

ZHONG-SHAN PHONOLOGY:
A Synchronic and Diachronic Analysis
of a Yue (Cantonese) Dialect

by

MARJORIE KIT MAN CHAN
B.A., University of British Columbia, 1974

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS

in

THE FACULTY OF GRADUATE STUDIES
Department of Linguistics

We accept this thesis as conforming
to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA

September, 1980

© Marjorie Kit Man Chan, 1980

In presenting this thesis in partial fulfilment of the requirements for an advanced degree at the University of British Columbia, I agree that the Library shall make it freely available for reference and study.

I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by the Head of my Department or by his representatives. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Department of

Linguistics

The University of British Columbia

2075 Wesbrook Place

Vancouver, Canada

V6T 1W5

Date

September 19, 1980

ABSTRACT

Zhong-shan is a county in Kwangtung Province in southern China. What is normally referred to as the "Zhong-shan dialect" is the speech of Shi-qi, the administrative centre for the county. For the present thesis, data were collected from native Zhong-shan speakers from Shi-qi and neighbouring villages where the speech can be equated with the Shi-qi, Zhong-shan dialect.

The data elicited consist of two main types: (1) colloquial vocabulary, for which graphic representation (in the form of standard Chinese characters) do not exist, and (2) a lexicon based on the reading of a standard word list for Chinese dialect surveys (namely, the Fang-yan Diao-cha Zi-biao), which contains some 3,700 Chinese characters. The synchronic study, which used both sets of data, is based on an amalgamation of Western structuralist and Chinese (traditional and modern) approaches.

For the diachronic study, the dialect survey list, arranged according to historical phonological categories, was indispensable. The diachronic study essentially mapped the pattern of correspondences of the dialect against the historical categories to which each word belonged. Against such a backdrop, it is possible to observe the development of a given dialect with respect not only to earlier strata of the Chinese language, but also to other modern Chinese dialects. Thus, in Zhong-shan, some features may reveal certain mergers with reference to a particular stratum of the language, whereas other features may show survivals of yet older distinctions. References to previous studies on the Zhong-shan dialect are also made when differences between (or

among) data seem significant. Cross-dialectally, since the Cantonese dialect is the standard for the Yue dialect group to which Zhong-shan belongs, a comparison between Zhong-shan and Cantonese is made throughout the study. Other southern Chinese dialect groups, such as Min and Hakka, are also cited where relevant.

The thesis itself is divided into two main parts: the first part is the synchronic study, and the second part the diachronic analysis. In order that the thesis may better serve future research endeavours, both the colloquial lexicon and the lexicon of character readings are included: the colloquial data appear at the end of Part I, while the dialect word list occurs at the end of Part II. The reading of the characters is recorded directly onto the format of the Fang-yan Diao-cha Zi-biao that the Chinese Linguistics Project at Princeton had prepared expressly for fieldwork purposes. Immediately following the dialect survey material is an index to the dialect material. The index is likewise prepared by the Chinese Linguistics Project, with the words arranged according to Pin-yin romanization.

TABLE OF CONTENTS

Title Page	i
Abstract	ii
Table of Contents	iv
List of Tables	vii
List of Charts	viii
List of Maps	ix
Acknowledgement	x

Part I. Synchronic Study

CHAPTER 0. INTRODUCTION	1
0.1. Terminology, Transliteration and Other Conventions	1
0.2. Historical, Geographical and Linguistic Setting	3
0.3. Data Base	6
0.3.1. The Informants--Biographical Sketch	6
0.3.2. Data-Collection Techniques	8
0.3.3. Additional Sources for Zhong- shan Data	11
Notes to Chapter 0	14
CHAPTER 1. PHONETIC DESCRIPTION AND PHONEMIC ANALYSIS	17
1.1. Initials	21
1.2. Finals	32
1.2.1. Nuclear Vowels	40
1.2.2. Medials	50
1.2.3. Endings	62
1.2.4. Syllabic Nasals	63
1.3. Tones	63
1.3.1. Tonal System	64
1.3.2. Tone Sandhi	67
1.3.3. Tone Change	68
1.4. Combination of Initials and Finals	77
1.4.1. Labial Dissimilation	77

1.4.2. Syncope	78
1.4.3. Sesquisyllabic Structures	79
1.4.4. Colloquial Versus Literary Forms	95
Notes to Chapter 1	101
CHAPTER 2. SYLLABARY AND LEXICON	107
2.1. Syllabary Arranged According to Modern Zhong-shan Finals	110
2.2. Lexicon of Colloquial Terms Arranged According to Modern Zhong-shan Finals	126
 <u>Part II. Diachronic Study</u>	
CHAPTER 3. ANALYSIS OF MODERN REFLEXES OF HISTORICAL CATEGORIES	161
3.1. Initials	164
3.1.1. Reconstructed Values of Middle Chinese Initials	164
3.1.2. Zhong-shan Correspondences to Middle Chinese Initials	175
3.1.2.1. Bilabials (LMC)	175
3.1.2.2. Labiodentals (LMC)	180
3.1.2.3. Dentals (LMC)	183
3.1.2.4. Dental Sibilants (LMC)	191
3.1.2.5. Retroflexes (LMC)	197
3.1.2.6. Retroflex Sibilants (EMC) and Palatals (EMC)	201
3.1.2.7. Velars (LMC)	216
3.1.2.8. Gutturals (LMC)	232
3.2. Finals	241
3.2.2. Modern Zhong-shan Correspondences to LMC Finals	260
3.2.2.1. Guo-she	261
3.2.2.2. Jia-she	265
3.2.2.3. Yu-she	266
3.2.2.4. Xie-she	271
3.2.2.5. Zhi-she	277
3.2.2.6. Xiao-she	282
3.2.2.7. Liu-she	283

3.2.2.8. Xian-she	285
3.2.2.9. Shen-she	289
3.2.2.10. Shan-she	290
3.2.2.11. Zhen-she	297
3.2.2.12. Dang-she	304
3.2.2.13. Jiang-she	307
3.2.2.14. Zeng-she	309
3.2.2.15. Geng-she	311
3.2.2.16. Tong-she	317
3.3. Tones	319
3.4. Concluding Remarks	333
Notes to Chapter 3	334
 CHAPTER 4. LEXICON (AS ARRANGED IN THE <u>FANG-YAN DIAO-CHA</u> <u>ZI-BIAO</u>)	 337
<u>Rhyme Groups:</u>	
1. Guo-she	339
2. Jia-she	345
3. Yu-she	352
4. Xie-she	366
5. Zhi-she	385
6. Xiao-she	405
7. Liu-she	419
8. Xian-she	430
9. Shen-she	448
10. Shan-she	453
11. Zhen-she	486
12. Dang-she	504
13. Jiang-she	518
14. Zeng-she	522
15. Geng-she	529
16. Tong-she	212
Index	565
 Bibliography	 655

LIST OF TABLES

Table 1.	The Initials in Zhong-shan	21
Table 2.	(a) Analysis of the Finals--Chan	35
	(b) Analysis of the Finals--Chao	36
	(c) Analysis of the Finals--Egerod	37
	(d) Transcription of Finals in (Macao) Zhong-shan--Ball	38
	(e) Phonetic Transcription of the Finals in Cantonese	39
Table 3.	(a) Tonal System of Zhong-shan	65
	(b) A Comparison of Cantonese and Zhong-shan Tones	66
Table 4.	Colloquial Versus Literary Forms:	
	(a) Tone /13/ Aspirated Initial and /22/ Unaspirated Initial	98
	(b) /a:ng/ and /ang/ Finals	98
	(c) /ia:ng/ and /ing/ Finals	99-100
Table 5.	Words with Alternate Historical Tonal Categories:	
	(a) Words Listed as Ping-sheng	327
	(b) Words Listed as Shang-sheng	327
	(c) Words Listed as Qu-sheng	328-329
	(d) Words Listed as Ru-sheng	329
	Notes to Table 5	329

LIST OF CHARTS

Chart 1.	Syllable Structure of Chinese	17
Chart 2.	Syllable Structure of Zhong-shan	19
Chart 3.	(a) Analysis of the Vowels--Chan	40
	(b) Analysis of the Vowels--Chao	41
	(c) Analysis of the Vowels--Egerod	41
Chart 4.	The 36 Initials of Late Middle Chinese	165-166
Chart 5.	Early Middle Chinese Initials	169
Chart 6.	Middle Chinese Initials in the <u>Fang-yan</u> <u>Diao-cha</u> <u>Zi-biao</u>	172
Chart 7.	Zhong-shan Correspondences to the Middle Chinese Initials in the <u>Fang-yan</u> <u>Diao-cha</u> <u>Zi-biao</u>	173-174
Chart 8.	Distribution of the LMC Glides and Medials	244
Chart 9.	The 16 Rhyme Groups	248
Chart 10.	Late Middle Chinese Finals	249-252
Chart 11.	Rhymes and Grades Within Each Rhyme Group	256-258
Chart 12.	Zhong-shan Correspondences to the LMC Finals	259
Chart 13.	(a) Zhong-shan Correspondences to the Historical Tones	320
	(b) Cantonese Correspondences to the Historical Tones	320
Chart 14.	Ru-sheng Correspondences in Cantonese and Zhong-shan	323
Chart 15.	Tonal Correspondences in Zhong-shan (and Cantonese)	323

LIST OF MAPS

Map 1. Kwangtung Province	xii
Map 2. Zhong-shan County	xiii

ACKNOWLEDGEMENT

The data for the present study of the Zhong-shan dialect was collected at various intervals, beginning with a short project in the spring of 1977; the bulk of the data for the thesis, however, was gathered in the spring of 1978. For these elicitations, the principal informants were my parents, Chen Gui-hong 陳桂鴻 and Yang Zhi-fang 楊志芳. They responded tirelessly to my seemingly endless questions. To them, I owe a depth of gratitude that words cannot fully express. Their willingness, patience and support have made this experience a very personally rewarding one.

I am grateful to the Linguistics Department at the University of British Columbia for the academic training that I have received, and for their supportive role in my endeavours. Concerning the thesis-writing in particular, I am indebted to my Committee members, Dr. M. Dale Kinkade and Dr. Sarah Bell, for their reading of an earlier draft and helpful suggestions. I am also appreciative of Dr. Kinkade's assistance in the finer phonetic transcriptions noted in the study.

To my advisor, Professor E.G. Pulleyblank, I owe deep gratitude for his many constructive criticisms and suggestions throughout the thesis-writing, and for his clarification of various points that were unclear to me. His helpfulness, together with his quiet support and immense patience during that entire period, cannot be over-emphasized.

I would also like to thank Professor Jerry Norman, at the University of Washington, who kindly read through an earlier draft and made a number of helpful comments, particularly with regard

to Min dialect material.

