

CS [xo 入]; CX [xɔ 陰去]; HS [fæ 上白 ~ xo 上文]; HY [fe 陽平]; PJ [føʔ入白 ~ uøʔ入文]; QY [ɣue 入]; SS [xʊ 陰去]; SY(CL) [ho 陰去]; XH(BX) [xo 入]; XX [xuai 陰去]

CMX *ɣuɔt 陽入白 ~ *ɣɔk 陽入文

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. Qíyáng's case is likely the same, preceding its merger of *Yīnqù (陰去) and *Yángqù (陽去) tones.

佮 gé QYS *kəp

CS [ko 入]; HS [ko 入]; HY [kua 入]; HT [ko 上]; ML(CL) [køʔ入]; QY [kua 入]; SY [ko 入]; XH [kua 陰平]; XX [kua 陽平]

CMX *kuɔt 陽入

3.7.6 CMX *-iɛt. It has monophthongized to -øʔ after retroflexes in Péngjiāng. Its realization in Xiāngxiāng could be a result of the sound change: *-iɛt > *-iɛ > -ia.

列 liè QYS *liat

CS [lie ˥]; CX [die ˧˥]; HS [lie ˥]; HY [lie ˧˥]; PJ [liɛʔ˥]; QY [lie ˥]; SS [niɛ ˥]; SY(CL) [niɛ ˨˩]; XH(BX) [lie ˥]; XX [lia ˧˥]

CMX *liɛt ˧˥

折 zhé QYS *tɕiat

CS [tsə ˥]; CX [tʂe ˧˥]; HS [tɕie ˥]; HY [tɕie ˥]; PJ [tʂøʔ˥]; QY [tʃie ˥]; SS [tʂɛ ˥]; SY(CL) [tɕiɛ ˧]; XH(BX) [tʂə ˥]; XX [tia ˧˥]

CMX *tʃiɛt ˨˩

葉 yè QYS *jiap

CS [ie ˥]; CX [ie ˧˥]; HS [ie ˩]; HY [ie ˥]; PJ [iɛʔ˥]; QY [ie ˥]; SS [iɛ ˥]; SY(CL) [iɛ ˨˩]; XH(BX) [ie ˨]; XX [ia ˨˩]

CMX *iɛt ˧˥

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 ˥]; CX [ɕye ˧˥]; HS [ɕie ˥]; HY [ɕye ˥]; PJ [ɕiɛʔ˥]; QY [ʃye ˥]; SS [siɛ ˥]; SY(CL) [ɕye ˧]; XH(BX) [ɕi ˧]; XX [ɕya ˧˥]

CMX *syɛt ˨˩

月 yuè QYS *ŋuat

CS [ye ˥]; CX [nye ˧˥ ~ ye ˧˥]; HS [yæ ˩ ~ yæ ˥]; HY [ye ˧˥]; PJ [yɛʔ˥]; QY [ye ˥]; SS [uɛ ˥]; SY(CL) [ye ˨˩]; XH(BX) [yɛ ˥]; XX [ya ˧˥]

CMX *ŋyɛt ˧˥

3.7.8 CMX *-ət. This final becomes -u after labials in most of the dialects except P ńgjiāng. When preceded by CMX post-alveolar initial, it possibly went through *-ət > *-ɨt > *-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 入]; CX [pu 陰去]; HS [pu 入]; HY [pu 入]; PJ [pɛʔ入]; QY [pu 入]; SS [pu 入]; SY(CL) [pu 陰去]; XH(BX) [pu 入]; XX [pu 陽平]

CMX *pət 陰入

物 wù　QYS *mut

CS [u 入]; CX [ve 陰去白 ~ u 陰去文]; HS [u 入]; HY [fu 陽平]; PJ [uɛʔ入]; QY [ve 入]; SS [u 入]; SY(CL) [vu 陽去]; XH(BX) [u 入]; XX [u 陰去]

CMX *ʊət 陽入

佛 fó/fú　QYS *but

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

CMX *vət 陽入

蝨 shī　QYS *ʂit

CS [sə 入]; CX [ʂʅ 陰平]; HS [sæ 入]; HY [se 入]; ML(CL) [si 入]; QY [se 入]; SS [sɛ 入]; SY(CL) [sie 陰平]; XH(BX) [ɕi 陰平]; XX [ɕia 陽平]

CMX *ʃət 陰入

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 入]; CX [pi 陽平]; HS [pi 入]; HY [pi 入]; PJ [piʔ入]; QY [pi 入]; SS [pi 入]; SY(CL) [pi 陰平]; XH(BX) [pi 入]; XX [pi 陽平]

CMX *pit 陰入

踢 tī　QYS *t^{h}ɛjk

CS [tʰi ˥]; CX [tʰi 陽平]; HS [tʰi ˥]; HY [tʰi ˥]; PJ [tʰiaʔ˥]; QY [tʰi ˥]; SS [tʰi ˥]; SY(CL) [tʰia 陰平白 ~ tʰi 陰平文]; XH(BX) [tʰia 陰平白 ~ tʰi 陰平文]; XX [tʰio 陽平白 ~ tʰi 陽平文]

CMX * tʰiak 陰人白 ~ tʰit 陰入文

十 shí QYS *dʑip

CS [sʅ ˥]; CX [ʂʅ 陰去]; HS [ɕi 上]; HY [ɕi 陽平]; PJ [ʂʅʔ˥]; QY [ʒi ˥]; SS [ʂʅ 陰去]; SY(CL) [ʂʅ 陰去]; XH(BX) [ʂʅ 去]; XX [ʂʅ 陰去]

CMX *ʒit 陽入

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

猝 cù QYS *tsʰwət

AH [tsʰei ˥]; CS [tsʰəu 陽平]; CX [tsʰəu 陰去]; HY [tsʰu ˥]; QY [tsʰu ˥]; SS [tsʰəɯ ˥]; SY [tsʰuei 陽去白 ~ tsʰu ˥文]; XP [tsʰuei 陰去]; XH(BX) [tsʰu ˥]

CMX *tsʰut 陰入白 ~ *tsʰuk 陰入文

骨 gǔ QYS *kwət

CS [ku ˥]; CX [kuei 陽平白 ~ ku 陽平文]; HS [kuei ˥白 ~ ku ˥文]; HY [kui ˥白 ~ ku ˥文]; PJ [kuɛʔ˥]; QY [ku ˥]; SS [kuɛ ˥白 ~ ku ˥文]; SY(CL) [kuɛ 陰平白 ~ ku 陰平文]; XH(BX) [kuə 陰平白 ~ ku ˥文]; XX [kuei 陽平白 ~ ku 陽平文]

CMX *kut 陰入白 ~ *kuk 陰入文

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

卒 zú QYS *tswit

CS [tsəu ˥]; CX [tsəu 陽平]; HS [tsei ˥]; HY [tɕy ˥]; ML(CL) [tsəɯ ˥]; QY [tsu ˥]; SS [tsəɯ ˥]; SY(CL) [tsəu 陰去]; XH(BX) [tsu ˥]; XX [tɕyei 陽平]

CMX *tsyt 陰入

出 chū QYS *tɕʰwit

CS [tɕʰy ˥]; CX [tʂʰu 陰平]; HS [tɕʰy ˥]; HY [tɕʰy ˥]; PJ [tɕʰyʔ˥]; QY [tʃʰy ˥]; SS [tʂʰʮ ˥]; SY(CL) [tɕʰy 陰平]; XH(BX) [tɕʰy ˥]; XX [tʰy 陽平]

CMX *tʃʰyt 陰入

域 yù QYS *wik

CS [y ˥]; CX [y 陽去]; HS [y 陽去]; HY [y ˥ ~ i ˥]; PJ [yʔ˥]; QY [y 去]; SS [ʮ 陰去]; SY(CL) [y 陰去]; XH(BX) [y 陽平]; XX [y 陰去]

CMX *yt 陽入

3.8 Finals Ended with the Coda -k

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

白 bái QYS *baʳjk

CS [pə ˥]; CX [phai 陰去]; HS [pʰɑ 上白 ~ pæ 上文] HY [pe 陽平]; PJ [pʰaʔ˥]; QY [be ˥]; SS [pɛ ˥]; SY(CL) [biɛ 陽去]; XH(BX) [pə ˥]; XX [pʰo 陰去白 ~ pia 陽平文]

CMX *bak 陽入白 ~ *bɛk 陽入文

擇 zhái/zé QYS *draʳjk

CS [tsʰə ˥]; CX [tsʰe ˥]; HS [tsʰæ ˥]; HY [tse ˥]; PJ [tsʰaʔ˥白 ~ tsʰɛʔ˥文]; QY [dze ˥]; SS [tsʰɛ ˥]; SY(CL) [tsʰa 陰去白 ~ tɕʰiɛ 陰去文]; XH(BX) [tɕʰiɛ ˥]; XX [tsʰo 陰去]

CMX *dʒak 陽入白 ~ *dʒɛk 陽入文

客 kè QYS *kʰaʳjk

CS [kʰə ˥]; CX [khai 陽平]; HS [kʰɑ ˥白 ~ kʰe ˥文]; HY [kʰa ˥白 ~ kʰe ˥文]; PJ [kʰaʔ˥]; QY [kʰa ˥白 ~ kʰe ˥文]; SS [kʰɛ ˥]; SY(CL) [kʰa 陰平白 ~ kʰei 陰平文]; XH(BX) [kʰa 陰平白 ~ kʰə ˥文]; XX [kʰo 陽平 ~ kʰia 陽平]

CMX *kʰak 陰入白 ~ kʰɛk 陰入文

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

劈 pī QYS *p^{h}ɛjk

CS [p^{h}i ^{入}]; CX [p^{h}i ^{陽平}]; HS [p^{h}iɑ $^{入}_{白}$ ~ p^{h}i $^{入}_{文}$]; HY [p^{h}ia $^{入}_{白}$ ~ p^{h}i $^{入}_{文}$]; PJ [p^{h}iaʔ^{入}]; QY [p^{h}i ^{入}]; SS [p^{h}ia $^{入}_{白}$ ~ p^{h}i $^{入}_{文}$]; SY(CL) [p^{h}ia $^{陰平}_{白}$ ~ p^{h}i $^{陰平}_{文}$]; XH(BX) [p^{h}i ^{入}]; XX [p^{h}io $^{陽平}_{白}$ ~ p^{h}i $^{陽平}_{文}$]

CMX *p^{h}iak $^{陰入}_{白}$ ~ *p^{h}it $^{陰入}_{文}$

石 sh í QYS *dʑiajk

CS [sʅ ^{入}]; CX [ʂʅ ^{陰去}]; HS [ɕia $^{上}_{白}$ ~ ɕi $^{上}_{文}$]; HY [ɕia $^{陽平}_{白}$ ~ ɕi $^{陽平}_{文}$]; PJ [ʂaʔ^{入}]; QY [ʒia $^{入}_{白}$ ~ ʒi $^{入}_{文}$]; SS [ʂua $^{陰入}_{白}$ ~ ʂʅ $^{入}_{文}$]; SY(CL) [ʂa $^{陰入}_{白}$ ~ ʂʅ $^{陰去}_{文}$]; XH(BX) [ʂa ^{去}]; XX [ɕio $^{陰去}_{白}$ ~ ʂʅ $^{陰去}_{文}$]

CMX *ʒiak $^{陽入}_{白}$ ~ *ʒit $^{陽入}_{文}$

3.8.3 CMX *-uak. This is a peripheral final. It is found contrastive against *-uat in M ìluó Ch ángl è and dialects around L óudǐ.

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

	劃	滑	罰
ML(CL)	uɑ^{43} ~ fɑ^{43}	ua^{43}	fa^{43}
CMX	*ɣuak ^{陽入}	*ɣuat ^{陽入}	*vat ^{陽入}

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

落 l àɔ/lu ò QYS *lɑk

CS [lo ^{入}]; CX [lɔ $^{陰去}_{白}$ ~ lo $^{陽平}_{文}$]; HS [lo ^{上}]; HY [lo ^{陽平}]; PJ [loʔ^{入}]; QY [lo ^{入}]; SS [nʊ ^{入}]; SY(CL) [no ^{陰去}]; XH(BX) [lo ^{去}]; XX [lʊ ^{陰去}]

CMX *lɔk ^{陽入}

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

戳 chuō QYS *tʂ^{h}a^{r}wk

CS [ts^{h}o ^{入}]; CX [ts^{h}ɔ ^{陰去}]; HS [ts^{h}o ^{入}]; HY [ts^{h}o ^{入}]; PJ [ts^{h}oʔ^{入}]; QY [ts^{h}o ^{入}]; SS [tʂ^{h}ʊ ^{入}];

SY(CL) [ts^{h}o ^{陰去}]; XH(BX) [dz^{h}o ^{入}]; XX [ts^{h}ʊ ^{陽平} ~ ts^{h}ʊ ^{陰去}]

CMX *tʃ^{h}ɔk ^{陰入}

The form of 戳 in Xīnhuà Bàixī is irregular.