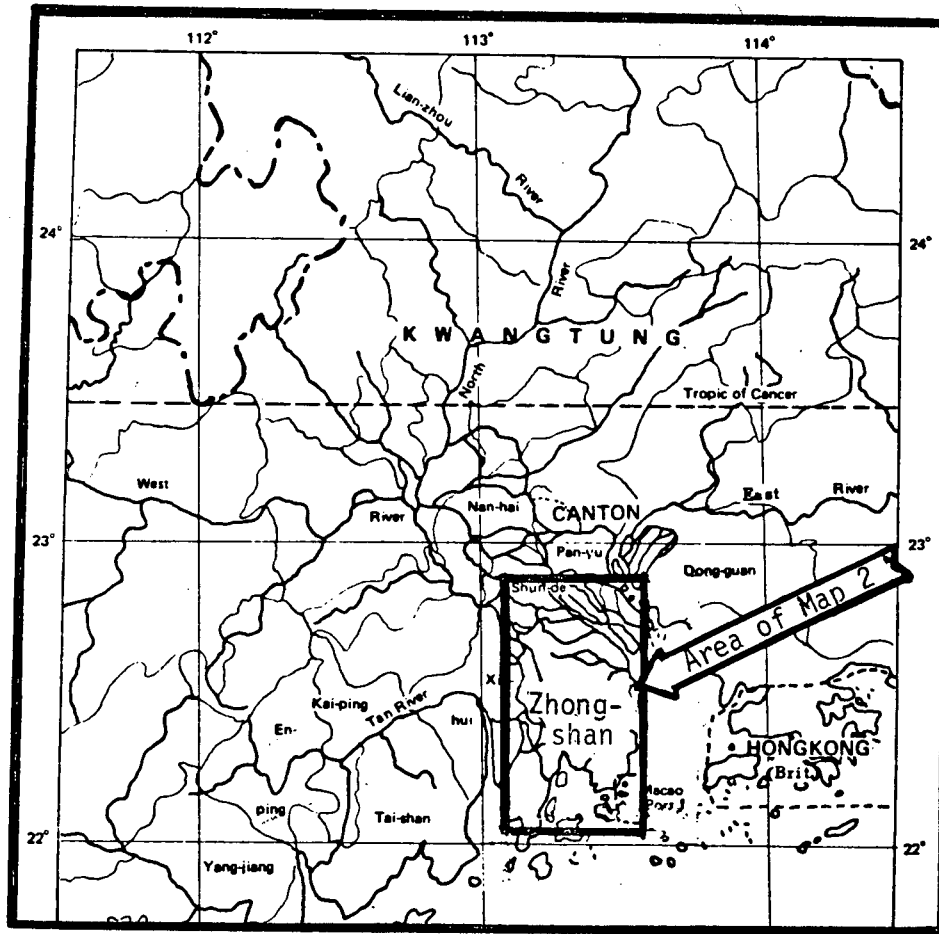
Also helpful in my thesis endeavours has been Karl K. Lo, a native Zhong-shan speaker, who supplied a few of the forms that are recorded here. I am also grateful to my husband, Gary R. White, for his moral support, encouragement, and general assistance that facilitated the writing and final type-up of the thesis.

I wish to acknowledge with heartfelt thanks support from the University of British Columbia (U.B.C. Graduate Fellowship 1976-1978). I am also gratified that the University of British Columbia allowed me to use the Summer Research Grant (1977) to attend the Linguistic Society of America's 1977 Summer Linguistic Institute. That year, the Institute was held at the University of Hawaii where special emphasis was on Asian and Pacific languages. The study programme was also supported by the Linguistic Society of America (LSA Fellowship 1977), to which I wish also to express my deep gratitude.

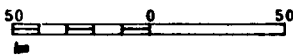
Needless to say, although I owe much to all those who have guided me in the thesis, I am solely responsible for whatever errors that remain.

Map 1. Kwangtung Province.

(A modification of Yue, 1979:2.)

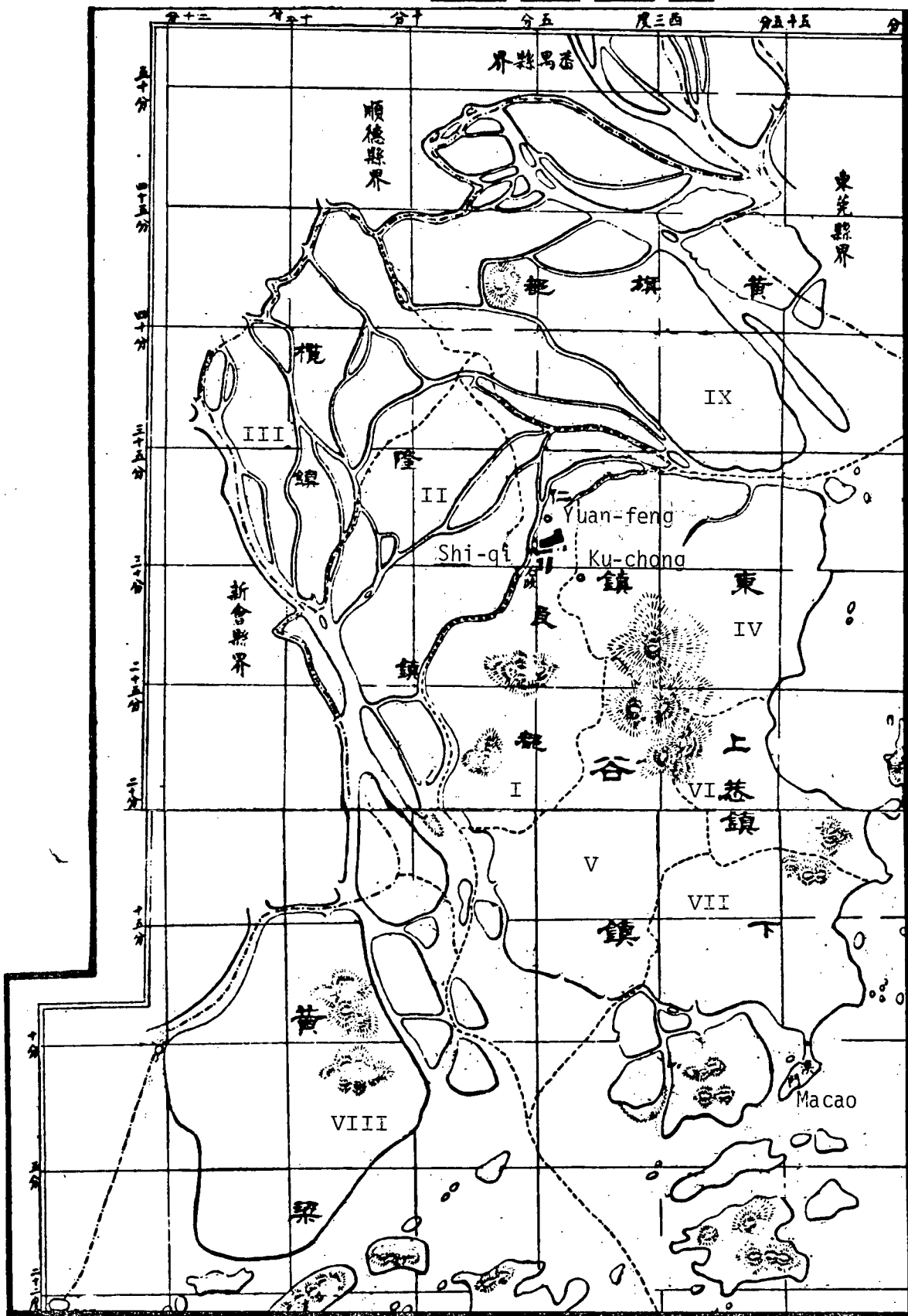


1 : 2,000,000



Map 2. Zhong-shan County.

(A simplification of: Xiang-shan Xian Zhi, 1923:14-15)



PART I. SYNCHRONIC STUDY

CHAPTER 0. INTRODUCTION

Studies of the Yue dialects of Chinese have generally concentrated on standard Cantonese and Taishanese, while other dialects have received peripheral attention. To counterbalance this general trend, the Yue dialect which is investigated in the present thesis is the Zhong-shan¹ 中山 dialect. The primary goal of this study, however, is to supplement existing works on the Zhong-shan dialect with a larger corpus of field data and a more detailed analysis of its phonology on a synchronic and diachronic level. The hope is that both the raw data and the analysis will contribute to future linguistic research.

0.1. Terminology, Transliteration and Other Conventions

The term "Cantonese" has often been used to identify both the standard Cantonese dialect and the dialect group, thereby creating some confusion for those less familiar with the linguistic situation in Kwangtung Province in southern China. To eliminate this source of ambiguity, the distinction between the terms "Yue" and "Cantonese" drawn by Oi-kan Yue Hashimoto (1972a:1) is adopted here: "Yue" is used to refer to the dialect group, and "Cantonese" to the group norm. Yue is the dialect group representative of Kwangtung Province, although found there are also other major Chinese dialect groups such as Hakka and Min. Cantonese, or Standard Yue, is the dialect of the majority of people in Canton and Hong Kong, located on the Pearl River Delta. "Standard Cantonese" will be a term used only for further clarification

or emphasis.

The new Pin-yin romanization system, which has been officially adopted in the People's Republic of China to transcribe the national standard, pu-tong-hua ('common dialect', or what is usually regarded as the Peking dialect of Mandarin), will be used here for the transliteration of Chinese terms, including personal and place names, with a few minor modifications. Hyphens will be inserted between syllables within a word, and an occasional tone mark will be used for disambiguation in cases where the romanized form of several words, for example, would have been identical except for tone. The four tones in Mandarin are marked thus: '-' for level, 'ˊ' rising, 'ˇ' dipping (falling-rising), and 'ˋ' falling. Pin-yin is used for Chinese personal and place names except for well-known geographical names, such as Canton and Hong Kong, for which the romanization established in the China Postal Atlas will be retained. Moreover, rather than attempt to over-standardize personal names to a single romanization system, the romanization that has already been established for the names of well-known Chinese linguists such as Yuen Ren Chao and Fang Kuei Li will likewise be used here.

The use of the terms "character" and "word" needs some clarification. The Chinese language distinguishes between what is a "character" (zi 字) and what is a "word" (ci 詞). A character is simply the individual ideograph, which is a monosyllable. Often a character constitutes a word; the character da 大, for instance, is a word meaning "big". However, it can also combine with the character xue 學 (which, as a monosyllabic word, means 'to study') to form the disyllabic word da-xue 大學, which

means 'university'. In a grammatical analysis, one should further introduce the linguistic term 'morpheme', which is loosely defined as a "minimal meaningful unit"². Usually there is a one-to-one correspondence between a syllable (or character) and a morpheme; that is, most morphemes in Chinese are monosyllabic, as exemplified by da and xue above, which can now be analyzed as two monosyllabic morphemes carrying the meanings 'big' and 'to study' respectively. There are, nonetheless, a few rare cases of disyllabic morphemes whose origin is no longer known. The word hu-die 蝴蝶 'butterfly' is a case in point; the first syllable hu contains no meaning in and of itself.

Other terminologies and conventions will be introduced as they are met in the following sections.

0.2. Historical, Geographical and Linguistic Setting

During the Han Dynasty (206 B.C.-23 A.D.), what is now the county (xian 縣) of Zhong-shan was part of Pan-yu county 番禺縣. In Tang times (618-907) it became a part of Dong-guan county 東莞縣. It was at the beginning of the Song Dynasty (960-1279) that it became established as a separate county called Xiang-shan county 香山縣, now over eight hundred years ago.

In the fourteenth year of the Republic of China (i.e., 1925), in honour of Dr. Yat-sen Sun, the father of the Chinese revolution, the name of his birth place was officially changed by the provincial government of Kwangtung from Xiang-shan to Zhong-shan 中山 based on the name which Dr. Sun adopted while seeking political asylum in Japan, "Zhong-shan" being the Chinese

pronunciation of "Naka-yama" 中山.³

Geographically⁴, Zhong-shan is one of the coastal counties of Kwangtung Province. It is situated west of the Pearl River delta and immediately north of Macao, thus partway between Canton and Macao (see Map 1). The county is over 1,800 square kilometres in area--70 kilometres long running north and south, and 35 kilometres wide east and west. Within this circumference, the county is divided into nine administrative sections called qu 區. Shi-qi (otherwise romanized as "Shekki") 石岐, the administrative centre and the largest town in the county, is located in the first qu. The Zhong-shan dialect is here identified and equated with Shi-qi speech, which is considered the standard for the county. Besides Shi-qi, also entering into the present study is the neighbouring village of Ku-chong 庫充, situated in the fourth qu immediately behind the boundary southeast of Shi-qi (see Map 2). A number of the more colloquial expressions collected in the present study reflect Ku-chong speech rather than that of the more educated townspeople of Shi-qi.

In terms of its linguistic classification, Zhong-shan is one of the Yue dialects, consequently sharing many of the features found in Cantonese. At the same time, the Shi-qi dialect in China is also influenced by the surrounding dialects. Although small in area, all three major dialect groups in Kwangtung--namely Hakka, Min and Yue--are spoken in the Zhong-shan county. It is therefore not surprising to find each dialect in turn influenced by the others, in a process which has been described by Egerod (1956:76)⁵ as "balkanization", using the term in the linguistic sense of "the gradual merging of geographically close, etymologically far-removed

speech forms". Egerod (p.77) notes, for example, that the simplicity of Shi-qi tonal pattern, in contrast to that in Cantonese, renders the Shi-qi dialect closer to Min than to Yue with respect to the number of tones. Zhong-shan is, in fact, the only exception to the pattern of eight or more tones and the dichotomy of the Yin-ru tone which constitute two of the characteristic features of the Yue dialects (Hashimoto, 1972a:44). Hence, it would not be unreasonable to suggest balkanization as a possible factor in the uniqueness of the Zhong-shan tonal system amongst the Yue dialects.

Although the Shi-qi dialect is the standard for the county, it is predominant only within its own qu. In the remaining eight qu, Cantonese, Hakka, and various forms of Min constitute the major dialects.⁶ Hence, the Shi-qi dialect is actually spoken in a very limited area, its prominence felt only as a result of its economic and political status. In this position also, it has stringent competition from Macao, which is geographically and historically⁷, though no longer politically, a part of Zhong-shan county. The linguistic scene in Macao has undergone drastic changes since J.D. Ball's fieldwork before the turn of the century when the county was still called "Xiang-shan" (or "Höng-shan", in Ball's Cantonese transcription). According to Ball (1897:550)⁸ the dialect spoken in Macao was identical to the Zhong-shan dialect, with exceptions arising primarily from the desire of the educated class in Shi-qi to emulate the more prestigious Cantonese forms. By mid-twentieth century, Egerod (p.3) observes that Standard Cantonese has become the main dialect in Macao.⁹ Nevertheless, the Cantonese spoken there retains a few traces of the Zhong-

shan dialect, such as the fusion of the plain and labialized velar stops as a result of which Cantonese /kwa/ and /ka/, for instance, are both pronounced /ka/ in Macao, with labialization lost.

Meanwhile, because of low yield in agricultural production in the past in Zhong-shan¹⁰, it has been a tradition for the local people to seek a means of livelihood away from home. Among the places which attracted many immigrants was the Hawaiian Islands. As Chao (1948:49)¹¹ commented, the Chinese population in Hawaii was predominantly speakers of the Zhong-shan dialect. Since the publication of Chao's article in the middle of the century, it is possible that the influx of Chinese immigrants from Hong Kong, Taiwan, and other areas may have reduced the proportion of Zhong-shan speakers in Hawaii.

0.3. Data Base.

The study of Zhong-shan phonology is based on data collected by the writer at various intervals from 1977 to 1980, the bulk of which was gathered during the spring of 1978. Published works on the dialect have also been consulted, as will be further elaborated subsequently.

0.3.1. The Informants--Biographical Sketch.

Data were elicited from two main informants: Chen Gui-hong 陳桂鴻 and Yang Zhi-fang 楊志芳, the writer's parents. Chen was born in 1923 in the village (cun 村) of Ku-chong 庫充村, where he acquired the early part of his education. He completed grammar school in Shi-qi, which is west of the village, about half an hour's walk away. His mother, who is living with

the family, was born in the village (xiang 鄉) of Yuan-feng 圓峯鄉 , north of Shi-qi, also approximately half an hour's walking distance from the town (see Map 2). Chen attended business college in Hong Kong, where he also studied Mandarin, English and Japanese. He travelled between Ku-chong and Hong Kong several times before immigrating to Vancouver, British Columbia in 1952 to join his parents. Chen's father, who was born in Ku-chong, spoke Zhong-shan and a few words of English, while Chen's mother only knows the Zhong-shan dialect. Contact with fellow villagers from Ku-chong is maintained through friends, relatives and annual gatherings organized by residents of the "Ku-chong Home", a house open to Ku-chong villagers who wish to drop in from time to time, or who need a place to stay.

Yang was born in 1927 in Shi-qi, where she received four or five years of education before it was disrupted by the invasion of China by Japan. She continued to live in Shi-qi, working there as a nurse during the war years. Yang lived in Ku-chong for several years before spending two or three years in Macao and Hong Kong, arriving in Vancouver, British Columbia in 1958. She has had exposure to Mandarin and Japanese. Her knowledge of English has been acquired informally, primarily through contact with customers in a small, family-operated grocery store.

The writer herself also served as an informant, although to a much more limited extent since she left Ku-chong at the age of four or five and was then exposed to Cantonese in Macao and Hong Kong, and in Canada subsequently.

0.3.2. Data-Collection Techniques

A preliminary set of data was collected in the spring of 1977 in the attempt to elicit colloquial versus literary readings of the same characters based on those found in Cantonese (i.e., in Hashimoto, 1972a:169-170). It was recognized by the writer that such an approach has its limitations, the primary one being that a distinction between literary and colloquial reading of some words found in Zhong-shan but not present in Cantonese would be missed. Given limited time, however, it was nevertheless a convenient means to obtain a sizeable list without resorting to an extensive lexicon. The method used was as follows: a character was first read by Chen, followed by a discussion of whether or not there exists a colloquial counterpart. Some effort was also made subsequently to produce literary versus colloquial forms, although not by any systematic or consistent approach.

The major task of eliciting Zhong-shan data was, however, based on the Fang-yan Diao-cha Zi-biao 方言調查字表 'A Table of Characters for Dialect Surveys' (hereafter referred to as the "dialect survey list" for short). That source provides a standard list of just over 3,700 characters arranged according to traditional Chinese phonological categories, and is used for comparisons among the Chinese dialects and for studies of the historical phonology of a particular dialect. Although different editions of this survey list exist, they are essentially the same, with but minor variations in the choice of characters and format. The edition used in the present study is published by Princeton University (1970), and is part of the Chinese Linguistic Project at Princeton. This edition, especially arranged for fieldwork

purposes, is based on the 1955 character list of the same name compiled by the Research Institute of Linguistics, Chinese Academy of Sciences in Peking. The survey list provided data for the study of the phonological system of Zhong-shan, as well as yielding the necessary material for a diachronic analysis of the dialect.

In preparing for the dialect survey on Zhong-shan, each character on the list was assigned a number consisting of two parts separated by a dash "-", with the part preceding the dash indicating reference to the page number in the dialect survey list, and the part following the dash that of the character's position in the column on a given page.¹² The word duo 多 'many', for example, is assigned the number "1-1" to specify page one, and the first character on the page. Similarly, tuo 拖 'to drag along' is assigned the number "1-2" since it is the second character on page one in the survey text. (See Chapter 4.)

After each character had been given a number, the order of the characters in the survey list was randomized. What the informant actually saw is the character, the number assigned to it, and, where provided by the compilers, such information as one-word definitions, part of speech, environments in which the character may occur, and alternate spelling, for the purpose of assisting the informant in recalling the character and/or making the correct choice for a character with multiple pronunciations. A parallel case in English would be to identify "export" as a verb or noun in order to elicit the form with the stress pattern sought.

The dialect survey list was read by Chen and recorded on a reel-to-reel tape recorder. The writer transcribed the data phonemically during the elicitation and used the tape for double-

checking afterwards. Questions concerning some of the finer phonetic distinctions were brought to the attention of M.D. Kinade in the Linguistics Department at the University of British Columbia.

The data collected was then compared with the Cantonese forms given in Hashimoto (1972a)¹³. A list of characters was drawn for double-checking pronunciation. Each of these characters was accompanied by additional information to facilitate recall, or to avoid confusion with other characters which graphically appear quite similar. Such information usually consists of definitions (in English or Chinese) and the combination of these characters with others to form polysyllabic words. Variant forms collected often reflect dialectal influence from Cantonese, especially in those cases where the informant was uncertain of the pronunciation. It is likely that some of the more literary words have received Cantonese pronunciation as a result of contact with Cantonese speakers in Hong Kong and Vancouver. This may account for some of the differences found between the present set of data and that obtained by Chao in Shi-qi.

For the second set of data, Yang served as primary informant, with Chen joining in on some of the occasions. The second task was stimulated by the observation of many gaps in Chao's repertoire of Zhong-shan syllables, including distinction of tone. The aim was to find colloquial Zhong-shan words to fill in as many of these empty spaces as possible. The writer soon found that to simply ask whether such-and-such a syllable exists in Zhong-shan produced few responses. The next approach was for the writer herself to systematically go through each potential syllable,

particularly those left blank in Chao's study, in order to find a word which would later be confirmed by Yang as a word spoken in Shi-qi, in both Shi-qi and Hong Kong, or strictly as a Hong KONG colloquialism. The majority of the words suggested by the writer were identified by Yang as Shi-qi expressions. Yang was frequently able to elaborate on the meaning of a word suggested by the writer, and sometimes produced additional meanings or usages for the word or syllable. These were necessarily informal sessions, conducted whenever the opportunity arose.

Chen's mother, who is now in her seventies, understands Cantonese, but speaks only Zhong-shan. A few distinctive expressions which she uses are also recorded for this study.

0.3.3. Additional Sources for Zhong-shan Data

As far as the writer is aware, to date only three works have been published which contain field material on the Zhong-shan dialect. Of these, "Zhong-shan fang-yan" 中山方言 ('Zhong-shan dialect') (1948) by Y.R. Chao, and portions of The Lungtu Dialect (1956) by S. Egerod contain data on the Zhong-shan dialect spoken in Shi-qi. A third source is an article by J.D. Ball in 1897 entitled "The Hŏng Shan or Macao dialect", which describes the Zhong-shan dialect as spoken in Macao, allegedly identical to Shi-qi speech. Shi-qi forms which differ from those found in Macao are recorded by Ball in his footnotes.