學 xué QYS *ɣa^{r}wk

CS [ɛio ^{入}]; CX [xɔ ^{陰去} ~ ɛio ^{陽平}]; HS [xo $^{上}_{白}$ ~ ɛio $^{上}_{文}$]; HY [ɛio ^{陽平}]; PJ [k^{h}oʔ$^{入}_{白}$ ~ ɛioʔ $^{入}_{文}$]; QY [ʒio ^{入}]; SS [ɕʊ ^{入}]; SY(CL) [ʂo $^{陰去}_{白}$ ~ ɕyɛ $^{陰去}_{文}$]; XH(BX) [ɕyo ^{入}]; XX [xʊ $^{陰去}_{白}$ ~ ɛiʊ $^{陽平}_{文}$]

CMX *ɣɔk $^{陽入}_{白}$ ~ *ɣiɔk $^{陽入}_{文}$

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

3.8.5 CMX *-iɔk.

削 xiāo/xuē QYS *siɑk

CS [ɛio ^{入}]; CX [ɛio ^{陽平}]; HS [ɛio ^{入}]; HY [ɛio ^{入}]; PJ [ɛioʔ^{入}]; QY [ʃio ^{入}]; SS [siəɯ ^{入}]; SY(CL) [siəu ^{陰平}]; XH(BX) [ɛiə ^{陰平}]; XX [ɛiʊ ^{陽平}]

CMX *siɔk ^{陰入}

勺 sháo QYS *dʑiɑk

CS [sau ^{陽平}]; CX [ʂɔ ^{陰去}]; HS [ɛio ^{上}]; HY [tɛio ^{入}]; QY [ʃio ^{入}]; SS [ɕʊ ^{入}]; SY(CL) [ʂo ^{陰去}]; XH(BX) [ɕyo ^{入}]; XP [sʊ ^{陰去}]; XX [ɛiʊ ^{陰去}]

CMX *ʒiɔk ^{陽入}

The forms of 勺 in Chángshā and Héngyáng are irregular.

藥 yào QYS *jiɑk

CS [io ^{入}]; CX [io ^{陽平}]; HS [io ^{入}]; HY [io ^{陽平}]; PJ [ioʔ^{入}]; QY [io ^{陽平}]; SS [iʊ ^{入}]; SY(CL) [io ^{陰去}]; XH(BX) [yo ^{去}]; XX [iʊ ^{陽平}]

CMX *iɔk ^{陽入}

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

*-iɛt in 3.7.6.

北 běi QYS *pək

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

CMX *pɛk 陰入

伯 bó QYS *paʳjk

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

CMX *pak 陰入白 ~ *pɛk 陰入文

勒 lēi/lè QYS *lək

CS [lə ˄]; CX [le 陽平]; HS [lie 上]; HY [le 陽平]; ML(CL) [lø˄]; QY [le ˄]; SS [nɛ ˄]; SY(CL) [niɛ 陰去]; XH(BX) [lə 去]; XX [lia 陽平]

CMX *lɛk 陽入

3.8.7 CMX *-uɛk. Xiāngxiāng lowers it to -ua.

國 guó QYS *kwək

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

CMX *kuɛk 陰入

或 huò QYS *ɣwək

CS [xo ˄]; CX [xue 陽平]; HS [fæ 上]; HY [fe 陽平]; PJ [fɛʔ˄]; QY [ɣue ˄]; SS [xʊ ˄]; SY(CL) [huɛ 陰去]; XH(BX) [xuæ 去]; XX [xua 陽平]

CMX *ɣuɛk 陽入

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

In Héngdōng Dàpǔ (衡東大浦) dialect, a lexeme 郭 (QYS *kwɑk) is recorded with two layers. The literary form corresponds to CMX *-ɔk like in most other Xiāng while the vernacular form corresponds to *-uɛk. 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 *-uɔk in HD

	郭	國	各
HD	kue^{213} 白 ~ ko^{213} 文	kue^{213}	ko^{213}
HY	ko^{22}	kue^{22}	ko^{22}
CMX	*kuɛk 陰入 白 ~ *kɔk 陰入 文	*kuɛk 陰入	*kɔk 陰入

Another syllable recorded in Hénɡdōnɡ Dàpǔ that shows this pattern is [k^{h}ue^{213}], possibly a vernacular reading of the etymon 擴 (QYS *k^{h}wɑk), 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 入]; CX [mu 陽平]; HS [mu 入]; HY [mu 入]; PJ [moʔ入]; QY [mu 入]; SS [mʊ 入]; SY(CL) [mə̃陰平]; XH(BX) [mo 陰平]; XX [mʊ̃陽平]

CMX *muk 陽入

服 fú QYS *buwk

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

CMX *vuk 陽入

讀 dú QYS *dowk

CS [təu 入]; CX [t^{h}əu 陰去 白 ~ təu 陽平 文]; HS [t^{h}æu 上]; HY [tu 陽平]; PJ [t^{h}əuʔ入]; QY [du 入]; SS [t^{h}əɯ 陰去 白 ~ təɯ 入 文]; SY(CL) [du 陽去]; XH(BX) [d^{h}u 入]; XX [t^{h}u 陰去 白 ~ tu 陽平 文]

CMX *duk 陽入

哭 kū　QYS *k^{h}owk

CS [k^{h}u ^{入}]; CX [k^{h}əu $^{陽平}_{白}$ ~ k^{h}u $^{陽平}_{文}$]; HS [k^{h}u ^{入}]; HY [k^{h}u ^{入}]; PJ [k^{h}uʔ^{入}]; QY [k^{h}u ^{入}]; SS [k^{h}u ^{入}]; SY(CL) [k^{h}u ^{陰平}]; XH(BX) [k^{h}u ^{陰平}]; XX [k^{h}u ^{陽平}]

CMX *k^{h}uk ^{陰入}

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 ^{入}]; CX [ləu ^{陽平}]; HS [læu ^{入}]; HY [liu ^{陽平}]; PJ [ləuʔ^{入}]; QY [liəɯ $^{入}_{白}$ ~ lu $^{入}_{文}$]; SS [nəɯ ^{入}]; SY(CL) [niəu ^{陰去}]; XH(BX) [liu ^{去}]; XX [liei ^{陽平}]

CMX *liuk $^{陽入}_{白}$ ~ *luk $^{陽入}_{文}$

祝 zhù　QYS *tɕuwk

CS [tsəu ^{入}]; CX [tʂəu ^{陽平}]; HS [ʈæu ^{入}]; HY [tɕiu $^{入}_{白}$ ~ tsu $^{入}_{文}$]; PJ [tʂəuʔ^{入}]; QY [tsu ^{入}]; SS [tʂəɯ ^{入}]; SY(CL) [tsu ^{陰平}]; XH(BX) [tʂəu ^{入}]; XX [tiei ^{陽平}]

CMX *tʃiuk $^{陰入}_{白}$ ~ *tsuk $^{陰入}_{文}$

曲 qǔ　QYS *k^{h}uawk

CS [tɕ^{h}iəu ^{入}]; CX [tɕ^{h}iəu $^{陽平}_{白}$ ~ tɕ^{h}y $^{陽平}_{文}$]; HS [ʈ^{h}æu ^{入}]; HY [tɕ^{h}iu $^{入}_{白}$ ~ tɕ^{h}y $^{入}_{文}$]; PJ [tɕ^{h}iəuʔ^{入}]; QY [tʃ^{h}y ^{入}]; SS [c^{h}iʊ ^{入}]; SY(CL) [tɕ^{h}y ^{陰平}]; XH(BX) [tɕ^{h}iu ^{入}]; XX [k^{h}iei ^{陽平}]

CMX *k^{h}iuk $^{陰入}_{白}$ ~ k^{h}yt $^{陰入}_{文}$

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 *-ɛ, while literary-only initials include *-ia, *-iɛ, *-yɛ, *-iai, *-iau, *-ian, *-iɒŋ, 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 *-uɔn and *-uɔt, 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 ángrù (陽入) tone syllables, originally bearing final obstruents, are no longer in a distinct toneme and must have merged into *Yīnqù (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 ángrù (陽入) with *Yīnqù (陰去) in some dialects is not as ancient as what Coblin has suggested.

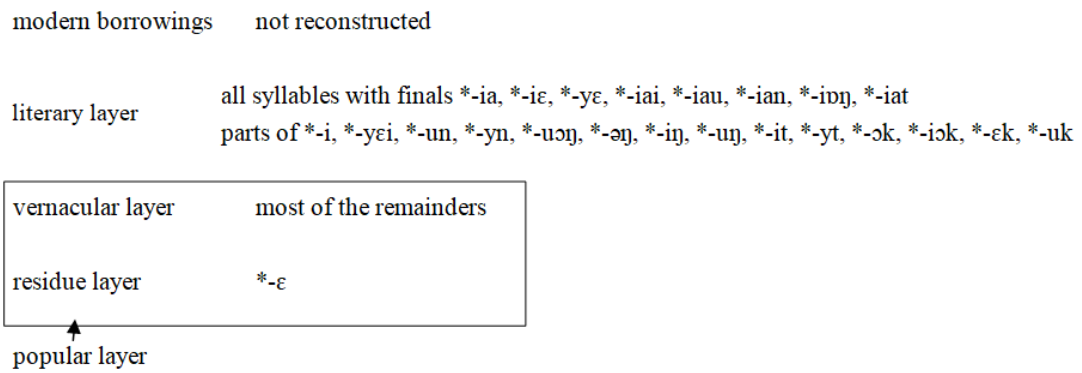


Figure 3.1: a diagram for layers of CMX finals

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^{45}	i^{11}	i^{54}	i^{214}	i^{214}	i^{33}	i^{33}
XX	i^{55}	i^{23}	i^{21}	i^{45}	i^{22}	i^{23}	i^{45}

From both dialects we know that syllables 1, 2, and 3 should have distinct tonemes each. Qúyáng 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.

Shàoyáng Chánglèin 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^{55}	taŋ^{42}	taŋ^{35}	daŋ^{12}	daŋ^{31}	daŋ^{24}
XX	tiã^{55}	tiã^{21}	tiã^{45}	diã^{23}	diã^{22}	diã^{22}

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.

*Yīnpíng	*Yīnshǎng	*Yīnqù	*Yīnrù
陰平	陰上	陰去	陰入
55	42	35	34
*Yángpíng	*Yángshǎng	*Yángqù	*Yángrù
陽平	陽上	陽去	陽入
12	32	33	24

The underlined pitches indicate short durations. Notions of *Yīn (陰) and *Y áng (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 *Yīnp íng (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 *towŋ

CS [tən^{33}]; CX [təɯ^{44}]; HS [teŋ̍^{33}]; HY [təŋ^{45}]; PJ [təŋ^{55}]; QY [toŋ^{45}]; SS [tən^{33}]; SY(CL) [tə̃^{55}]; XH(BX) [tən^{33}]; XX [tʌn^{55}]

CMX *tuŋ^{55}

窩 wō QYS *wɑ

CS [o^{33}]; CX [o^{44}]; HS [o^{33}]; HY [xo^{45}]; PJ [o^{55}]; QY [xo^{45}]; SS [o^{33}]; SY(CL) [ʊ^{55}]; XH(BX) [o^{33}]; XX [ʊ^{55} ~ k^{h}ʊ^{55}]

CMX *uɔ^{55}

The forms of 窩 (lit. nest or lair) in H éngy áng, Q ýy áng, and the alternative reading [k^{h}ʊ] in Xiāngxiāng are irregular, possibly being another etymon 窠 kē (lit. nest; QYS *k^{h}wɑ).

4.1.2 CMX *Yīnshǎng (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. H éngy áng might have dropped the final falling part and H éngshān further lowers the onset pitch.

懂 dǒng QYS *towŋ^{ʔ}

CS [tən^{42}]; CX [təɯ^{31}]; HS [teŋ̍^{13}]; HY [təŋ^{33}]; PJ [təŋ^{53}]; QY [toŋ^{54}]; SS [tən^{42}]; SY(CL) [tə̃^{42}]; XH(BX) [tən^{31}]; XX [tʌn^{21}]

CMX *tuŋ^{42}

火 huǒ QYS *xwɑˀ

CS [xo^{42}]; CX [xo^{31}]; HS [fu^{13} 白 ~ xo^{13} 文]; HY [xo^{33}]; PJ [xo^{53}]; QY [xo^{54}]; SS [xʊ^{42}]; SY(CL) [xo^{42}]; XH(BX) [xo^{31}]; XX [xʊ^{21}]

CMX *xuɔ^{42}

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 Héngshān, and lower in Héngyáng and Qíyáng.

凍 dòng QYS *towŋ^{h}

CS [tən^{55}]; CX [təɯ^{324}]; HS [teŋ^{55}]; HY [təŋ^{24}]; PJ [təŋ^{34}]; QY [toŋ^{214}]; SS [tən^{45}]; SY(CL) [tə̃^{35}]; XH(BX) [tən^{45}]; XX [tʌn^{45}]

CMX *tuŋ^{35}

貨 huò QYS *xwɑ^{h}

CS [xo^{55}]; CX [xɔ^{324}]; HS [xo^{55}]; HY [xo^{24}]; PJ [xo^{34}]; QY [xo^{214}]; SS [xʊ^{45}]; SY(CL) [xo^{35}]; XH(BX) [xo^{45}]; XX [xʊ^{45}]

CMX *xuɔ^{35}

4.1.4 CMX *Yīnrù (陰入). The actual pitch is reconstructed to be a half mid-rising tone <u>34</u> 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 *ʂuwk

CS [səu^{24}]; CX [səu ^{213}]; HS [sæu^{35}]; HY [su^{22}]; PJ [səuʔ^{4}]; QY [su^{33}]; SS [səɯ^{24}]; SY(CL) [su^{55}]; XH(BX) [so^{24}]; XX [ɕiei^{23}]

CMX *suk$^{\underline{34}}$

The vowel in Xīnhuà Báxī for this character possibly comes from Mandarin.