A comparison with Chao's article reveals more differences between Ball's Macao data and Chao's Shi-qi data than were reported by Ball. At least some of these differences may have resulted from sound changes during that interval between Ball's collection

of data on the Zhong-shan dialect and Chao's fieldwork in Shi-qi, a period of at least thirty or forty years. Ball's article is primarily of historical significance; its usefulness for comparative purposes is rather limited. Tone indicators, for instance, are omitted by Ball in his transcriptions. Furthermore, lacking an international alphabet by which to transcribe with greater precision and conciseness the phonetic sounds of the dialect at that time, Ball had to struggle with the inadequacies of the English language and the limitations of the English alphabet. Consequently, he resorted at times to circumlocutory phrases to describe a particular sound. This is especially true when he attempted to explain the manner in which some of the vowel clusters and diphthongs were articulated.¹⁴ Ball's choice of format in his syllabary (i.e., repertoire of the syllables in the dialect) also presents a weakness: by using Cantonese syllables to show Zhong-shan counterparts, the structure of Zhong-shan phonology is obscured. Sounds which contrasted historically and were preserved in Zhong-shan are not readily discerned in Ball's syllabary if they merged in Cantonese. In such cases, only one of the sounds in Zhong-shan was presented in the syllabary and the other merely entered in the footnote as exceptions. Egerod's contribution rests primarily on his fairly detailed phonetic description of the Shi-qi dialect, as well as the provision of background information on the dialect and the region.

The most valuable and most frequently cited source on the Zhong-shan dialect is Chao's article on the phonology of the Shi-qi dialect. Chao's material is based mostly on data elicited from one informant in Shi-qi in 1929. Supplemental material was

gathered on another informant in Hawaii ten years later. Although tersely written, Chao's article is a comprehensive work containing a description of the phonological system of Zhong-shan, a syllabary, a list of some exceptions to the sound changes in the modern dialect on the basis of historical phonological classifications, and a sample dialogue.

Besides the aforementioned works, there is also a Sino-Portuguese glossary compiled by Guang-ren Yin and Ru-lin Zhang circa mid-eighteenth century in Macao which is of historical interest. The glossary, consisting of 395 lexical items, is part of the text Ao-men Ji-lue 澳門記略 ('Record of Macao') of which several editions exist today. Studies which have been conducted on the glossary include C.R. Bawden (1954), R.W. Thompson (1959), W. Boltz (1977), and M. Chan (forthcoming).

Notes to Chapter 0

1. Also transcribed as "Chungshan" in Wade-Giles romanization, and as "Hòng Shan" according to Cantonese pronunciation.
2. For a more detailed discussion of Mandarin morphological structure, see, for example, Kratochvil (1968:55-88).
3. The historical information is derived from various sources: Hsu, 1970:540; Zhao, 1955:135-136; Xie, 1933:100; and Scenery Publishers' "Zhong-shan qiao-xiang feng-guang" 中山僑鄉風光 ('Scenic spots of Chungshan'--English title provided) (no date--c.1975?).
4. Much of the geographical and linguistic information presented in this section is thanks to the description of the county by Egerod (1956:3). (Note that Egerod refers to Zhong-shan as a "district".)
5. Unless noted otherwise, references to Egerod are to his book, The Lungtu Dialect (1956). For Egerod (1956), only page reference will be given hereafter.
6. Hashimoto (1972a:8) notes that although Zhong-shan is predominantly Yue-speaking, a quarter of its inhabitants speak a Hakka dialect while a number speak a Southern Min dialect.
7. For example, in Zhao (1955:136) it is stated that Macao, while belonging to Xiang-shan county, was leased to Portugal in the Sino-Portuguese treaty of 1888 in the thirteenth year of Emperor Guang-xu 光緒. (See also Bu, 1977:1; Hua-qiao Zhi, 1964:1).
8. All subsequent references to Ball will be to his 1897 article; therefore, only page number will be specified hereafter.
9. Karl Lo, a native Zhong-shan speaker, received his elementary

education in Macao during the 1940's, at which time the dialect of instruction in his classes was Zhong-shan, not standard Cantonese (Lo, personal communication). The emergence of Cantonese as the main dialect must have been more or less contemporaneous with Egerod's fieldwork.

10. Hsu (1970:540) attributes poor agricultural output to infertile soil, whereas the pictorial magazine on "Zhong-shan qiao-xiang feng-guang" (n.d.:17) claims that "(t)here are several million mu of fertile alluvial sandy land in Chungshan county ... (b)ut its annual grain output reached only 200 to 250 kilos in the past because of its backward agriculture and shabby water conservancy". ('Mu' is a Chinese land-measure of area.)
11. Unless otherwise indicated, all reference to Chao pertains to his publication on Zhong-shan phonology (1948); therefore, only page number will be provided in subsequent references.
12. After the survey was conducted, a few words were added to the survey list using letters or additional numbers. This will be discussed in greater detail later.
13. Unless specified otherwise, all subsequent citings of Hashimoto are of Hashimoto (1972a). For this work on Cantonese which is cited throughout the present study for comparative purposes, only page number will be given subsequently.
14. An excerpt from the description of the sound /óí/, as in the word gai 該 /kóí/ 'ought', is cited here as an example: "An approximation of it may be got by pronouncing the two Cantonese sounds ko (高) and yi (意) rapidly together. Having now got this sound, then slightly open the lips further and

pronounce it a little more open, at the same time taking great care not to get too near to the open koí sound of the Cantonese (該). In this way and by listening to a native from Macao pronouncing it, it is possible to arrive at the sound of the word 該 , kóí in Macao." (Ball, p.509). (Underlining of the transcriptions mine.)

CHAPTER 1. PHONETIC DESCRIPTION AND PHONEMIC ANALYSIS

The phonology of the Zhong-shan dialect will be described according to an amalgamation of American structuralist and Chinese (traditional and modern) approaches. Since it is the latter approach which is unfamiliar to most Western linguists, some of the terminologies and conventions based on Chinese analytical categories will be introduced below.

First of all, the syllable is analyzed by Chinese linguists into two major parts: the initial and the final (cf. Chart 1). The initial is simply the beginning consonant whose absence constitutes the "zero initial". The final consists of an optional medial, which is a glide or vocalic segment and is ignored in Chinese rhyming practices. The rhyming part (i.e., the rhyme) consists of an obligatory syllabic segment, the nucleus, followed by an optional ending, which is a glide, or a nasal or stop consonant. Also considered part of the final by some Chinese linguists is the tone, which is usually described in terms of pitch contour and duration. Other linguists simply regard tone as a suprasegmental feature and treat it separately.

Chart 1. Syllable Structure of Chinese.

S Y L L A B L E			
INITIAL	FINAL		
	MEDIAL	RHYME	
		NUCLEUS	ENDING

This analysis of the Chinese syllable in terms of an initial-final dichotomy is an interpretation of a tradition which has its source in a method of "spelling" used since late Han, or second century A.D., called fan-qie 反切, literally, 'turning and cutting'. It is a means of obtaining the pronunciation of a character by using two other characters, the first of which bears the same initial (essentially the non-rhyming portion), and the second the same rhyme, or final. The character dong 東 'east', for example, is defined phonetically by the gloss de 德 and hong 紅: that is, d(e) - (h)ong = dong. The fan-qie method works well when the final of a word contains only the rhyme, but breaks down when the final includes a medial¹, which is not consistently found in the second character in the fan-qie.

While fan-qie is involved in grouping words which contain the same rhyme, the niu 紐 ('knot') principle is used in categorizing words which have the same initial; that is, words containing the same initial which are grouped together belong to the same niu (Pulleyblank, 1977). Beyond the division of a character into initial and final, the further decomposition of the final into smaller component parts such as nucleus and ending is the influence of Western approach, which analyzes a syllable in terms of a linear sequence of sounds arranged according to their temporal position in a spoken chain.

The canonical shape of the syllable in Zhong-shan (Chart 2) can be analyzed using the terms introduced above. The initial in Zhong-shan is a consonant which, when omitted, constitutes the "zero" initial, and is assigned the phoneme / \emptyset / (i.e., the null element, for convenience of reference; the zero initial is omitted

Chart 2. Syllable Structure of Zhong-shan.

T				
(I) + (M) + N + (E)				
Examples: 釘	[tɛa:ŋ ⁵⁵]	/ t + i + a: + ng ⁵⁵ /	= /tia:ng ⁵⁵ /	'nail'
瓜	[kwa: ⁵⁵]	/ k + w + a + — ⁵⁵ /	= /kwa ⁵⁵ /	'melon'
還	[wa:n ⁵¹]	/ w + — + a: + n ⁵¹ /	= /wa:n ⁵¹ /	'yet'
吃	[ja:k ²]	/ j + — + a: + k ² /	= /ja:k ² /	'eat'
葉	[i:p ²]	/ — + — + i + p ² /	= /ip ² /	'leaf'
五	[ŋ ¹³]	/ — + — + ng + — ¹³ /	= /ng ¹³ /	'five'

where T = Tone

I = Initial (Consonant or "zero" initial)

M = Medial (/i/ or /w/)

N = Nucleus (Vowel or syllabic nasal)

E = Ending (Glide, stop, or nasal)

in actual transcriptions). With regard to the final, the first element is the medial, which is an optional segment. Of central importance is the nucleus, which is a vowel or a syllabic nasal in Zhong-shan. The ending is optional, consisting of a glide, stop or nasal consonant. The tone, indicated by the use of superscripts following the syllable, is treated as a suprasegmental feature over the entire syllable.

With regard to conventions for indicating tone, Y.R. Chao has devised two systems, one using tone letters and the other ...

numerals. Both systems continue to be used by Chinese linguists. In the first, tone letters graphically represent the pitch height and the contour of a tone. The tone letters for the various level tones, for instance, are "ㄚ ㄚ ㄚ ㄚ ㄚ", with a gradual descent in pitch height represented by the gradual lowering of the horizontal stroke. Tonal length is also graphically represented. A long level tone, for example, is indicated by a comparatively longer horizontal stroke than a short level tone (e.g., ㄚ versus ㄚ). Short level tones are generally used for syllables ending in a stop consonant.

The second system for tonal transcription is a numerical one which uses the scale of "1" to "5" wherein "1" indicates the lowest pitch and "5" the highest. Thus, a high level tone may be represented by "55", for instance, and a high falling tone by "51", and so forth. A single number is used for denoting short syllables, especially relevant to the transcription of syllables with stop consonant endings. For typographical and comparative reasons, it is this latter system of tone notation which will be employed in the present study.

Transcription of consonants is basically in accordance with the International Phonetic Alphabet (IPA), with a few modifications. Aspiration, for example, is indicated by the diacritic ['] (e.g., [p'] instead of IPA [ph]). The segment [ts] represents an affricate rather than a sequence of two segments; [ts'] is the aspirated counterpart.

1.1. Initials

The consonants in Table 1 represent the inventory of initial consonants in broad phonetic transcription. Those consonants accompanied by a dash "-" occur in syllable-initial position only.

Table 1. The Initials in Zhong-shan.

	Plosive		<u>Nasal</u>	<u>Lateral</u>	<u>Fricative</u>	<u>Glide</u>
	<u>Unasp.</u>	<u>Asp'd.</u>				
Bilabial	p	p'-	m			w
Labiodental					f-	
Dental	t	t'-	n	l-		
Alveolar	ts-	ts'-				j
Velar	k	k'-	ŋ			
Glottal	(ʔ)				h-	

The broad phonetic transcription in Table 1 above is essentially identical to a phonemic inventory that can be arrived at by applying the principles of complementary distribution and phonetic similarity. Thus, Table 1 also serves as the phonemic system of Zhong-shan initials. For typographical reasons, /ng/ will be used to represent the velar nasal [ŋ] in the phonemic system and should be considered a unit phoneme. Likewise, /ts/ and /ts'/ constitute unit phonemes.

In the following paragraphs is a more detailed discussion of some of the phonemes and their allophones. The phonemes /p/, /t/, /ts/ and /k/ are unaspirated, and generally quite weak, voiceless plosives, often perceived phonetically as [p̚], [t̚], [d̚]

and [g̊], and sometimes even with slight voicing. Note that this observation differs from that made by Chao (p.51) who asserts that, unlike Mandarin, the dialects of Cantonese, Zhong-shan and Wu are alike in having strong, unaspirated stops in syllable-initial position.

There is strong aspiration in the aspirated series, particularly apparent in the careful enunciation of individual characters containing them.

Some lip-rounding accompanies the initials when they occur before the high rounded vowel [u:] (e.g., [p^w, p^{ʰw}, ts^w, k^w, h^w]). It was further observed that slight affrication may occur, as in the word bu 步 'step', phonetically [p^ɸu:²²].

There is some disagreement among linguists concerning the nature of the sibilants in Zhong-shan. Chao (p.51) feels that there is clearly no palatalization in the Shi-qi dialect, in contrast to his observation of strong palatalization in Cantonese. Egerod (p.13), on the other hand, posits a palatal series for both Cantonese and Shi-qi, with the phonemes /c/, /ch/ and /s/ representing the phonetic segments [c^ʃ], [c^{ʃʰ}] and [s] respectively. Ball's analysis may constitute a compromise in that complementary distribution can perhaps be inferred from his transcriptions: in general, Ball's /ts/ occurs with back vowels while his /ch/ occurs with front ones, which suggests that the palatal /ch/ is the result of assimilation to the following front vowel.²

It was observed in the writer's data that Chen's pronunciation tends to be slightly more palatal than Yang's, but is nonetheless not as strongly palatalized as found among some speakers of Cantonese. In her study of Cantonese, Hashimoto (p.88)

describes the sibilants in her idiolect as dental in articulation, but adds that the place of articulation of this series of sound ranges from dental to palatal among Cantonese speakers, with a tendency for some degree of palatalization preceding the high front vowels. Hashimoto (p.17,fn.8) further cites an observation made by D.C. Lau at the University of London who found that there is a greater tendency for male speakers than female speakers to palatalize. This would concur with our observations on Chen and Yang's speech with regard to the relative degree of palatalization of the sibilant series.

As noted by both Chao and Egerod, the initial nasal consonants are often accompanied by homorganic stops: [m^b, n^d, ŋ^g]. However, in the case of a non-labial nasal followed by the high back vowel [u:], it was found that the homorganic stop may be replaced by labial [b] in anticipation of the following labial segment, as in one of the repetitions in the pronunciation of the word nu 怒 'anger', which was rendered [n^bu:²²] by Chen. At times, instead of the nasal consonant being accompanied by a homorganic stop, the initial segment becomes in fact a prenasalized stop, as in Chen's pronunciation of the word men 門 'door'. It is [mu:n⁵¹] in broad phonetic transcription; in narrow phonetic transcription, however, the word should be recorded as [m^bu:n⁵¹].

The alternation between /n/ and /l/ observed in the speech of a number of Hong Kong speakers is not found in Zhong-shan, which maintains a clear distinction between these two initials. None of the words which had the historical Ni 泥³ (*n-) initial are pronounced with the lateral [l] in Zhong-shan. There are only three cases in the survey of an [n] corresponding to the Lai 來 (*l-)

initial: (1) the character liang 兩 which is pronounced [nøɔŋ¹³] with the meaning of 'two' (173-12) and [løɔŋ¹³] when it is used as a measure word to mean 'a tael' (173-13); (2) the character ling 領 (201-7) for 'collar' and 'to apply for' which has the literary reading of [lin¹³], while a colloquial reading of [nɛa:ŋ¹³] only applies to the first meaning, and that of [lɛa:ŋ¹³] only to the second meaning; and (3) the character li 粒 (113-13) which is a classifier for small, round objects such as seeds, grain, pearls, buttons, etc., and is pronounced [nɛp⁵]. Although any explanation of why these three characters have acquired a nasal initial can only be speculative, it is possible that the /n/ is a result of borrowing in all three cases.

Two of the three words, liang 兩 and ling 領, can be found in the very useful cross-dialectal reference source, the Han-yu Fang-yan Zi-hui 漢語方言字匯 ('Chinese Dialect Syllabary', edited by the Beijing Daxue Zhong-guo Yu-yan Wen-xue-xi Yu-yan-xue Jiao-yan-shi (1962)--hereafter referred to as "Zi-hui" for short, with page reference included only). There is only one entry for the word liang 兩. Since the Zi-hui does not provide glosses, one can only suppose that the two meanings of the word, 'two' and 'tael', are combined in the single entry in that syllabary. While most of the dialects have the lateral [l] as the reflex of the historical *Lai* initial, a few of the dialects represented therein show an [n] initial. In Amoy (a Southern Min dialect), two forms contain an [n] initial, and one an [l] initial, partially reflecting stylistic differences: [linɔŋ] is literary whereas [niũ] and [nɛp] are colloquial readings.⁴ However, [n] and [l] are in complementary distribution in Amoy, with [n] occurring

before nasalized vowels and [ŋ] and [l] elsewhere.⁵

Although there may be contact between Zhong-shan and Amoy, or some other similar Southern Min dialect, stronger evidence for possible dialectal influence comes from Fu-zhou, a Northeastern Min dialect (data provided by J. Norman). Not all Fu-zhou speakers maintain a phonemic distinction between /n/ and /l/; however, among those who do, 'two' is [naŋ²], while 'tael' is [ʔliŋ].⁶ The /n/~/l/ split in Fu-zhou not only serves the same function as that found in Zhong-shan, but the same assignment of initial to meaning occurs in the two dialects. There are no data on the Long-du dialect ("Lungtu" in Wade-Giles romanization), which is spoken in the second qu in Zhong-shan, and is regarded by both J. Norman and N. Bodman as a Northeastern Min dialect. Nevertheless, one would suspect that Zhong-shan borrowed the /n/~/l/ split for the two meanings of the word liang 兩 from Long-du--if such a distinction occurs in that dialect--or from Fu-zhou or another Northeastern dialect where the same distinction is found.

It might also be noted that although Hashimoto (p.570) records a lateral initial for both meanings of the character liang 兩, when it is used to mean 'two', the character is pronounced in the Yang-shang tone [24], while its use to mean 'tael' is rendered in the Yin-shang tone [35]. Hashimoto (p.668) suggests that since liang as a measure word is a colloquial term, its Yin-shang tone may be the product of either changed tone phenomenon (i.e., an original tone changed to a high rising [35]), or influence from the colloquial layer.

The evidence thus far demonstrates, firstly, that the two meanings of the character liang 兩 do diverge in their suscepti-

bility to external influences, with Zhong-shan and Fu-zhou showing an alternation of initials, while Cantonese exhibits a tonal differentiation. Secondly, and more importantly with regard to Zhong-shan, given the paucity of exceptions in the modern reflex of the Lai initial in Zhong-shan and the evidence from Fu-zhou, it would be logical to suggest that the reading of liang which has the /n/ initial in Zhong-shan is likely to have been the one borrowed into the dialect, whereas the one with the /l/ initial is the native form.

A parallel case may be argued for the character ling 領, which has both an /l/ and an /n/ initial in the colloquial reading in Zhong-shan: the form [lɛa:ŋ¹³] means 'to apply for' and [nɛa:ŋ¹³] 'collar'. Again, there are several dialects in the Zi-hui (p.255) which show an [n] initial for the character ling. Of the southern Chinese dialects recorded in the Zi-hui, only Chao-zhou (Southern Min) shows an [n] initial for the character: [nia⁵²] (with no other form given). In general, the /n/~l/ distinction is not very well maintained in Southern Min dialects. It is noted that such a distinction is likewise not always maintained in Northeastern Min. It is therefore conceivable that the nasal initial for the colloquial reading of 'collar' is a borrowing from one of the Min dialects.

Chao's data on the Zhong-shan dialect show a lateral initial for the colloquial reading of the character ling 領, which is transcribed by Chao phonemically as /lia:ng¹³/.⁷ It is significant that Chao leaves the slot for the potential syllable /nia:ng¹³/ in his syllabary empty, which quite strongly suggests that the pronunciation of /lia:ng¹³/ for the character ling encompasses

both the meanings of 'collar' and 'to apply for'. The present data on Shi-qi, which yields a nasal form, would lead to the proposal that the borrowing may be a recent one. In contrast, the character liang 兩 in Chao's data agrees with the present corpus in having both a lateral and a nasal initial, which probably reflects an earlier borrowing.

The character li 粒 [nɛp⁵], which is a measure word for small, round objects, only has the /n/ initial in Zhong-shan. It is likely that this is also a borrowed form, although the writer has no concrete cross-dialectal data on which to support this claim. The general observations made above on the Min dialects and the rarity of /n/ as a reflex of the Lai initial in Zhong-shan would suggest a similar borrowing in this third and last case of exceptions to the Lai initial in the Zhong-shan data.

Moreover, although Hashimoto (p.513) records [lɛp⁵] for the character, it is noteworthy that Huang (1970:425), for example, posits only an /n/ initial for the same character, carrying the meaning of 'measure of seeds, grains, etc.' in his Cantonese Dictionary. The word does not occur elsewhere in the dictionary, or more precisely, it does not appear in the section under /l/. (Huang transcribes the word as n̄ap, in Yale romanization.) S.L. Wong (1954) likewise records the word li under the syllable [nɛp] for Cantonese. However, Wong does note that the character is also read similar to that of the historically homophonous word, li 笠 (113-12); that is, li 粒 has an alternate pronunciation of [lɛp⁵]. One can, however, assume that the reading of the word li 粒 with the /n/ initial in Cantonese is the primary one in Wong's Chinese syllabary based on the pronunciation in Canton. Given Wong's

decision to record li 粒 only under the /n/ initial category, and Huang's recording of the word only with an /n/ initial, it appears that not only Zhong-shan, but Cantonese speakers as well, who do not normally "confuse" /n/ and /l/ initials would nevertheless pronounce the word li 粒 with a nasal initial.

The initial /h/ is a glottal fricative. Chao (p.51) however states that when /h/ precedes the back vowels /u/ and /o/, there is some velar or uvular frication, resulting in a sound which is almost [x]. This allophonic variation was not observed in the speech of Chen and Yang to any significant degree.