一 yī QYS *ʔjit

CS [i^{24}]; CX [i^{213}]; HS [i^{35}]; HY [i^{22}]; PJ [iʔ^{4}]; QY [i^{33}]; SS [i^{24}]; SY(CL) [i^{55}]; XH(BX)

[i^{24}]; XX [i^{23}]

CMX *it$^{\underline{34}}$

4.2 Tones from the Yáng (陽) Category

4.2.1 CMX *Yángp íng (陽平). The actual pitch is reconstructed to be a low rising tone 12.

同 tóng QYS *dowŋ

CS [tən^{13}]; CX [dəɯ^{213}]; HS [t^{h}eŋ^{11}]; HY [təŋ^{11}]; PJ [dəŋ^{23}]; QY [doŋ^{11}]; SS [dən^{13}]; SY(CL) [dɜ̃^{12}]; XH(BX) [d^{h}ən^{13}]; XX [dʌn^{23}]

CMX *duŋ^{12}

鵝 é QYS *ŋɑ

CS [o^{13}]; CX [ŋo^{213}]; HS [ŋo^{11}]; HY [ŋo^{11}]; PJ [ŋo^{23}]; QY [ŋo^{54}]; SS [ŋʊ^{13}]; SY(CL) [ɡo^{12} 白 ~ ŋo^{12} 文]; XH(BX) [o^{13}]; XX [ŋɔ̃^{23}]

CMX ŋɔ^{12}

4.2.2 CMX *Yángshǎng (陽上). The actual pitch is reconstructed to be a low falling tone 32. Most dialects have merged it with *Yángqù (陽去) upon the condition of following [-sonorant] initials, usually restricted to plosives, affricates, and fricatives. Otherwise, the tone is merged with *Yīnshǎng (陰上). Evidence for a late merger of *Yángshǎng (陽上) and *Yángqù (陽去) tones that conditioned on changed initials is found from comparing Q ýáng and P ńgjiāng dialects.

Table 4.3: QY's special merger

	舞	晚	網	尾	乳	擾	軟	忍
PJ	u 上	uan 上	uoŋ 上	uɛi 上	y 上	iau 上	yan 上	yn 上
QY	vu 去	van 去	vaŋ 去	vi 去	ʒy 去	ʒiau 去	ʒyan 去	ʒin 去
SY(CL)	vu 陽上	vaŋ 陽上	vã 陽上	vi 陽上	zy 陽上	ziau 陽上	zyɛ 陽上	zɐŋ 陽上
CMX	*u 陽上	*uan 陽上	*uoŋ 陽上	*ui 陽上	*ɻy 陽上	*ɻiau 陽上	*ɻyɛn 陽上	*ɻin 陽上

Residual forms are not listed in Table 4.3. Syllables here all bear the shǎng (上)

tone in P íngjiāng dialect and most other dialects as well. However in Q íy áng, these syllables are in the q ù (去) tone with their initials realized as voiced fricatives. It can be explained by a conjecture that the initial of these syllables in Q íy áng has hardened to a fricative before the merger of *Y ángshǎng (陽上) and *Y ángq ù (陽去) tones conditioned on [-sonorant] syllabic onsets. By contrast, the initials of these syllables softened to initial zero in P íngjiāng before a similar merger.

Table 4.4: mismatch of *Y ángshǎng (陽上) among PJ, QY, and SY(CL)

	雨	乳	豎	樹	預
PJ	y 上	y 上	ɕy 陽去	ɕy 陽去	y 陽去
QY	y 上	ʒy 去	ʒy 去	ʒy 去	y 去
SY(CL)	y 陰上	ʑy 陽上	ʑy 陽上	ʑy 陽去	y 陰去
CMX	*y 陰上	*ɻy 陽上	*ʒy 陽上	*ʒy 陽去	*y 陽去

In Table 4.4, syllables bearing the q ù (去) tone, no matter yīn or y áng, are shaded, while those with shǎng (上) tone are not. Both P íngjiāng and Q íy áng's zero initial syllables bear shǎng (上) tone (yīn or y áng are not specified for Shǎng tone here). The difference is that a fricative initial ʒ- is found in Q íy áng for the syllable 乳 while zero in P íngjiāng. For Sh àoy áng Ch ángl 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 *ɻy > *y before a split of *Y ángshǎng (陽上), the latter of which conditioned on some type of constriction at the syllabic onset. By contrast, there should have been *ɻy > ʒy in QY before this same split.

重 zh òng QYS *druawŋ^{ʔ}

CS [tsən$^{21\ 白}$ ~ tsən$^{55\ 文}$]; CX [tʂəɯ^{55}]; HS [ʈuen̪^{44}]; HY [tsəŋ^{213}]; PJ [dʐəŋ^{21}]; QY [dzoŋ^{214}]; SS [dʐən$^{21\ 白}$ ~ tʂən$^{45\ 文}$]; SY(CL) [dʐə̃$^{21\ 白}$ ~ dʐə̃$^{24\ 文}$]; XH(BX) [tɕ^{h}yn^{24}]; XX [dʌn^{22}]

CMX *dʒiuŋ^{32}

坐 zu òQYS *dzwɑ^{ʔ}

CS [tso$^{21\ 白}$ ~ tso$^{55\ 文}$]; CX [tsɔ^{55}]; HS [tso^{44}]; HY [tso^{213}]; PJ [dzo^{21}]; QY [dzo^{214}]; SS

[dzo^{21} 白 ~ tso^{45} 文]; SY(CL) [dzo^{31}]; XH [dz^{h}o^{21}]; XX [dzʊ^{22}]

CMX *dzuɔ^{32}

Shàoyáng Chánglè has undergone a local change where the *Yángshǎng (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^{ʔ}

CS [ŋo^{42}]; CX [ŋo^{31}]; HS [ŋo^{13}]; HY [ŋo^{33}]; PJ [ŋo^{53}]; QY [ŋo^{54}]; SS [ŋʊ^{42}]; SY(CL) [ɡo^{31} 白 ~ ŋo^{42} 文]; XH(BX) [o^{31}]; XX [ŋ̍^{21} 白 ~ ŋõ^{21} 文]

CMX *ŋɔ^{32}

4.2.3 CMX *Yángqù (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 *Yángshǎng (陽上). In the area near Chángshā (including Sháoshān), 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 Qíyáng, *Yángqù (陽去) has merged with *Yīnqù (陰去) tone.

In Shàoyáng Chánglè, syllables from this tone merge with yīnpíng (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 Shàoyáng City, because Shàoyáng dialect has experienced a shift of *Yángqù (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 *dowŋ^{h}

CS [tən^{21} 白 ~ tən^{55} 文]; CX [təɯ^{55}]; HS [teŋ^{44}]; HY [təŋ^{213}]; PJ [dəŋ^{21}]; QY [doŋ^{214}]; SS [dən^{21} 白 ~ tən^{45} 文]; SY(CL) [dɜ̃^{24}]; XH(BX) [d^{h}ən^{33}]; XX [dʌn^{22}]

CMX *duŋ^{33}

餓 è QYS *ŋɑ^{h}

CS [o^{21} 白 ~ o^{55} 文]; CX [ŋɔ^{55}]; HS [ŋo^{44}]; HY [ŋo^{213}]; PJ [ŋo^{21}]; QY [ŋo^{214}]; SS [ŋʊ^{21} 白 ~ ŋʊ^{45} 文]; SY(CL) [ŋo^{55}]; XH(BX) [o^{45}]; XX [ŋõ^{22}]

CMX *ŋɔ^{33}

The case of Xīnhuà Báixī 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 Báixī 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 Bǎoqìngfǔ (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^{h}i^{33} 白 ~ d^{h}i^{24} 文	zy^{33} 白 ~ zy^{24} 文	ɣã^{33} 白 ~ ɣã^{24} 文	b^{h}u^{33} 白 ~ b^{h}u^{24} 文
SY	di^{24}	zy^{24}	ɣã^{24}	bu^{24}

Additionally, the *Yángqù (陽去) syllables with sonorant initials in the literary layer of Xīnhuà Báixī 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 Báixī 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^{33} 白 ~ mau^{45} 文	lə^{33} 白 ~ lə^{45} 文	miɛ̃^{33} 白 ~ miɛ̃^{45} 文
SY	mau^{35}	nuei^{35}	miɛ̃^{35}
XX	mao^{22}	luai^{22}	miĩ^{22}

This is again likely to be affected by Shàoyáng. There is not a tone with the pitch of 35 in Xīnhuà, so 45 would be an optimal target. Recent influence from Mandarin might be an additional stimulating factor.

4.2.4 CMX *Yángrù (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 Chángshā and Píngjiāng. Chénxī's *Yángrù (陽入) tone has only merged with *Yīnqù (陰去) after plosives, affricates, and fricatives, with the majority of the remainder merged with *Yángpíng (陽平). in Héngshān it has merged with shǎngshēng (上聲). In Héngyáng it merges with *Yángpíng (陽平). It has merged with yángqù (陽去) tone in Shàoyáng after bilabial initials, and mostly with *Yīnqù (陰去) otherwise.

It is worth noting that the voiced plosives and affricates of *Yángrù (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 *Yángrù (陽入) relative to the other yáng (陽) tones.

別 bié QYS *biat

CS [$p^{h}ie^{24}$ ~ pie^{24}]; CX [$p^{h}ie^{324}$ 白 ~ pie^{213} 文]; HS [$p^{h}ie^{13}$ ~ pie^{35}]; HY [pie^{11}]; PJ [$p^{h}iɛʔ^{4}$]; QY [bie^{33}]; SS [$p^{h}iɛ^{24}$]; SY(CL) [$biɛ^{24}$]; XH(BX) [$piɛ^{24}$]; XX [$p^{h}ia^{23}$ ~ $p^{h}ia^{45}$]

CMX *biɛt^{24}

盒 hé QYS *ɣəp

CS [xo^{24}]; CX [$xɔ^{324}$]; HS [$xɑ^{13}$ 白 ~ xo^{13} 文]; HY [$xo^{陽平}$]; PJ [$xøʔ^{4}$]; QY [$ɣo^{33}$]; SS [$xʊ^{24}$]; SY(CL) [ho^{35}]; XH(BX) [xo^{24}]; XX [$xuai^{45}$]

CMX *ɣɔt^{24}

The vernacular form in Héngshān is irregular.

4.3 Justification for a Separate *Yángrù (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 *Yángrù (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 *Yángrù (陽入) largely overlaps the QYS tone *Yángrù (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 Báxī

As mentioned in Chapter 1, Coblin's first challenge comes from Xīnhuà. To recapitulate, there are five tones in Xīnhuà Báxī 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 Báxī 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 *Yángrù (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 *Yángrù (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 evlolution 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 *Yángrù (陽入) syllables in the material for this dialect.

Table 4.8: tones of *Yángrù (陽入) obstruents in XH(BX)

XH(BX) syllables with [-sonorant] onsets from QYS *Yángrù (陽入) tone	modern tone
宅	3
擲秩十什拾石舌惑縛熟	4
蟄侄直值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閘札鍘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芍學僕瀑突獨讀牘犢毒複佛服伏族俗續鐲逐贖淑蜀屬別跌疊碟牒蝶諜特截賊澤擇杰協穴絕掘倔	5

The rate for syllables with [-sonorant] onsets from QYS *Yángrù (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 *Yángrù. Subscript numeral 1 denotes the vernacular forms and numeral 2 the literary.

Table 4.9: tones of *Yángrù (陽入) sonorants in XH(BX)

XH(BX) syllables with [+sonorant] onsets from QYS *Yángrù (陽入) tone	modern tone
抹臘$_1$蠟$_1$拉木鑊鹿$_1$綠$_1$肉$_1$日$_1$	1
域	2
覓密蜜立笠粒栗力溺歷匿翼亦譯疫役玉獄臘$_2$蠟$_2$辣捋肋勒幕寞陌目落烙駱酪洛絡樂藥鑰躍樂勿六篾葉頁腋液略掠額$_1$業	4
逆入纳捺滑猾襪滅沒墨默麥脈額$_2$莫摸穆牧末沫鄂若弱虐瘧岳祿陸錄綠$_2$鹿$_2$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 *Yángrù (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 *Yángrù (陽入) with [+sonorant] onsets.

The feature of sonority is one of the dominant factors affecting the split of *Yángrù (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 *Yángrù (陽入) syllables behave relative to them.

The pattern for [-sonorant] onset syllables is depicted in Figure 4.1.

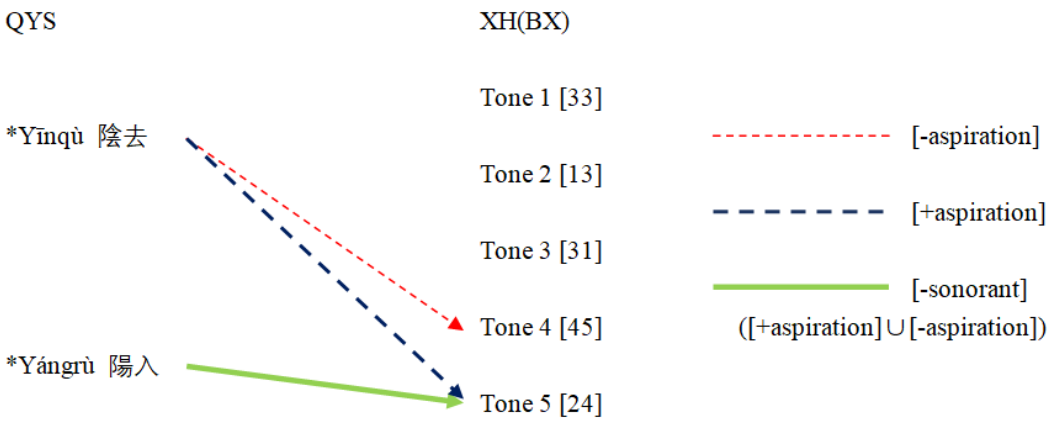


Figure 4.1: the pattern of *Yángrù (陽入) with [-sonorant] onsets

The pattern for [+sonorant] onset syllables is depicted in Figure 4.2.

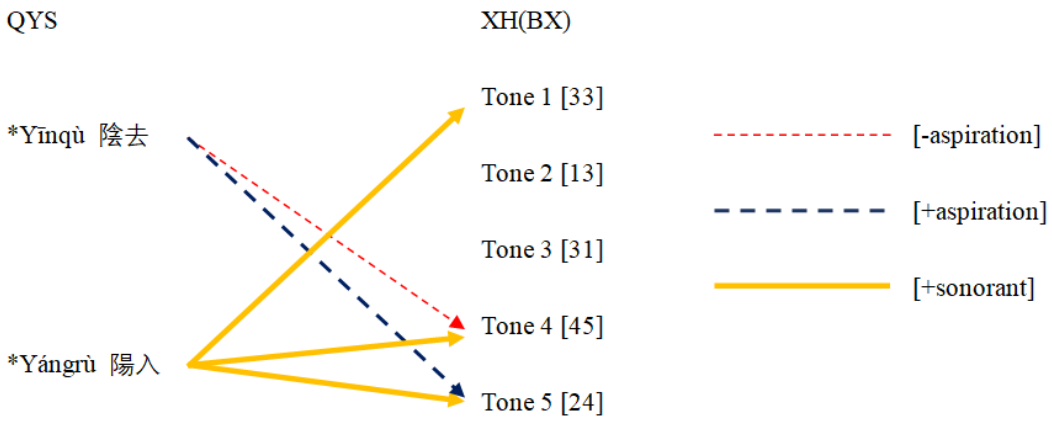


Figure 4.2: the pattern of *Yángrù (陽入) with [+sonorant] onsets

On the one hand, the evolution of the [-sonorant] onset syllables from *Yángrù (陽入) tone is incompatible with that from *Yīnqù (陰去) tone. On the other hand, that of the [+sonorant] onset syllables from *Yángrù (陽入) does not match with those from *Yīnqù (陰去) as well. Thus *Yángrù (陽入) and *Yīnqù (陰去) tones cannot trace back to a single toneme in Xīnhuà Bǎoxī at all. Evidently, there is no such justification for an early merger between *Yángrù (陽入) and *Yīnqù (陰去) syllables for this dialect. Since Bǎoxī 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 (Méichéng) 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 *Yángrù (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 Méichéng 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

Méichéng dialect has one feature in common with Xīnhuà Bǎoxī 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.

Ānhuà Jièyáng is located not far from Méichéng, while there are interesting tonal mappings to be explored between the two dialects. A list of the five tones in Jièyáng 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 Jièyáng'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.

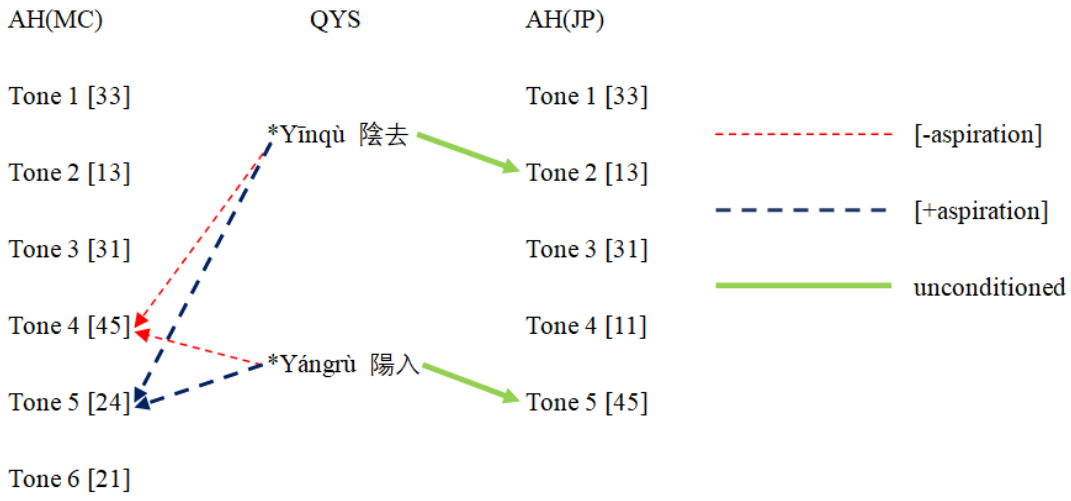


Figure 4.3: from QYS to AH(MC) and AH(JP)

Now consider a hypothetical shift for Jièyáng as in Figure 4.4.

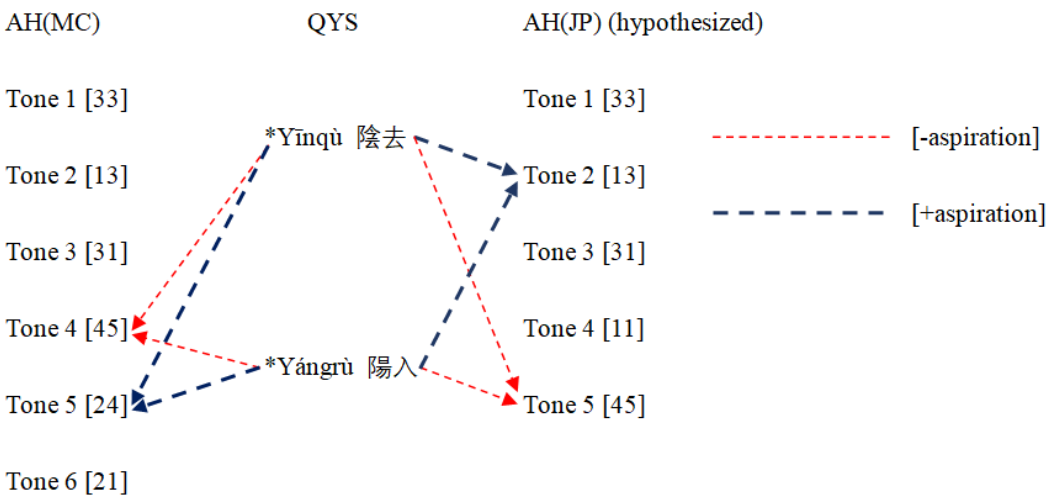


Figure 4.4: result of hypothetical shift in AH(JP)

Regarding the *Yīnqù (陰去) and *Yángrù (陽入) syllables, it is realizable for Jièyáu 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 *Yángrù (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 Jièyáu's *Yīnqù (陰去) and *Yángrù (陽入) syllables would become identical to that of Méichéng once it had completed this hypothetical shift. In other words, the current situation in Ānhuà Méichéng can be a later stage from the pattern observed in Jièyáu.

According to Lei (2007), both Jièyáu and Méichéng 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 Méichéng to have merged *Yīnqù (陰去) and *Yángrù (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 *Yángrù (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 lexemes of MC *Yángrù (陽入) origin are found in the qù (去) tone, listed in Table 4.13.

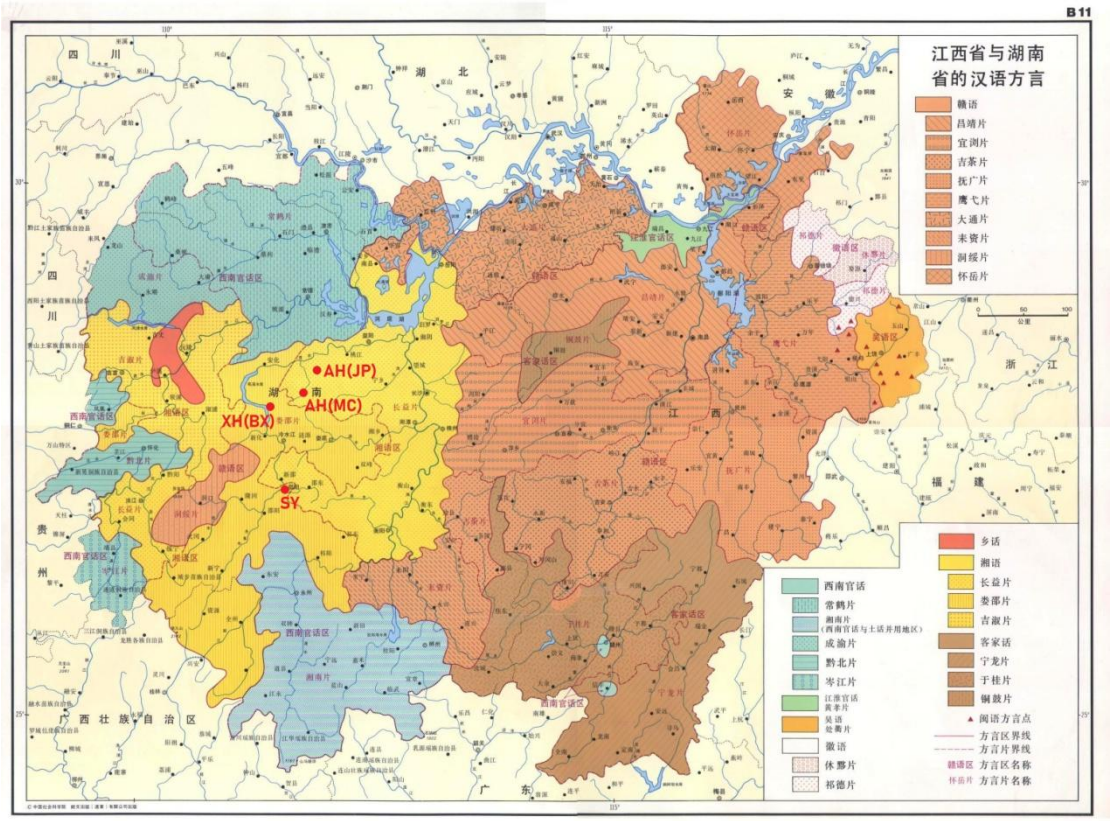
Table 4.13: *Yángrù (陽入) syllables in qù (去) tone of SY

Initial feature	plosive & affricate onsets	other onsets
[+voice, -sonorant]	賊擇昨屐讀褥辱	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碟液腋葉囁勺六陆斛猾滑劃术述律域疫役玉獄慾浴育鬱絕

Shàoyáng has undergone a devoicing of obstruent initials of its *Yángrù (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 *Yángrù (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 *Yángrù (陽入) reconstructed in 4.2.4 disagrees with Coblin's Central Common Xiāng. The necessity of a separate *Yángrù (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	$k^hɛi$	xɛi	tɛi	fi ~ fɛi	fɛi
SF	due	xue	ɣue	tue	xue	ɣue
LD	due	xue	ɣue	tue	xue	ɣue
XX	duai	xuai	ɣuai	tuai	xuai	ɣuai
CMX	*dɔi	*xɔi	*ɣɔi	*tuɔi	*xuɔi	*ɣuɔi

Table 5.2: comparison of *-ɔn

	簪	肝	感	汗	鑽	官	管	換
CS	tsan	kan	kan	xan	tsõ	kõ	kõ	xõ
PJ	ts ø n	ku ø n	k ø n	x ø n	ts ø n	ku ø n	ku ø n	f ø n
SF	tsia	kua	kia	ɣua	tsua	kua	kua	ɣua
LD	tsã	kuẽ	kuẽ	ɣuẽ	tsuẽ	kuẽ	kuẽ	ɣuẽ
XX	tɕiã	kuã	kuã	ɣuã	tsuã	kuã	kuã	ɣuã
CMX	*tsɔn	*kɔn	*kɔn	*ɣɔn	*tsuɔn	*kuɔn	*kuɔn	*ɣuɔn

Table 5.3: comparison of *-ɔt

	葛	渴	盒	括	闊	活
CS	ko	k^ho	xo	kua	k^ho	xo
PJ	køʔ	k^høʔ	xøʔ	kuøʔ	k^hoʔ	føʔ ~ uøʔ
SF	kua	k^hua	xua	kua	k^hua	xua
LD	kue	k^ho	xue	kue	k^hue	xue
XX	kua	k^hua	xuai	kua	k^hua	xuai
CMX	*kɔt	*k^hɔt	*ɣɔt	*kuɔt	*k^huɔt	*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 Pínghjiāng 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 smilar character 刮 with pronunciation [kua^{24}]. 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 *Yángrù (陽入) syllables that evolve into XX's 陰去 tone (see section 4.2.4). Only three lexemes, namely 捋 [luai ^{陰去}], 盒 [xuai ^{陰去}], and 活 [xuai ^{陰去}], are of this kind. They may represent a residue layer before a merger of *-ɔt/-uɔt 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. Pínghjiāng and Shuāngfēng in Table 5.2 both have some syllables (e.g. 肝) carrying the glide while some others (e.g. 感) not. The Pínghjiāng 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 ńgjiāng 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.