The zero initial / \emptyset / ⁸, according to Chao (p.51), is a smooth onset before high vowels, but is usually a glottal stop [ʔ] before mid and low vowels. This allophonic distribution of the zero initial was not consistently observed in the present data. The zero initial occurs before finals beginning with a nuclear vowel, as well as before syllabic nasals. In the representation of a syllable containing a zero initial, the null symbol " \emptyset " is actually never transcribed. Egerod records a phonemic glottal stop /ʔ/ rather than a zero initial, which he posits before vowels and syllabic nasals. Egerod makes no note of allophonic variations.

Before discussing the semi-vowel initials, it should be made clear that the phonemic analysis of both Egerod and the writer distinguishes between vowels and glides and, moreover, allows the latter to serve as initials. Chao, on the other hand, does not differentiate glides from vowels in his analysis. He treats [j] as an allophone of the phoneme /i/, and [w] as that of /u/. His rationale is founded on the strict application of the principle of complementary distribution; since whether the segment

/i/, for instance, is the vowel [i] or the semi-vowel [j] can be predicted on the basis of its position in the syllable and/or what rhyme or final accompanies it, Chao combines the front vowel and palatal glide under the phoneme /i/. The corresponding back vowel [u] and the labial glide [w] are incorporated under the phoneme /u/ on similar grounds.

Since vowels and glides are in complementary distribution in Zhong-shan, contrasting them phonemically would inevitably create redundancies in the system. Egerod's distinction of glides and vowels is probably prompted by the desire to set up the vowel cluster /ua/, which he records phonetically as [ɔɔ̃] or [ɔ:ɪ]. Setting up the phonemes /w/ and /u/ allows such minimal pairs as /kwan/ and /kuan/, which are phonetically [kwən] and [kɔ:n] respectively (using our phonetic transcriptions). Although the present analysis does not have such an objective in mind, it is in the treatment of medials that the recognition of vowels versus glides becomes a particularly important issue, as we shall see later.

Chao also differs from Egerod and the writer in that he does not treat the glides as initial segments. They are not discussed in the section on initials. Chao (pp.51,53) refers to them explicitly as medials (jie-yin 介音 'medial sounds'). The phoneme /u/ in the word hua 話 /ua²²/ (in Chao's transcription, phonetically [wa:²²]), is analyzed by Chao as a medial, whereas both Egerod and the writer would analyze that segment as an initial. Although on the whole, there is historical basis for analyzing a glide in such a position in the modern dialect as a medial preceded by the zero initial, it is nonetheless a very costly step in that it would substantially increase the number of finals.

At the same time, many of these finals would actually have a very low functional load. Finals such as [wɔ:ŋ], [wɔ:k], [jən] and [qøq], for example, would only occur with the zero initial.

Chao solves the problem by putting the two glides (his /i/ and /u/ phonemically) in brackets in his chart of initials and, in his syllabary, he posits these two medials under what is in fact the category of initials. Thus, although Chao analyses them as medials, he is actually treating them as initials without actually acknowledging it. Only in the case of his finals /ia/, /ia:ng/ and /ia:k/ does Chao treat /i/ as a medial in his syllabary, the reason being that in these finals, medial /i/ does co-occur with most of the initials and hence carry a heavy functional load. However, by allowing /i/ to occupy both initial and medial position in his syllabary, Chao also creates certain redundancies: a syllable such as */iia/, for example, would not be possible in the dialect, but it could be generated from the combination of "initial + final" in his syllabary.

In the present analysis, a similar problem is avoided by stating the following restriction: the two medials, /w/ and /i/, never co-occur with the zero initial. (The two semi-vowel initials are /w/ and /j/.). According to this co-occurrence restriction, the phoneme /w/ in the syllable /kwa/, for example, is analyzed as a medial whereas it is an initial in the syllable /wa/. The phoneme /i/ is a medial in the syllable /kia:k/, for instance, while /j/ in the syllable such as /ja:k/ is an initial. (The phoneme /i/ can only occur syllable-initially when it is the nuclear vowel [i:].) The reasons for choosing an asymmetrical pair of phonemes (/w/ and /i/) for the medials will be discussed

later.

Returning now to the discussion of glide initials, /w/ is simply the back, rounded semi-vowel [w], while /j/ is usually the front glide [j]. Before the front rounded vowel [ø], however, the glide assimilates to the rounding of the following segment, and thus becomes the front, rounded semi-vowel [ɥ]. The only occurrence of this regressive assimilation in the present data is in the syllable /jøj/, phonetically [ɥøɥ], with the nuclear vowel affecting both the preceding and the following segment.

With regard to a comparison of the initials in Zhong-shan and Cantonese, in general, there is very little difference between the two dialects. One observation discussed earlier was the difference in degree of palatalization present in the sibilants in the two dialects. Another concerns the nasal initials. Unlike Zhong-shan and some of the other Yue dialects (e.g., Si-yi dialects), Cantonese does not have homorganic stops accompanying the articulation of nasals. Another difference that is found in Cantonese is the presence of homorganic glides preceding the high vowels. Thus, the Zhong-shan syllable [u:n] would be [wu:n] in Cantonese. Likewise, Zhong-shan [i:] corresponds to Cantonese [ji:], and Zhong-shan [y:] is Cantonese [ɥy:]. Moreover, Cantonese is often treated as containing a phonological contrast between a plain versus a labialized velar initial (i.e., /k/ versus /kw/, and /k'/ versus /k'w/). The labialized counterparts are treated in Zhong-shan as a sequence of a velar initial plus a labial medial to correspond to the non-labial medial /i/. The absence of a medial /i/ in Cantonese, combined with a heavier functional load of the labialized initials in Cantonese make the option of treating /kw/ and

/k'w/ as initial segments a practical one for Cantonese.

1.2. Finals

A broad phonetic transcription of the finals in Zhong-shan, together with a phonemic analysis, is presented in Table 2 (a) on page 35. In the table, the phonemic renditions of the medials and syllable nuclei are placed in the left-most column, while the endings are recorded across the very top. Justification for the particular phonemic solution proposed here will be detailed later.

In the meantime, for the purpose of comparison, Chao and Egerod's treatment of the finals are re-interpreted in Tables 2 (b) and (c) in order to fit into the format of Table 2 (a). The finals in Ball's study are given in Table 2 (d). For cross-dialectal comparison with Cantonese, the finals in Cantonese, based on Hashimoto (p.90), are placed in Table 2 (e). To conform with the format established here for Zhong-shan, the labial feature of the labialized velar initials is treated as a medial in the table. Such a treatment will also prove useful in the later comparison of historical reflexes of various rhyme groups.

Egerod's data cause some difficulty since he did not provide a syllabary for Shi-qi and his corpus of data on the dialect is extremely limited. It will be assumed here that the finals found in Chao's study are also present in Egerod's. Moreover, some segments which Egerod has analyzed as "vowel clusters" have been redistributed in Table 2 (c): his /aa/ cluster is regarded as a simple "vowel nucleus", while the clusters /ia/, /øa/ and /ua/ as well as the sequences /wa/ and /waa/ (with /w/ originally part of the velar consonant cluster), are considered a combination of

"medial + vowel nucleus", based on historical and cross-dialectal data.

It is more difficult to know the precise phonetic value J.D. Ball intended in his transcription of Macao Zhong-shan. In some instances, there is an attempt to transcribe the words phonetically; for example, his vowels /i/ and /i̥/ correspond to [ɪ] and [i̥] respectively in modern (Shi-qi) Zhong-shan. However, /i̥/ is also used for a sound which is now the front glide [j]. In other situations, it appears to be simply an over-differentiation of forms. The initials /ts/ and /ch/, mentioned earlier, are transcribed as though they may be contrastive in the dialect. It is likely that such a contrast between a dental and an alveolar (or palatal) series--also found in a number of earlier works on Cantonese (including those by Ball)--is in fact an artificial creation which became quite widely accepted since it had functional value.

The over-differentiation is based on a distinction found in the national standard wherein the dental sibilants in Cantonese generally correspond to the dental/palatal series in Mandarin, and the Cantonese alveolars (or palatals, as the case may be) that of the retroflex series in the Mandarin dialect. It is primarily for the purpose of aiding Cantonese speakers in learning the national dialect that the two series had often been kept apart in Cantonese, even though such a distinction is founded on pedagogical rather than linguistic grounds (see, for example, Chao (1947:18-19); Yuan (1960:183), etc.). The fact that a series of dental versus palatal sibilants is phonemic in Shun-de, which is one of the Yue dialects but is by no means representative of the dialect

family as a whole, may have contributed to the original differentiation recorded in earlier writings on Cantonese.

Some of Ball's finals also appear to be overly differentiated; for example, Ball transcribes the finals of the three words ming 名 (200-2) 'name', jing 精 (200-3) 'quick-witted', and ling 嶺 (201-8) 'hill' in three different ways, as shown in (1) below. The finals of all three words are pronounced [ɛa:ŋ] in the colloquial reading in Zhong-shan. Historically, these finals not only belong to the same rhyme group (Geng 梗)⁹, but also to the same rhyme (Qing 清) and the same grade (III)¹⁰. There is no reason to expect that these finals recorded by Ball should have reflected a contrast in their pronunciation sufficient to warrant three different means of transcription.

(1)	<u>Ball</u>	<u>Chan</u>	<u>Gloss</u>
名	/mêng/	/mia:ng ⁵¹ / ([mɛa:ŋ ⁵¹])	'name'
精	/tsieng/	/tsia:ng ⁵⁵ / ([tsɛa:ŋ ⁵⁵])	'quick-witted'
嶺	/leng/	/lia:ng ¹³ / ([lɛa:ŋ ¹³])	'hill'

In the recording of Ball's finals in Table 2 (d), some of the diacritical marks that he used in his article are not very distinct in the microfiche of his article from which a photocopy was made for this study. As a result, it is possible that the writer may have recorded a circumflex (^) where it should have been an umlaut ("), a grave accent (`) instead of a circumflex, etc. An attempt is nevertheless made to be consistent. Finals /ing/ and /ik/ are found in Shi-qi speech only. Macao and the surrounding areas use /ang/ and /ak/ instead (phonetically [ɛŋ] and [ɛk] in modern speech).