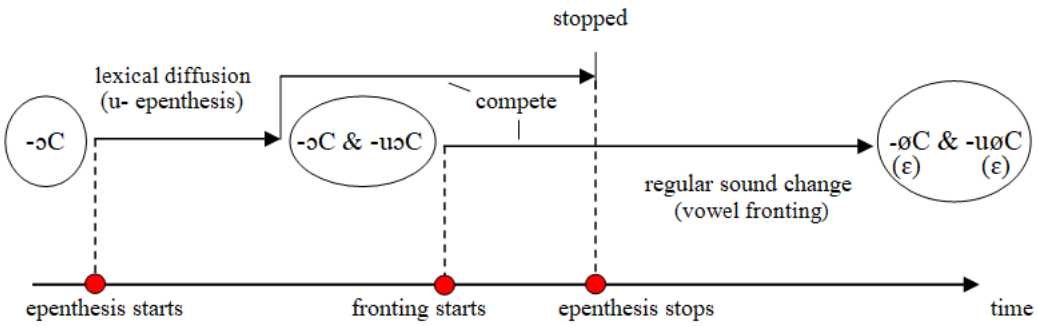


Figure 5.1: evolution procedure of CMX *-ɔi/ɔn/ɔt

A summary for the evolution of CMX *-ɔi/ɔn/ɔt in P ńgjiāng, 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 ńgjiāng 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 *-ɒŋ, as it does appear to show [+back] and [+round] features in a number of dialects of central Hún án. 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.)	*sɒŋ 陰平 白	sɔ̃ 陰平 白	*ʃaŋ 陰平 白
桑	*saŋ 陰平	sɔŋ 陰平	*sɔŋ 陰平

There is an obvious problem here. While both the pronunciations of 生 and 桑 contain a mid-open back rounded vowel ɔ in Lóudǐ dialect, only one of them have been reconstructed as such in the common language. If the CCX final *-ɒŋ 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 陰平 白	kʰɔŋ 陰平	sɔŋ 陰平	kʰɔŋ 陰平
SF	saŋ 陰平 白	-	saŋ 陰平	kʰaŋ 陰平
SF(HS)	saŋ 陰平 白	-	saŋ 陰平	kʰaŋ 陰平
SF(GT)	sɑŋ 陰平 白	kʰɑŋ 陰平	sɑŋ 陰平	kʰɑŋ 陰平
SF(HY)	saŋ 陰平 白	-	saŋ 陰平	kʰaŋ 陰平
XH	sɔ̃ 陰平 白	kʰɔ̃ 陰平	sɔ̃ 陰平	kʰɔ̃ 陰平
XH(BX)	-	kʰɔ̃ 陰平	sɔ̃ 陰平	kʰɔ̃ 陰平
XP	-	kʰɑ̃ 陰平	sɑ̃ 陰平	kʰɑ̃ 陰平
PJ	saŋ 陰平 白	kʰaŋ 陰平 白	soŋ 陰平	kʰoŋ 陰平
LD	sɔ̃ 陰平 白	kʰɔ̃ 陰平 白	sɔŋ 陰平	kʰɔŋ 陰平
LD(JL)	so 陰平 白	kʰo 陰平	soŋ 陰平	kʰoŋ 陰平
LY	sɔ 陰平 白	kʰɔ 陰平	soŋ 陰平	kʰoŋ 陰平
SF(ZM)	sɔ̃ 陰平 白	-	saŋ 陰平	kʰaŋ 陰平
XX	sɔ̃ 陰平 白	kʰɔ̃ 陰平	saŋ 陰平	kʰaŋ 陰平
XX(QZ)	sɔ̃ 陰平 白	kʰɔ̃ 陰平	saŋ 陰平	gʰaŋ 陰平

Since some dialects may not have a corresponding vernacular reading recorded for the lexeme 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	sɔ̃$^{陰平}_{白}$	k^{h}ɔ̃$^{陰平}_{白}$	dzɔ^{陽平}	kɔ$^{陰平}_{白}$
LD(JL)	so$^{陰平}_{白}$	k^{h}o^{陰平}	ts^{h}o^{陽平}	ko$^{陰平}_{白}$
LY	sɔ$^{陰平}_{白}$	k^{h}ɔ^{陰平}	tsɔ^{陽平}	kɔ$^{陰平}_{白}$
SF(ZM)	sõ$^{陰平}_{白}$	-	dzo^{陽平}	ko$^{陰平}_{白}$
XX	sõ$^{陰平}_{白}$	k^{h}õ^{陰平}	dzo^{陽平}	ko$^{陰平}_{白}$
XX(QZ)	sõ$^{陰平}_{白}$	k^{h}õ^{陰平}	dz^{h}o^{陽平}	ko$^{陰平}_{白}$
CMX	*ʃaŋ$^{陰平}_{白}$	*k^{h}aŋ$^{陰平}_{白}$	*dʒa^{陽平}	*ka$^{陰平}_{白}$

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 hights. 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 wth 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 Jiāoliáng and Liányuán 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 *-ɔŋ for syllables like 桑, incorporating their [+back, +round] feature, while stays compatible with the same feature observed for syllables like 生 in central Húnán. A second advantage is to have perfectly explained the disparity observed between Liányuán and Xiāngxiāng. In Table 5.5, Liányuán'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.

Xīnhuà follows another possible trajectory in line with this conjecture. In this dialect, CMX *-aŋ merged into *-ɔŋ in the first place. The merged final *-ɔŋ 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	sõ$^{陰平}_{白}$	sõ^{陰平}	tso^{上}	dz^{h}a^{陽平}
CMX	*ʃaŋ$^{陰平}_{白}$	*sɔŋ^{陰平}	*tsɔ^{陰上}	*dʒa^{陽平}

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^{h}ia	ia
XX	ɕiã	kiã	tɕiã	kiã	tɕia	kia	tɕia	k^{h}ia	ia
SF(HY)	sã	kã	tɕiã	kiæ̃	tɕia	tɕia	tɕia	k^{h}ia	ia
SF(ZM)	sã	kã	tɕiæ̃	kiæ̃	tɕia	kia	tɕia	k^{h}ia	ia
SS(DP)	sã	kã	tsiɛ̃	ciɛ̃	tsiɛ	ciɛ	tsiɛ	c^{h}iɛ	ia
LD	sã	kã	tsẽ	kẽ	tse	ke	tse	k^{h}e	ia
LD(JL)	sa	ka	tse	ke	tse	ke	tse	k^{h}e	ia
SF(GT)	sæ̃	kæ̃	tsai	kai	tse	ke	tse	k^{h}e	ia
SS	sã	kã	tsẽ	cẽ	tsiɛ	ciɛ	tsɛ	k^{h}ɛ	ia
XX(QZ)	sã	kã	tsæ̃	kæ̃	tɕia	ȶia	tse	g^{h}e	ia
LY	sɑ	kɑ	tsɛ	kɛ	tsi	ki	tsɛ	k^{h}ɛ	iɑ
CMX	*san	*kan	*tsəŋ	*kən	*tsiɛt	*kiɛt	*tʃɛk	*k^{h}ɛk	*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 *-iɛ > -ia. If *-iɛt and *-ɛk merged, the result is a dialect like LD. The merged final (possibly *-e or *-ɛ) 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 *-ən > *-ẽĩ > *-ɛ̃ĩ > *-ɛi > -ai. For XX and SF, likely a sound change *-an > *-æ̃ > *-ẽ was completed before the pairing. In conclusion, e > 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 *-yɛ and *-iɛ 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	ɕya	tua	kua	kua	tsia	kia	k^hia	ia
XX	kuã	kuã	ɕya	tua	kua	kua	tɕia	kia	k^hia	ia
SF(HY)	kuã	kuã	ɕya	tɕya	kua	kua	tɕia	tɕia	k^hia	ia
SF(ZM)	kuã	kuã	ɕya	tuæ	kuæ	kua	tɕia	kia	k^hia	ia
SS(DP)	kuɛ̃	kuã	ʂuɛ	tuɛ	kuɛ	kua	tsiɛ	ciɛ	c^hiɛ	ia
LD	kuẽ	kuã	ɕye	tɕye	kue	kua	tse	ke	k^he	ia
LD(JL)	kue	kua	ɕye	ʈue	kue	kua	tse	ke	k^he	ia
SF(GT)	kɑŋ	kuæ̃	ɕye	tue	kue	kua	tse	ke	k^he	ia
SS	kuɛ̃	kuã	ʂuɛ	tʂuɛ	kuɛ	kua	tsiɛ	ciɛ	k^hɛ	ia
XX(QZ)	kuæ̃	kuã	ɕya	ʈya	kue	kua	tɕia	ʈia	$ɡ^h$e	ia
LY	kuɛ	kuɑ	xui	kui	kuɛ	kuɑ	tsi	ki	k^hɛ	iɑ
CMX	*kuɔn	*kuan	*ʃyɛt	*kyɛt	*kuɛk	*kuat	*tsiɛt	*kiɛt	*k^hɛk	*iat

SF(ZM) missed the pairing so it has a final -uæ lagged behind in contrast to -ua, causing a major assymetry. As explained in section 1.2.4, the final -uæ is relatively marked in SF(ZM). SF(GT) did not join the *-uɔn > *-uen sound change.

Evidently, the vowel lowering of [e] to [a] is an innovation found for a handful of dialects in central Hún án. 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 > ʊ, 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, Píngjiāng 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 陽平	ka 陰去	dzo 陽平	ko 陰去	tsʊ 上	kʊ 陰去
LD	dza 陽平	ka 陰去	dzɔ 陽平	kɔ 陰去	tso 上	ko 陰去
CX	dza 陽平	ka 陰去	dzɔ 陽平	kɔ 陰去	tso 上	kɔ 陰去
XP	dza 陽平	ka 陰去	dzɒ 陽平	kɒ 陰去	tsʊ 上	kʊ 陰去
PJ	dzai 陽平	kai 陰去	dza 陽平	ka 陰去	tso 上	ko 陰去
CMX	*dzai 陽平	*kai 陰去	*dʒa 陽平	*ka 陰去	*tsɔ 陰上	*kɔ 陰去

Table 5.11: shifts of *-iai, *-ia, and *-iɔ

	諧 (lit.)	涯 (lit.)	加 (lit.)	夏 (lit.)	姐 (ver.)	爺 (ver.)
XX	ɣia 陽平	ŋiã 陽平	kio 陰平	ɣio 陽去	tɕio 上	io 陽平
LD	-	-	tɕiɔ 陰平	ʑiɔ 陽去	tsiɔ 上	iɔ 陽平
CX	ɕie 陽平	ia 陽平	tɕia 陰平	ɕia 陽去	tɕio 上	iɔ 陽平
XP	ɕiɛ 陽平	iɒ 陽平	tɕiɒ 陰平	ɕiɒ 陽去	tɕiɒ 上	iɒ 陽平
PJ	-	ia 陽平	tɕia 陰平	ɕia 陽去	tɕia 上	ia 陽平
CMX	*ɣiai 陽平	*ŋiai 陽平	*kia 陰平	*ɣia 陽去	*tsiɔ 陰上	*iɔ 陽平

Table 5.12: shifts of *-uai, *-ua, and *-uɔ

	乖	壞	瓜	話	過 (ver.)	禾 (ver.)
XX	kua 陰平	ɣua 陽去	ko 陰平	o 陽去	ku 陰去	u 陽平
LD	kua 陰平	ɣua 陽去	kɔ 陰平	ɔ 陽去	ku 陰去	u 陽平
CX	kua 陰平	xuai 陽去	kua 陰平	xua 陰去	kɔ 陰去	o 陽平
XP	kua 陰平	huɛ 陽去	kuɒ 陰平	huɒ 陽去	kʊ 陰去	ʊ 陽平
PJ	kuai 陰平	fai 陽去	kua 陰平	fa 陽去	ku 陰去	u 陽平
CMX	*kuai 陰平	*ɣuai 陽去	*kua 陰平	*ɣua 陽去	*kuɔ 陰去	*ɣuɔ 陽平

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 hight 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 Xièshè (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 Hún án, whereas CX and XP are in western Hún án. 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 -ʊ (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 *-iɛt where -e lowers to -ia. A challenge is that the lexeme 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]. Lexeme 諧 is read [ɣia] there. Thus it is not from an earlier *ɣiɛ.

Table 5.13: contrast of final -ia against -iɛ

	甲	峽	**諧**	懈	壓	劫	革	克	協	頁
SS(DP)	cia	ɕia	**ɣia**	ɣia	ia	ciɛ	ciɛ	c^{h}iɛ	ɕiɛ	iɛ
XX	kia	ɕia	**ɣia**	ɣia	ia	kia	kia	k^{h}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)

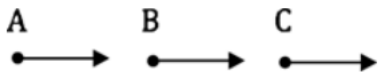


Figure 5.2: chain shift

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 -io) 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 *ɣua (話) in Table 5.12 has already moved to huɒ, while the syllable *ɣuai (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 陰去] 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 陰去] 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 Xiè(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 involed. Li and Zhao claim that there were no Xièshè(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 陽平]. 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 Xièshè(蟹攝) *-iai. For instance, there are roughly a dozen characters like 甲 [tɛia 陽平], 洽 [tɛʰia 陽平], 峽 [ɛia 陰去], 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 陽平] (諧) would be left unexplained.

To conclude, if the shifts are of chain shifts in nature, there must have been push chains in central Húnán and drag chains in western Húnán. 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 taxanomic identification for Xiāng.

5.2 The Early Innovation of MC Tán (覃) and Hé(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 Tán (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 墋, 函, and 涵, have been examined by Wu (2018).

The lexemes 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 Tán (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 [ɣuẽ^{陽平}.dɤŋ^{陽平}.ŋã^{上}] 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 [ɣuẽ^{陽平}] 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 Tán (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 ^{陰去}.k^{h}ua ^{上}] in Shuāngfēng. The first syllable in this lexeme means a stick used as a pestle or hammer and is undoubtedly the etymon 碓 (Mandarin dùi). The second one is debatable. Chen (2006, p. 244) and Luo (2006, p. 55) both suggest the etymon 窾 (Mandarin kuǎn), which has meanings including emptiness, a hollow or gap, to whither, 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 窾 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 窾 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 Lónghú (LH) and Yìyáng (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

	墋	函	涵	坎	寬	換
HS	k^{h}uẽĩ^{陰去}	fẽĩ^{陽平}	fẽĩ^{陽平}	-	k^{h}uẽĩ^{陰平}	fẽĩ^{陽去}
LH	k^{h}õ^{陰去}	õ^{陽平}	-	k^{h}õ^{上}	k^{h}õ^{陰平}	ɣõ^{陽去}
LY	k^{h}uɛ^{陰去}	xuɛ^{陽平}	xuɛ^{陽平}	-	k^{h}uɛ^{陰平}	xuɛ^{陽去}
NX	k^{h}ŋ^{陰去}	xŋ^{陽平}	xŋ^{陽平}	-	k^{h}ŋ^{陰平}	xŋ^{陽去}
SF	k^{h}ua^{陰去}	ɣua^{陽平}	-	k^{h}ua^{上}	k^{h}ua^{陰平}	ɣua^{陽去}
SY	-	vã^{陽平}	-	k^{h}uã^{上}	k^{h}uã^{陰平}	vã^{陽去}
XH	k^{h}õ^{陰去}	ɣõ^{陽平}	-	-	k^{h}õ^{陰平}	ɣõ^{陰平}
XP	k^{h}uɛ̃^{陰去}	-	-	k^{h}uɛ̃^{上}	k^{h}uɛ̃^{陰平}	xuɛ̃^{陽去}
YiY	k^{h}ɔ̃^{陽平}	ɔ̃^{陽平}	-	-	k^{h}ɔ̃^{陰平}	ɔ̃^{去}
QYS	*k^{h}əm^{h}	*ɣəm	*ɣəm	*k^{h}əm^{ʔ}	*k^{h}wan	*ɣwan^{h}

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 Tán (覃) rhyme is Hé (合) rhyme bearing the MC Rù (入) tone and it is sometimes covered under the term Tán (覃) rhyme for convenience. In QYS, Tán (覃) and Hé (合) are reconstructed to be *-əm and *-əp (Pulleyblank, 1984). Wu (2018) has identified two lexemes 佮 and 罨 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

	佮	合	盒	罨	闊
CS_2	ko^{入}	xo^{入}	xo^{入}	o^{入}	k^ho^{入}
HS	ko^{入}	xo^{上}	xo^{上}	o^{入}	k^ho^{入}
LY	kuɛ^{入}	xuɛ^{入} ~ xuɛ^{陰去}	xuɛ^{陰去}	uɛ^{入}	k^huɛ^{入}
ML(CL)	kø^{入}	xø^{入}	xø^{入}	ŋø^{入}	k^hø^{入}
NX	kuɛ^{入}	xuɛ^{入}	xuɛ^{陰去}	uɛ^{入}	k^huɛ^{入}
SF	kua^{陽平}	xua^{陰去}	xua^{陰去}	-	k^hua^{陽平}
SY	ko^{入}	xo^{入}	xo^{入}	-	k^ho^{入}
YiY	ko^{入}	xo^{入}	xo^{入}	o^{入}	k^ho^{入}
QYS	*kəp	*ɣəp	*ɣəp	*ʔəp	*k^hwat

All these syllables behave alike across the listed Xiāng dialects. It shall be noted that Liányuán has a syllable [k^huɛ^{入}] marked as vernacular form of character 寬 (lit. width; QYS *k^hwan) (Chen, 1999, p. 60). This lexeme should be the synonym 闊 (lit. width; QYS *k^hwat) instead, as it bears the rù (入) tone.

Xiāngyīn (湘陰) Dialect demonstrates that possibly two more candidates shall be taken into consideration. The first one is recorded as [kuei^{陰去}] 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^{入}] in Mǐluó Chánglè (Chen, 2006, p. 77) and [ko^{入}] in Yìyáng (Cui, 1998, p. 57). The other candidate is 焐 (lit. to hide the fire) with the pronunciation of [uei^{陰去}] (Sun, 2012). Its cognates are also recorded in Chángshā, Yìyáng, and Mǐluó (Bao et al., 1999, p. 69; Cui, 1998, p. 58; Chen, 2006, p. 77). The two lexemes both originated from MC Hé (合) rhyme syllables.

For dialects in Table 5.15 like Chángshā, syllables with CMX *-ɔt and *-uɔt have basically merged. To verify if glide u- had existed, one has to turn to the conservative

dialects such as Tájiāng and Quánzhōu. Please refer to Table 5.16.

Table 5.16: contrast between CMX *-ɔt and *-uɔt

	CS_2	TJ	QZ	CMX	QYS
闊	$k^h o^{入}$	$k^h uɯ^{入}$	$k^h uo^{陰平}$	$*k^h uɔt^{陰入}$	$*k^h wat$
渴	$k^h o^{入}$	$k^h o^{入}$	-	$*k^h ɔt^{陰入}$	$*k^h at$
磕	$k^h o^{入}$	$k^h o^{入}$	$k^h o^{陰平}$	$*k^h ɔt^{陰入}$	$*k^h ap$

A major phonetic property of the ten vernacular Tán (覃) and Hé (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:

∅ → u(w) / [+consonantal, +back] __ ə [+consonantal, +labial, -continuant]

The feature [+back] refers to the places of constriction behind the soft palate.

Wu (2018) has concluded that the Tán (覃) and Hé (合) rhymes after velar initials could be reconstructed differently from the Tán (談) rhyme and its correspondent Hé (盍) rhyme, respectively.

In Húnán Province, however, most of the dialects have mixed Tán (覃) and Tán (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 Píngjiāng Chéngchuān are pivotal. This is because these dialects preserve a rare three-way contrast of CMX finals *-uɔn : *-ɔn : *-an. We can start by analyzing Píngjiāng. 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$_1$冠$_2$管館貫灌罐觀$_2$冠$_2$	kuøn	*kuɔn
2.歡奐喚煥渙	føn	*xuɔn
3.緩換	føn	*ɣuɔn
4.完	uøn	*ɣuɔn
5.豌碗宛婉腕	uøn	*uɔn

Table 5.18: second group

Lexemes	PJ	CMX
寬款	k^høn	*k^huɔn

Quite obviously, the final -uøn in Píngjiāng can go after the initial k- but never after k^h- or x-. It has been discussed in section 2.6.5 that Píngjiāng merges CMX *xu- into f-. In this case, *xuɔn is realized as [føn]. In Table 5.18, the CMX *k^huɔn evolves into [k^høn] by uøn > øn / k^h__. 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 *uøn 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.肝桿稈擀趕	kuøn	*kɔn
2.乾	kuøn$_{白}$ ~ køn$_{文}$	*kɔn

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	køn	*kɔn
2.岸	ŋøn	*ŋɔn
3.憨鼾罕漢	xøn	*xɔn
4.寒韓旱焊汗翰	xøn	*ɣɔn
5.安鞍按案	ŋøn	*ɔn

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 *øn 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^hɔn. It can be deduced that the realization of [k^han] is either a borrowing (Mandarin kàn; Chángshā [k^han]) or the result of extrusion from a sound change *k^huɔn > k^høn. 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.尷简	kan	*kan 白 ~ kian 文
2.减碱监艰间 1 拣柬间 2 奸肩	kan 白 ~ tɕian 文	*kan 白 ~ kian 文
3.眼颜雁	ŋan	*ŋan 白 ~ ian 文
4.喊	xan	*xan
5.衔陷限苋	xan	*ɣan 白 ~ ɣian 文
6.咸闲	xan 白 ~ ɕian 文	*ɣan 白 ~ ɣian 文
7.晏	ŋan	*an
8.看 1 看 2	k^han	*k^hɔn

Theoretically, there should have been an etymon 嵌 (Mandarin qiàn) that would bear a vernacular reading [k^han] in Píngjiāng. However, the material only provides its literary reading [tɕ^{h}ian]. Luckily, a vernacular reading [g^{h}an] is recorded in the word list of Yuèyáng Bǎixiáng. This dialect has experienced a similar *g^{h}uɔn > g^{h}øn sound

change, where g^h- corresponds to k^h- in Píngjiāng. Consequently, the lexeme 寬 is read [g^hɔn] whereas 看 is read [g^han].

The following Table lists the *uɔn Syllables*, the *ɔn Syllables*, and the *an Syllables* of several nearby dialects. Note that they all highly coincide with those in Píngjiāng. A few *ɔn syllables* in Mǐluó Chánglè 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 *uɔn*, *ɔn*, and *an syllables*

	uɔn Syllables	*ɔn Syllables*	*an Syllables*
ML(CL)	kuõ:官倌棺觀管館貫灌罐冠 k^hõ:寬款 xõ:歡獾喚煥緩皖 uõ:完換碗宛婉腕	kõ:柑乾$_1$幹 kuõ:肝乾$_2$稈趕 k^hã:看 xõ:憨鼾漢寒韓旱焊汗 ŋõ:岸安案	kã:減監鑒艦間$_1$艱簡揀間$_2$奸 xã:喊鹹陷銜閒限莧 ŋã:眼顏晏
YeY(RJ)	kuɔn:官觀管館灌冠 g^hɔn:寬款 xuɔn:歡喚完緩換 uɔn:丸碗	kɔn:甘柑敢肝乾幹 g^han:看 xɔn:漢寒韓旱汗 ŋɔn:岸安案	kan:減監艱間奸 xan:喊鹹銜閒莧 ŋan:眼顏雁晏
YeY(BX)	kɔn:官棺觀$_1$冠$_1$管館貫灌罐觀$_2$冠$_2$ g^hɔn:寬款 fɔn:歡喚煥完緩換 vɔn:丸豌剜碗	kɔn:甘柑泔敢橄肝乾竿稈擀幹 g^han:看 xɔn:憨酣鼾罕漢寒韓旱焊汗翰 ŋɔn:岸安鞍按案	kan:減尷監間$_1$艱簡柬揀裥間$_2$澗鐧奸 g^han:嵌 xan: 喊鹹陷餡銜閒限莧 ŋan:眼顏雁晏
PJ	kuɔn:官倌棺觀$_1$冠$_2$管館貫灌罐觀$_2$冠$_2$ k^hɔn:寬款 fɔn:歡奐喚煥渙緩換 uɔn:完豌碗宛婉腕	kɔn:甘柑泔敢橄竿贛幹 kuɔn:肝桿稈擀趕乾 k^han:看 xɔn:憨鼾罕漢寒韓旱焊汗翰 ŋɔn:岸安鞍按案	kan:减碱尷监艰间$_1$简揀柬间$_2$奸肩 xan:喊咸陷銜闲限莧 ŋan:眼颜雁晏

Now we can turn back to the question: are the vernacular Tán (覃) rhyme syllables merged with the *uɔn Syllables*, the *ɔn Syllables*, or the *an Syllables*? Mǐluó and Píngjiāng both have several *ɔn Syllables* mixed into *uɔn Syllables*, thus should be ruled out for discussion. As vernacular readings usually exist within specific lexical contexts and a lexicon list is available from Yuèyáng Bǎixiáng, 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 èyáng Bǎixi áng.