Table 2 (a). Analysis of the Finals--Chan.

ending vowel nucleus	—	-j	-w	-m	-n	-ŋ	-p	-t	-k
i	iː		iːw	iːm	iːn	iŋ	iːp	iːt	ɪk
y	yː				yːn			yːt	
u	uː	uːj			uːn	uŋ		uːt	ʊk
ø	øː	øj			øːn			øːt	
o	ɔː	ɔːj	ow	ɔːm	ɔːn	ɔŋ	ɔːp	ɔːt	ɔk
a		əj	əw	əm	ən	əŋ	əp	ət	ək
aː	ɑː	ɑːj	ɑːw	ɑːm	ɑːn	ɑŋ	ɑːp	ɑːt	ɑk
<hr/>									
medial + vowel nucleus									
io						øɔŋ			øɔk
iaː	ɛaː		ɛaːw	ɛaːm		ɛaːŋ	ɛaːp	ɛaːt	ɛaːk
wi									wɪk
wa		wəj			wən	wəŋ		wət	wək
waː	waː	waːj			waːn	waːŋ		waːt	waːk
<hr/>									
syllabic nasal				m̩		ŋ̩			

Table 2 (b). Analysis of the Finals--Chao.

ending vowel nucleus	—	-i	-u	-m	-n	-ŋ	-p	-t	-k
i	iː		iːw	iːm	iːn	eŋ	iːp	iːt	ek
y	yː				yːn			yːt	
u	uː	uːj			uːn			uːt	
œ	œː					œːŋ			œːk
o		œy	ow		œn	oŋ		œt	ok
oː	ɔː	ɔːj		ɔːm	ɔːn	ɔːŋ	ɔːp	ɔːt	ɔːk
a		əj	aw	əm	en	eŋ	əp	ət	ək
aː	Aː	Aːj	Aːw	Aːm	Aːn	Aːŋ	Aːp	Aːt	Aːk
medial + vowel nucleus									
iaː	iaː					iaːŋ			iaːk
wa		wəj			wən	wəŋ		wət	
waː	WAː	WAːj			WAːn	WAːŋ		WAːt	WAːk
syllabic nasal				ɱ		ŋ			

Table 2 (c). Analysis of the Finals--Egerod.

ending vowel nucleus	—	-j	-w	-m	-n	-ŋ	-p	-t	-k
i	iɪ		iɪw	iɪm	iɪn	eŋ	iɪp	iɪt	ek
y	yɪ				yɪn			yɪt	
u	uɪ	uɪj			uɪn	oŋ		uɪt	ok
ø		œy			œn			œt	
a		áj	áw	ám	án	áŋ	áp	át	ák
aa	áɪ	áɪj	áɪw	áɪm	áɪn	áɪŋ	áɪp	áɪt	áɪk
<hr/>									
medial + vowel nucleus									
ia	ɛa					ɛaŋ			ɛak
øa	œo					œoŋ			œok
ua	ɔo				ɔon	ɔoŋ	ɔoɔp	ɔot	ɔok
wa		wáj			wán	wáŋ		wát	
waa	wáɪ	wáɪj			wáɪn	wáɪŋ		wáɪt	wáɪk
<hr/>									
syllabic nasal									
				m̩		ŋ̩			

Table 2 (d). Transcription of Finals in (Macao) Zhong-shan--Ball.

ending vowel nucleus		—	-í	-ú	-ü	-m	-n	-ng	-p	-t	-k
* [ɪ]	(i)							(ing)			(ik)
[iɪ]	í	í		íú		ím	ín		íp	ít	
[ʊ]	u							ung			uk
[yɪ]	ü	ü					ün			üt	
[uɪ]	ú	ú					ún			út	
[uɪ]	úu		úuí								
[ø, uɪ]	úö				úöü						
[œɪ, œɔ]	ö	ö			öü			öng			ök
[ɔɪ]	o	o					on	ong		ot	ok
[ɔɪ]	ô		ôí								
[ow]	ò	ò									
[ə]	a		aí	aú		am	an	ang	ap	at	ak
[Aɪ]	á	á	ái	áu		ám	án	áng	áp	át	ák
medial + vowel nucleus											
[ɛaɪ]	e	e						eng			ek
[ɛaɪ]	íe							íeng			íek
[ɛaɪ]	ye			yeú		yem			yep		
[ɛaɪ]	eê							eêng			
[ɛaɪ]	yá	(yá)				yám					
syllabic nasal		m									

* Modern Zhong-shan equivalents are recorded on the left-most column. Zhong-shan [ŋ] = Ball's /ung/.

Table 2 (e). Phonetic Transcription of the Finals in Cantonese.

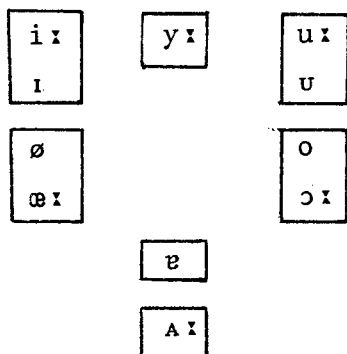
ending vowel nucleus	—	-ĩ	-ỹ	-ũ	-m	-n	-ŋ	-p	-t	-k
ɪ							ɪŋ			ɪk
i:	i:			i:ũ	i:m	i:n		i:p	i:t	
y:	y:					y:n			y:t	
ʊ							ʊŋ			ʊk
u:	u:	u:ĩ				u:n			u:t	
ɛ	ɛ:						ɛ:ŋ			ɛ:k
e		eĩ								
ø			øỹ			øn			ø:t	
œ	œ:						œ:ŋ			œ:k
o				oũ						
ɔ:	ɔ:	ɔ:ĩ				ɔ:n	ɔ:ŋ		ɔ:t	ɔ:k
ɐ		ɐĩ		ɐũ	ɐm	ɐn	ɐŋ	ɐp	ɐt	ɐk
ʌ:	ʌ:	ʌ:ĩ		ʌ:ũ	ʌ:m	ʌ:n	ʌ:ŋ	ʌ:p	ʌ:t	ʌ:k
medial+ vowel nucleus										
wɪ							wɪŋ			wɪk
wi:	wi:									
wɔ:	wɔ:						wɔ:ŋ			wɔ:k
wɐ		wɐĩ				wɐn	wɐŋ		wɐt	wɐk
wʌ:	wʌ:	wʌ:ĩ				wʌ:n	wʌ:ŋ		wʌ:t	wʌ:k
syllabic nasal					m̩		ŋ̩			

1.2.1. Nuclear Vowels

Of the finals, the nuclear vowels will be discussed first. In the present analysis of Zhong-shan, they form a three-tier, six-vowel system with a phonemic contrast of length in the low vowels only, as diagrammed in Chart 3 (a). It may be observed that, generally, tense and lax vowels--or long and short vowels--sharing the same vowel height (high, mid, low) serve as allophones of the same phoneme. The chart also includes an analysis of the combination of "medial + vowel". Comparative charts of Chao and Egerod's vowel system for Zhong-shan are shown in Charts 3 (b) and (c) respectively. As in Table 2, part of their phonemic system is re-interpreted in terms of "medial + vowel" for which Chart 3 (a) serves as the model.

Chart 3 (a). Analysis of the Vowels--Chan.

Phonetic Representation:



Phonemic System:

i	y	u
ø		o
a/aː		

Medial + Vowel:

[ɛaː]	=	/ia/
[øɔ]	=	/io/
[wɛ]	=	/wa/
[wAː]	=	/waː/

Chart 3 (b). Analysis of the Vowels--Chao.

Phonetic Representation:

i:	y:	u:
e	ə	o
æ:		ɔ:
	ɐ	
	ʌ:	

Phonemic System:

i	y	u
æ		o/o:
	a/a:	

Medial + Vowel:

[ia:]	=	/ia/
[wə]	=	/ua/
[wa:]	=	/ua:/

Chart 3 (c). Analysis of the Vowels--Egerod.

Phonetic Representation:

i:	y:	u:
e		o
æ		
	a	

Phonemic System:

i	y	u
	ø	
	a/aa	

Medial + Vowel:

[ɛa]	=	/ia/
[œv]	=	/øa/
[ɔɔ]/[ɔ:]	=	/ua/
[wà]	=	/wa/
[wà:]	=	/waa/

There are three phonemic high vowels in Zhong-shan: /i/, /y/ and /u/. The phoneme /i/ is pronounced [i:] in syllable-final position, and when it is followed by the labial glide /w/, the labial or dental nasal (i.e., /m/ or /n/), or the corresponding stops (/p/ and /t/). Chao describes the vowel as being almost the cardinal [i]. Before the stop endings /p/ and /t/, there is some tendency towards pronouncing the vowel with a schwa off-glide thus: [i^əp] and [i^ət], first noted by Chao (p.53). Sometimes it is a case of the laxing of [i:], resulting in the pronunciation of the word jie 結 'knot', for instance, as [ki¹t²] (phonemically /kit²/). At other times, the off-glide is further lowered, producing the segment [i^ɛ], as observed in the pronunciation of the word jie 傑 'outstanding' as [ki^ɛt²]. The phonetic description above is based on Chen's pronunciation. In general, however, the vowel is simply a long [i:]. Egerod (p.14) records the long vowel [i:] without elaboration.

Cross-dialectally, the situation is quite different: what is merely a low-level schwa off-glide found in some /ip/ and /it/ finals in Zhong-shan is a full vowel in other dialects such as Mandarin, Southern Min and Hakka. The character jie 結 'knot', for example, is pronounced [tɕie³⁵] in Mandarin, [kiat³²] in Amoy (Southern Min), and [kiɛt²¹] in Mei-xian (Hakka) (Zi-hui, p.34).¹¹ This final is reconstructed by Karlgren as Ancient Chinese (or "Anc." for short) *iät in Division III, and *iet in Division IV; and by Pulleyblank as Late Middle Chinese (LMC) *iat for both grades, or divisions. Cross-dialectal data for what are the /im/ and /in/ finals in Zhong-shan parallel the above observations, reflected in the historical reconstructions (e.g., LMC *iam and

*ian). Similar cross-dialectal and historical observations as above can be made of finals which correspond to Zhong-shan /yt/ and /ut/ finals in which a schwa off-glide is only heard sporadically. Usually, the two finals /yt/ and /ut/ are pronounced [y:t] and [u:t], without a perceptible gliding effect. Again, it was Chao (p.53) who first made the observation of a schwa off-glide, while Egerod simply recorded a long [y:] and a long [u:], with no discussion of allophonic variations.

The phoneme /i/ is pronounced [ɪ] before velars. (The preferred IPA symbol for [ɪ] is [ɪ̯].) Chao also analyzes this vowel as /i/, which he describes as being quite open before /ŋ/ and /k/, almost becoming an [e], which is the broad phonetic form he uses for the vowel. Egerod also transcribes /i/ as [e] in the same environment. This vowel is identical to the one found in Cantonese, usually transcribed as either [e] or [ɪ].

A further point must also be added concerning the special complementary distribution found in the syllable /ing/. In all the tones except the rising one, the syllable has a smooth onset, and begins simply with the vowel [ɪ], as in the word ying 英 'distinguished', which is phonemically /ing⁵⁵/ and is pronounced [ɪŋ⁵⁵]. In contrast, the syllable in the rising tone begins with the front on-glide [j], as in the words ying 影 'shadow' and ying 映 'to reflect', both of which are /ing¹³/ phonemically, but are in fact pronounced [jɪŋ¹³], with an initial palatal on-glide. The reason for this phenomenon is not clear to the writer. Pulleyblank (personal communication) speculates that it may be the result of the laxness of [ɪ] combined with some characteristic of the rising tone, since all other finals with /i/ in the rising

tone have the tense, long [i:], and are produced with a smooth onset before the nuclear vowel; for example, yi 椅 'chair' is /i¹³/, phonetically [i:¹³], and yan 掩 'to conceal' is /im¹³/, phonetically [i:m¹³].