Table 5.23: YeY(BX)'s lexical matching

lexeme of YeY(BX)	墈 (a high earthen step)	函心 (the heart)
pronunciation	g^{h}øn^{35}	vøn^{24}. ɕiən^{33}
match	*uøn Syllables*	*uøn Syllables*

The first syllable vøn for heart is undoubtedly a member of the *uøn Syllables*. Although we were unsure about the status of [g^{h}øn], it now justifiably belongs to the *uøn Syllables* as well. By contrast, T án (談) rhyme syllables such as 甘, 憨, and 酣 are clearly the *øn 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 *øn Syllables* to the *uøn Syllables* can be provided. In Yu èyáng 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 *uøn Syllables*.

The situation for some relatively distant Xiāng dialects is nuanced. Take L óudǐ and Li ányu án as examples. The *uøn Syllables* and the *øn 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

	uøn Syllables				*øn Syllables*			
Syllable	官	館	換	碗	肝	敢	汗	案
LD	kuẽ	kuẽ	ɣuẽ	uẽ	kuẽ	kuẽ	ɣuẽ	uẽ
LY	kuɛ	kuɛ	xuɛ	uɛ	kuɛ	kɑ	xuɛ	ɑ
CMX	*kuɔn	*kuɔn	*ɣuɔn	*uɔn	*kɔn	*kɔn	*ɣɔn	*ɔn

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 *uøn Syllables* or the *øn Syllables*. LY is tricky as there are two finals mapped with the *øn Syllables*. The vernacular T án (覃) rhyme lexeme 函 [xuɛ] seems to be undecided between the *uøn Syllables* and the *øn Syllables*. One may want to argue that as long as QYS *-əm is found mapped with final -uɛ 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) *-ɔn merged with *-an as a gradual regular sound change; and 2) *-ɔn diffused into *-uɔn as a lexeme by lexeme diffusion? In this case, it is likely that the reason for the vernacular etymons 肝, 汗, and 墈 carrying the final -uɛ is because they are the forerunners of sound change number two! Wu's inference that the Liányuán lexeme for the heart, [xuɛ^{陽平}. ɕin^{陰平}], can serve to support a Tán (覃) / Tán (談) distinction (Wu, 2018) is untenable. Scholars should always keep alert on any potential subsequent innovation that could cover up a previous contrast.

The Xīnhuà cognate [ɣõ^{陽平}.ɕin^{陰平}] faces a similar though relatively weakened challenge. In this dialect, the *øn Syllables* have merged into the *an Syllables*. The final -õ is composed primarily of the *uøn Syllables*. It is more likely that [ɣõ] in Xīnhuà comes from the *uøn Syllables* than [xuɛ] in Liányuán does, yet the likelihood that this [ɣõ] is an unchanged remnant of *-ɔn > *-an cannot be ruled out for certain before we have examined the cases in Yuèyáng and Píngjiāng. Now that the status of vernacular Tán (覃) syllables of Yuèyáng Bǎixiáng have been justified as the *uøn Syllables*, we can reasonably deduce with confidence that the cognates from Xīnhuà with the final -õ are of *-uɔn > -õ 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 *uøn Syllables* or at least with a potentially traceable glide u-, as long as a sufficient lexicon list is provided. Some examples are 坎 [k^{h}ue] of Chénxī, 墈 and 坎 [k^{h}uɛ] of Wǔgāng (Liao, 2011, p. 95; p. 99), 墈 [k^{h}uə] of Ānhuà Jiēpái (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 Hé(合) Rhyme Syllables

Just like the loophole in explaining Tán (覃) rhyme, Wu (2018) has made another oversight when examining the vernacular Hé(合) rhyme syllables. The lexeme [kue^{入}]

(佮) recorded in Lóudǐ provides little information about a separate Hé(合) rhyme. A counter-argument could be easily made that the final -ue in Lóudǐ may represent one that mixes Hé(合) rhyme with the CMX final *-ɔt including Hé(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 Hé(合) rhyme is purposedly left unfilled.

Table 5.25: LD's blurred case

LD syllables	CMX final	QYS final
割葛 kue; 喝 xue; 厥ue	*-ɔt	*-at
括聒 kue; 闊 k^{h}ue; 活 xue	*-uɔt	*-wat
佮 kue; 鴿合盒 xue; 罨 ue	?	*-əp
國 kue; 或惑 xue	*-uɛk	*-wək
獲 xue	*-uɛk 文	*-wɛ^{r}jk
越曰粵月拐 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 Hé(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 Hé(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 Hé(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 Píngjiāng 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

	佮	脫	捋	括	瞎	葛	磕
XH	kua 陰平	t^ha 陰平	la 去	kua 陰平	ua 陰平	ko 入	k^ho 入
CMX	?	*t^huɔt 陰入	*luɔt 陽入	*kuɔt 陰入	*uɔt 陰入	*kɔt 陰入	*k^hɔt 陰入

When preceded by coronal initials, Xīnhuà's glide u- is always dropped. The [t^ha] and [la] in Table 5.26 come from the earlier forms *t^hua and *lua respectively. The syllable 佮 [kua 陰平] cannot come from *kɔt, because CMX final *-ɔt has changed to -o in Xīnhuà. Although a vernacular reading [kua 陰平] 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^{33}], 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 *kuɔt 陰入. Without any explicit evidence for a sound change *-ɔt > -ua, the Xīnhuà lexeme 佮 [kua 陰平] 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^hɛ^{33}] and 捋 is [lɛ^{45}] (Li, 2020). In addition to 佮, 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^{45}], 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 investigors may fail to identify. For instance in Shàoyáng dialect, Chu (1998, p. 146) recorded a lexeme, 角孽 [ko 入.ȵiɛ 入], with the meaning explained as 'children quarrelling with each other'. Another material of the same dialect has correctly identified the first etymon to be 佮 instead of 角 (Shaoyangshi difangzhi bianzuan weiyuanhui, p. 158).

Now that two lexemes 佮 and 合 are verified to have rooted from CMX *-uɔt, the epenthesis of glide *u- alone for vernacular Hé(合) rhyme is proven. The unfilled syllable in Table 5.26 should justifiably carry a final *-uɔt. However, lexemes 盒, 嗑, 合 (a unit), and 煮 introduced in section 5.2.1 cannot be verified to correspond with *-uɔt. More detailed investigations may uncover the mystery. To conclude, the glide u- marks a distinct vernacular Hé(合) rhyme for the early common language.

5.2.4 Remarks on the Innovation of Tán (覃) and Hé(合) Rhymes

A striking significance of the sound change discussed in this section 5.2 is its potential antiquity. The merger of QYS Tányùn (覃韻) with Tányùn (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 *-ɑm (Huang, 1995, p. 175). Huang uses *ɑm to denote Tán (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, Tán (覃) and Tán (談) rhymes have merged as *-am, while Hé (合) and Hé(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 Gàn (贛語), Tán (覃) and Tán (談) rhymes have not been found to contrast after velars or laryngeals. In the Common Gàn (CG) system, a final *-om is reconstructed for both the Tán (覃) rhyme syllable 感, as well as for the Tán (談) rhyme syllable 敢 (Coblin, 2015, p. 148). Coblin argues that the earliest substratum of Gàn 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 Gàn, 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 Gàn were already distanced within this range of time.

Notwithstanding, the vernacular Hakka is found to contrast Tán (覃) and Tán (談) rhymes in all environments, despite its close affinity with Gàn. As many as eighteen examples have been uncovered in Lóngchuān (龍川) Hakka carrying the special final -ɛm for Tán (覃) rhyme, and ten more are attested as -ɛp for Hé(合) rhyme (Yan & Yu, 2013). Among these etymons, a few have been discussed in this chapter as well, such as 嘞, 坎, 佮, and 署. Unlike Xiāng, however, Tán (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 Tán (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 Tán (覃) rhyme in contrast to Tán (談) rhyme after back consonants. The CDC final *-om contains all the Tán (覃) rhyme syllables, together with those Tán (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 *ʈi; QYS *triă) against 支 (CMX *tʃi; QYS *tɕiă) 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 Tán (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, 揜, 黭, 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 Gàn (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 *-uɔn. On the contrary, for Gàn, QYS *-am split up in the condition of following velar and glottal initials, then was raised and merged with *-əm. At this stage the language became a prototype of Common Gàn, or Proto-CG. Its *-əm later unfronted and rounded to the CG final *-om. Some of Lower Yangtze Mandarin (LYM) such as Tàizhōu (泰州) as well as Nántōng (南通) are questionably the same type with CG. These dialects have been reported to contrast QYS *-əm with *-am after coronals (Yu, 1991; Zhang 2011). For the majority of Mandarin dialects, as Huang (1995) stated, QYS *-əm has largely merged into *-am during Tang Dynasty. The envisaged pattern is depicted in Figure 5.3

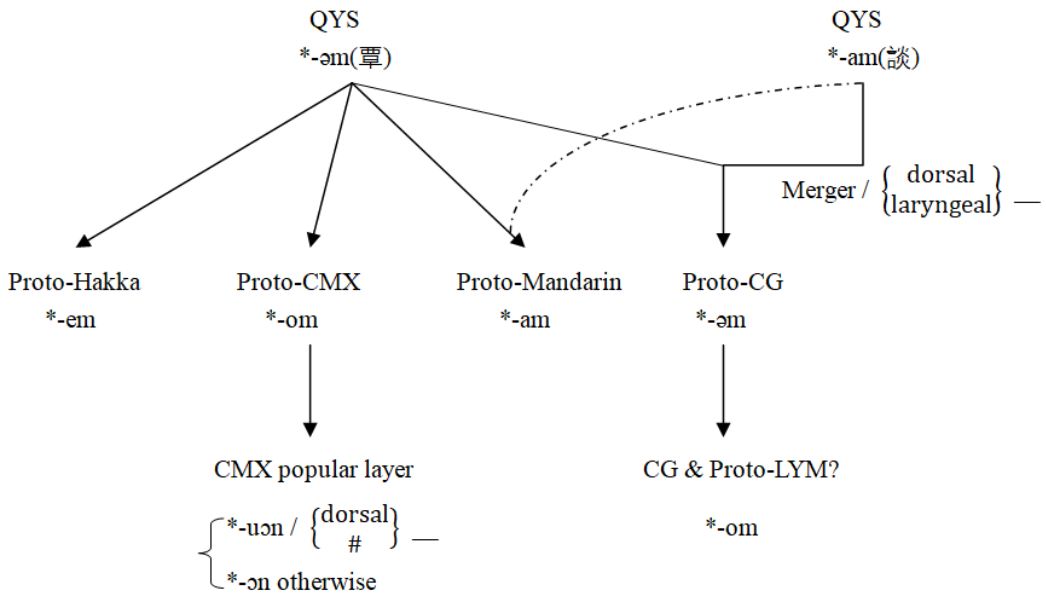


Figure 5.3: the evolution paths of vernacular Tán (覃)

5.3 Other Candidates

Testing the hypothetic uniquely shared innovation of vernacular Tán (覃) and Hé (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 Gàn and southern Mandarin.

When compared with Common Gàn, 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^{h}u	*dzu	*ts^{h}u	*su
CG	*ts^{h}ɻ	*dzɻ	*ts^{h}u	*su
QYS	*tʂ^{h}iă	*dʑiă	*ts^{h}ɔ	*sɔ

However, this merger is also observed for most southern Mandarin dialects such as Dàyōng (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^{h}u	*dzu	*ts^{h}u	*su
DY	ts^{h}əu	ts^{h}əu	ts^{h}əu	səu

However, there is another merger in CMX system that seems to be unique both relative to Dàyōng and to CG.

Table 5.29: a promising CMX innovation

	巢	抄	曹	草
CMX	*dzau	*ts^{h}au	*dzau	*ts^{h}au
DY	tʂ^{h}au	tʂ^{h}au	ts^{h}au	ts^{h}au
CG	*dzau	*ts^{h}au	*dzou	*ts^{h}ou
QYS	*dʑa^{r}w	*tʂ^{h}a^{r}w	*dzaw	*ts^{h}aw$^{?}$

This is indeed a promising shared innovation of CMX in addition to that of Tán (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 bettter treated as a supplementary indicator for the unique epenthesis of Tán (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 *-uɔn/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

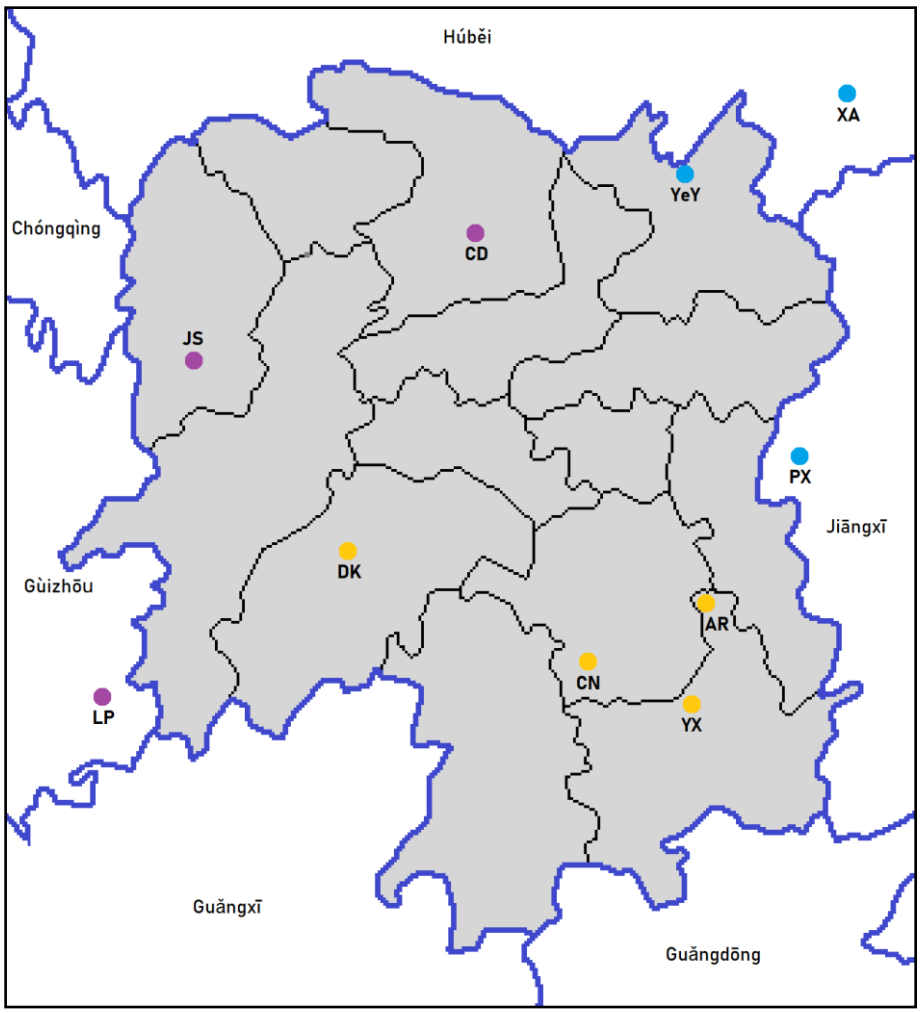
The validity of CMX as a system or several layers of systems that can probably reflect certain prototype for the Xiāng Dialect has been justified in the previous chapters. Now, if Xiāng is to be regarded as a taxonomic group identifiable by a uniquely shared innovation, i.e. the glide *u- epenthesis 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 Xiánníng (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 坳, 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 佮, 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 Gàn

Píngxiāng is located at the border of Jiāngxī with Húnán. In the material of this dialect, all four flagship etymons have been recorded. The etymon 坎 [$k^{h}õ^{上}$] within 碓坎 was not identified by the authors (Li & Wei, 1998, p. 182), though from previous discussion we know it should be 坎. Xián'ān dialect has only two etymons recorded. One is 塕 (Wang, 2015, p. 311), the other being 合 (Wang, 2015, p. 48). Yuèyáng City (岳陽市) is located in Húnán, and it is a different city from Yuèyáng County (岳陽縣), where two of the key Xiāng dialects discussed in Chapter 5, Bǎixiáng and Róngjiāwān, are located. In the lexicon list for Yuèyáng City, 塕 is

recorded as [k^{h}an ^{陰去}], and 佮 is as [ko ^{入}] (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: examinination of PX, XA, and YeY

	塳	坎 mortar	佮	合 unit	寬	闊
PX	k^{h}õ^{陰平}	k^{h}õ^{上}	kɔ ^{陰平}	kɔ ^{陰平}	k^{h}uõ^{陰平}	k^{h}ɔ ^{陰平}
XA	k^{h}õ^{陰去}	-	-	kə ^{入}	k^{h}uõ^{陰平}	k^{h}ue ^{入}
YeY	k^{h}an ^{陰去}	-	ko ^{入}	ko ^{入}	k^{h}uan ^{陰平}	k^{h}o ^{入}
CMX	*k^{h}uɔn ^{陰平}	*k^{h}uɔn ^{陰上}	*kuɔt ^{陰入}	*kuɔt ^{陰入}	*k^{h}uɔn ^{陰平}	*k^{h}uɔt ^{陰入}

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 Gàn.

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 塳 [k^{h}aŋ ^{上}] (Zheng, 1999, p. 113). The Jíshǒu material also records a [k^{h}aŋ ^{上}] that the author identifies to be 坎 (Li, 2002, p. 103) for the lexeme that usually corresponds to 塳 in Xiāng dialects. Xiong (2014, p.95) again identifies the Lǐpíng syllable [k^{h}an ^{上}] as 塳. This is fairly peculiar, as 塳 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 塳, 坎 or a third candidate, it certainly bears no epenthetic glide *u- found for Xiāng dialects.

L ṕ ńg's material reports another lexeme, written 碓髖 and read [tei ^{去}.k^{h}on ^{上}] (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

	塳	坎 (mortar)	佮	合 (a unit)	寬	闊
CD	k^{h}aŋ ^{上}?	-	ko ^{陰去}	-	k^{h}uan ^{陰平}	k^{h}o ^{陰去}
JS	k^{h}aŋ ^{上}?	-	ko ^{陽平}	-	k^{h}uan ^{陰平}	k^{h}o ^{陽平}
LP	k^{h}an ^{上}?	-	ko ^{入}	-	k^{h}on ^{陰平}	k^{h}uə ^{入}
CMX	*k^{h}uɔn ^{陰去}	*k^{h}uɔn ^{陰上}	*kuɔt ^{陰入}	*kuɔt ^{陰入}	*k^{h}uɔn ^{陰平}	*k^{h}uɔt ^{陰入}

As data is extremely limited, no clear conclusion can be drawn from this simple comparison. Yet L ṕ ńg is probably not a member of Xiāng as it contrasts the finals of 佮 [ko] with 闊 [k^{h}uə].

6.3 Southern Húnán Dialects

For the southern half of Húnán, debates for classification in the Dialectological literature are sharp. For example, the *Language atlas of China* (General Editors, 1987) on the one hand classified Ānrén dialect as Gàn, whereas Chen (1995, pp. 2-3) on the other hand suggested that no clear boundary shall be drawn and that Ānrén dialect is a transitional dialect between Gàn and Xiāng.

Despite numerous historical records such as family books (族譜) on Jiāngxī migrants into Húnán 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 [huã^{陽平}.sien ^{陰平}] (Chen, 1995, p. 130), though Chen did not identify its true etymon. The etymon of 涵 in the word 涵眼 [huã^{陽平}. ŋã^{陰平}] was not identified either (Chen, 1995, p. 90), so was 坎 in 碓坎 [tue ^{去}.k^{h}uã^{上}] (Chen, 1995, p. 94). The etymon 佮 [kua ^{入}] was falsely written 刮 at first, however he correctly changed it to 佮 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

	墈	坎 (mortar)	函 (heart)	涵	佮	合 (a unit)
AR	k^{h}uã^{去}	k^{h}uã^{上}	huã^{陽平}	huã^{陽平}	kua ^{入}	kua ^{入}
CMX	*k^{h}uɔn ^{陰去}	*k^{h}uɔn ^{陰上}	*ɣuɔn ^{陽平}	*ɣuɔn ^{陽平}	*kuɔt ^{陰入}	*kuɔt ^{陰入}

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 *-ɔn carrying this glide. The others all end with final -ã.

Table 6.4: evolution of CMX *-ɔn in AR

	墈	稈	汗	幹	甘	看
AR	k^{h}uã^{去}	kuã^{上}	huã^{去}	kã^{去}	kã^{陰平}	k^{h}ã^{去}
CMX	*k^{h}uɔn ^{陰去}	*kɔn ^{陰上}	*ɣɔn ^{陽去}	*kɔn ^{陰去}	*kɔn ^{陰平}	*k^{h}ɔn ^{陰去}
QYS	*k^{h}əm^{h}	*kan^{ʔ}	*ɣan^{h}	*kan^{h}	*kam	*k^{h}an^{h}

Table 6.5 lists the situation reported in Chángníng's material. The short level strokes indicate unrecorded lexemes.

Table 6.5: examination of CN

	墈	坎 (mortar)	函 (heart)	涵	佮	合 (a unit)
CN	k^{h}uã^{去}	-	-	-	kua ^{入}	-
CMX	*k^{h}uɔn ^{陰去}	*k^{h}uɔn ^{陰上}	*ɣuɔn ^{陽平}	*ɣuɔn ^{陽平}	*kuɔt ^{陰入}	*kuɔt ^{陰入}

Although Chángn íng 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 佮 [kua^{入}] is almost undoubtly inherited from CMX *kuɔt^{陰入}. The other one, 塷 [k^{h}uã], can thus be deduced as a reflection of CMX *k^{h}uɔn 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

	塷	坎 (mortar)	函 (heart)	涵	佮	合 (a unit)
YX	k^{h}uɛ^{去}	-	-	-	-	-
CMX	*k^{h}uɔn^{陰去}	*k^{h}uɔn^{陰上}	*ɣuɔn^{陽平}	*ɣuɔn^{陽平}	*kuɔt^{陰入}	*kuɔt^{陰入}

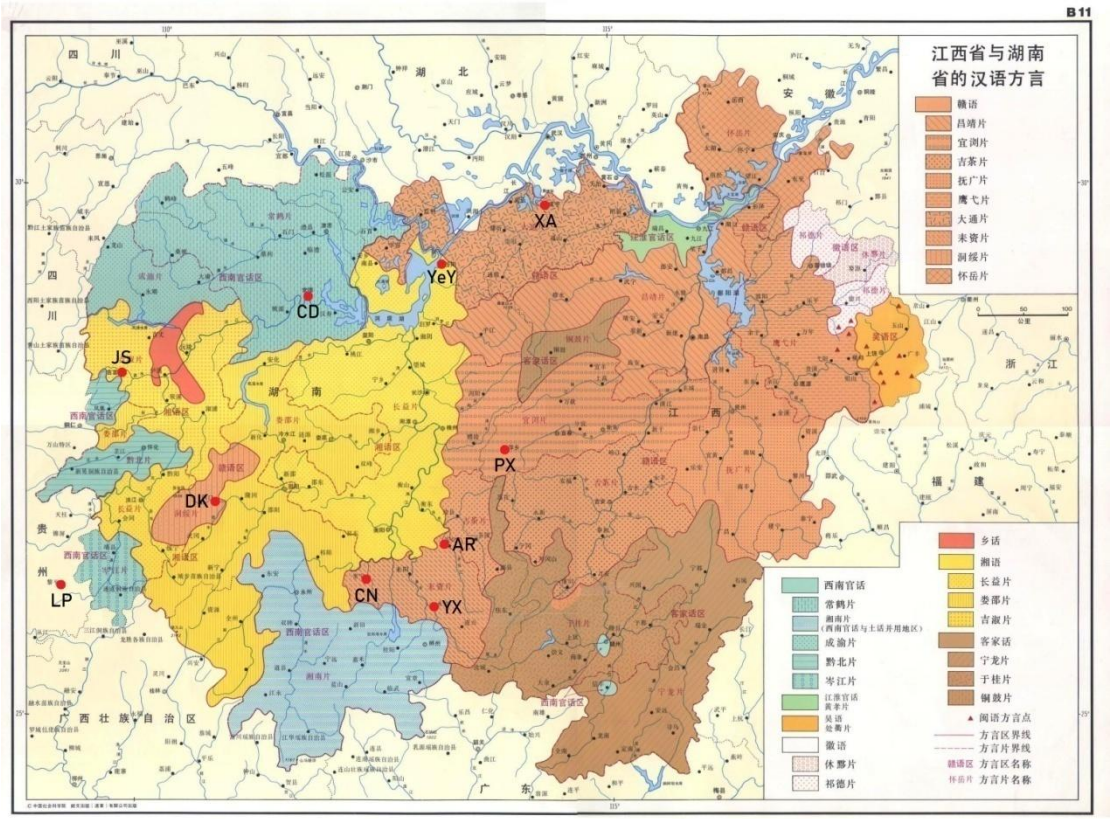
The only etymon recorded for Yǒngxīng seems not promising for the discussion. However, there is a lexicon list for another dialect in Yǒngxīng, the Zǐmù (梓木) dialect. In this dialect, 塷 is recorded as [kuã^{去}] (the absence of aspiration might be a transcription error) while 函心 is [xuã^{陽平}. ɕiẽ^{陰平}] (Huang, 2017, pp. 130, 150). Zǐmù's -uã corresponds to -uɛ 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^{陽平} ɕiẽ^{陰平}]. 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

	塷	坎 (mortar)	函 (heart)	涵	佮	合 (a unit)
DK	k^{h}uã^{上}	k^{h}uã^{陰平}	fã^{陽平}	-	kua^{陰平}	-
CMX	*k^{h}uɔn^{陰去}	*k^{h}uɔn^{陰上}	*ɣuɔn^{陽平}	*ɣuɔn^{陽平}	*kuɔt^{陰入}	*kuɔt^{陰入}

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 塈 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 塈 for the second syllable in 田塈 [xiã^{24}.k^{h}uã^{21}] (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, Chángníng, Yǒngxīng, and Dòngkǒu in the south of Húnán Province are very likely members of the Xiāng Dialect. However, the western boundary between Xiāng and Mandarin is relatively unclear. Nonetheless Lǐpíng 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 has been discredited that it overestimates the ancientness of the suggested identificatory feature and fails to demarcate a group with persuasively high degree of clustering. 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 Gàn, 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 Húnán 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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