The phoneme /y/ is pronounced somewhat more open than cardinal [y] in Chen's speech, which agrees with Chao's observation of the vowel. In Zhong-shan this vowel is always long, occurring as a final either alone or followed by a dental. However, recall that the final /yt/ is sometimes pronounced [y^ət], with an off-glide following the vowel.

The phoneme /u/ is pronounced [u:] in syllable-final position and when it occurs before /j/ and the dentals, /n/ and /t/. The vowel is actually slightly more open than cardinal [u], a point also made by Chao (p.53). As mentioned earlier, the final /ut/ is sometimes pronounced [u^ət]. In the environment before the velar endings, /ng/ and /k/, the phoneme /u/ is somewhat more open than [u] (= [ʊ] or the preferred IPA symbol [ɯ]), which is identical to its Cantonese counterpart, variously transcribed as [o], [ʊ] and [u] in Cantonese.

In both Egerod's and the present study of Zhong-shan, what is transcribed here as the high, lax vowel [u] is analyzed as the allophone of /u/, in complementary distribution with the corresponding tense, long vowel [u:]. Chao, however, treats our [u] as /o/, moreover regarding the analysis of this vowel as /u/ in Cantonese being due to the influence of English and German, wherein the letter "u" in the English word "put", for example, is, according to Chao, extremely open and quite close to cardinal [o] (p.53, fn.9). Whether or not Chao's surmise of influence from

English and German is true, the analysis of the high, lax, back rounded vowel [ʊ] as /u/ in the finals provides congruity to the pattern established earlier in the analysis of the high, lax, front unrounded vowel [ɪ] as /i/ in the finals [ɪŋ] and [ɪk] (see Chart 3 (a)). Furthermore, the finals [ʊŋ] and [ʊk] correspond cross-dialectally and historically to [ɪŋ] and [ɪk], and should be similarly analyzed.

The symmetry between treating lax [ɪ] as an allophone of /i/ and lax [ʊ] as an allophone of /u/ can be briefly elaborated as follows. Historically, the Late Middle Chinese finals *-im, *-ip, *-in, *-it, *-ij (< *-iaj) and *-iw gave the lax finals -əm, -əp, -ən, -ət, -əj, and -əw, now [ɐm], [ɐp] and so forth in modern Zhong-shan and Cantonese. Such a development did not occur before *-ŋ (and the corresponding Ru-sheng ending, *-k). LMC final *-iŋ resulted in -eŋ (now [ɪŋ] (or [eŋ] in alternate transcriptions) in the two Yue dialects). As a comparison, LMC final *-in gave Mandarin -in.

In the case of the Late Middle Chinese final *-oŋ (*-ok in Ru-sheng), it remains -oŋ in Zhong-shan and Cantonese, now phonetically [ʊŋ] (or [oŋ] in alternate transcriptions). In Mandarin, LMC final *-oŋ yields -uŋ. Thus, the symmetry of -eŋ and -oŋ (and -ek and -ok) justifies parallel treatment of [ɪ] and [ʊ] on historical grounds. The same -eŋ ~ -oŋ parallellism is observed in literary Min and appears to be a general southern development. In the north, the parallellism between the LMC finals *-iŋ and *-oŋ is observed in the Mandarin reflexes of -in and -un corresponding to the two historical finals. Thus, the tense and lax distinction in conjunction with historical and cross-

dialectal arguments supports a phonemic analysis which recognizes the parallellism or symmetry that exists between the vowels [ɪ] and [ʊ], and treats them accordingly.¹²

Turning now to the mid vowels, phonemically there are two mid vowels: /ø/ and /o/. Regarding the first phoneme, /ø/ is pronounced [œ:] as a syllable-final segment. There are very few words in Zhong-shan and Cantonese with the final [œ:], and these may be vestiges of an earlier layer of the language as suggested by Pulleyblank (personal communication). Chao (p.53) chooses phonemic symbol /æ/ for [œ:] when it occurs in syllable-final position. Before the endings /ng/ and /k/, Chao notes that /æ/ tends to break into a [øɔ] cluster, which is treated phonemically as /io/ in the present analysis. (We will return to this point later.) Egerod posits the vowel cluster /øa/, which he transcribes phonetically as [œɔ], occurring with an initial consonant only, or before /q/ (= /ng/) and /k/.

In the present phonemic analysis, /ø/ is recorded as [œ:] syllable-finally, and elsewhere (i.e., before the endings /n/, /t/ and /j/) as a rounded vowel which is slightly more open and centralized than [ø]. The vowel [ø] is recorded as the broad phonetic form in Table 2 (a). Chao (p.52) describes the same vowel as a rounded, mid central [ə], which is the same as its Cantonese counterpart. Chao analyzes his [ə] as /o/ phonemically, adding an umlaut above the phoneme (i.e., /ö/) in order to facilitate recognition and recall of its actual phonetic value. Moreover, Chao (p.52,fn.8) makes the comment that this vowel is transcribed by Daniel Jones as [œ], which is the same phonetic form suggested by Kinkade for the vowel in question. Egerod (p.14) also

hears the vowel [ə] in his Zhong-shan data, analyzing it phonemically as /ø/. On a preceding page however, Egerod (p.12), in describing the phonological system of standard Cantonese, records the phoneme /ø/ which he states is [ø] before /n/, /t/ and /j/. Recent studies on Cantonese (e.g., Kao, 1971; Hashimoto, 1972a; Cheung, 1972) have vacillated between selecting the form [ə] or [ø] for transcribing the vowel.

The phoneme /o/ is pronounced [ɔ:] except in the environment before the labial glide /w/ where it is pronounced somewhat lower than cardinal [o]. Whereas in the present analysis length is non-contrastive except in the low vowels, Chao treats short [o] as /o/ phonemically, and long [ɔ:] as /o:/, thereby implicitly considering length phonemic in Zhong-shan. He is not consistent, however, since he also subsumes his mid central vowel [ə] under the phoneme /o/, and provides no corresponding long phoneme to his /æ/, which only has the long [æ:] as its basic phonetic shape.

It is observed that the vowel [ɔ:] sometimes splits into [ɔɑ] (in which the initial segment of the bivocalic nucleus is slightly lower than cardinal [ɔ] and the second somewhat more centralized than cardinal [ɑ]). Chao (p.53) describes the breaking of the vowel [ɔ:] (his phoneme /o:/) as [ɔɔ], particularly notable after velars and laryngeals. Egerod (p.14) sets up a vowel cluster /ua/, with [ɔɔ]¹³ as the principal phonetic form, presumably occurring after velars, laryngeals and /f/, since its allophone [ɔ:], which is enclosed in round brackets, occurs most commonly after dentals, sibilants and labials with the exception of /f/. Concerning the allophone [ɔ:], Egerod states that if it is considered a phoneme, it should be written /o/. This would

parallel his treatment of the vowel [ɔ:] as /o/ on the preceding page for Standard Cantonese (p.12).

It should be observed that in Cantonese there is a contrast between [k] and [kw] (and between the aspirated series, [k'] and [k'w]) before the vowel [ɔ:], namely affecting the finals [ɔ:], [ɔ:ŋ] and [ɔ:k]. Such a contrast is not found in Zhong-shan. Consider, for example, the Cantonese pronunciation of the word ge 個 '(classifier)', which is [kɔ:⁴⁴]¹⁴, and that of guo 過 'to cross', which is [kwɔ:⁴⁴]. The pronunciation of these two words is merged in Zhong-shan such that both ge and guo are pronounced [kɔ:²²]. The contrast found in Cantonese between the two sample words is reflected historically in the distinction between Kai-kou 開口 ('open mouth', associated with the absence of lip-rounding) and He-kou 合口 ('closed mouth', associated with the presence of lip-rounding), reconstructed by Pulleyblank as LMC *ka and *kwa respectively. As noted above, Chao (p.52) describes the breaking of the vowel [ɔ:] in Zhong-shan into the sequence [ɔɔ] after velars and laryngeals. While one can say that Zhong-shan does not have a Kai-He distinction, Chao suggests that one might equally take the vowel in Zhong-shan as originally between Kai and He. Egerod's treatment of [ɔ:], and even more so that of his cluster [ɔɔ] as /ua/ rather than /o/, as in our analysis, or /o:/, as in Chao's, is obviously an attempt, however implicit, to reflect the He-kou category.

There are two low vowels in the data, contrasting in length and tenseness. Short /a/ is phonetically a very lax vowel, described by Chao (p.52) as one raised towards [ɐ], except before /w/, where it is a low, central vowel for which he adopts the symbol

[A]. In our broad phonetic transcription in Table 2 (a), the vowel [ɐ] is used throughout the set of /a/ finals. Kinkade perceives short /a/ in the data as simply the low, back vowel [a], although he observes that the vowel occasionally shifts to midway between [ɐ] and [æ]. Egerod simply records a low central [ä] without any comment concerning allophonic variations. This vowel is identical to the corresponding short, low vowel in Cantonese.

Long /a:/ is a low, central vowel, transcribed here using the symbol [A:]. Chao's phoneme /a:/ is also [A:] in Zhong-shan. The same vowel is also found in Cantonese. Hashimoto, for instance, transcribes the long, low vowel in Cantonese as [A:]. Egerod records his long, low central vowel as [ä:], which he treats phonemically as the vowel cluster /aa/. Chao (p.52) notes that before stop endings, the difference in vowel length between the two low vowels /a/ and /a:/ is not sharp; for the most part, it is the vowel quality which differentiates them. Egerod (p.14) makes the observation that in his syllable /jaa/, the phonetic form [ja:] and [jæ:] occur in free variation. This is not noticed in the speech of the informants used in the present study wherein only the low, central [A:] is found.

Note in Table 2 (a) that all the vowels in syllable-final position are long in Zhong-shan. While there is a phonemic contrast between /a/ and /a:/ in non-final position, such a contrast does not exist in syllable-final position. Thus, to mark length in the latter case would be redundant, and is therefore omitted in such an environment (e.g., ma 媽 'mother' is /ma⁵⁵/, phonetically [ma:⁵⁵]).

In the discussion of nuclear vowels in this section, no

account is taken of the influence which the medials may have on them. The following section on medials will include allophonic variations of the nuclear vowels resulting from assimilation of certain features of the medials, and conversely, of the effect of the nuclear vowels on the medials.

1.2.2. Medials

Two medials are proposed for the Zhong-shan data, namely /i/ and /w/. Although it might have been more symmetrical to posit either a pair of medial vowels or a pair of medial glides, the choice of the vowel /i/ and the semi-vowel /w/ is based on synchronic data, supported by cross-dialectal and historical evidence. Synchronically, for example, vocalic medial /i/ is a vowel in Zhong-shan, phonetically [ɛ] before /a/, and [ø] before /o/. The glide /w/ is in fact the semi-vowel [w] in Zhong-shan. Thus, phonetically, the two medials in Zhong-shan are not symmetrical with respect to vowel quality.

Diachronically, there are also good reasons for distinguishing the vocalic nature of the two Zhong-shan medials. Medial /i/ in Zhong-shan is derived from the LMC medial *i, while medial /w/ has its source in medial *w. Thus, historically, the two medials also differ in vocalic quality.

Pulleyblank (1970-71), for example, analyzes the four grades in historical Chinese phonology in terms of differences found in the medials, since Chinese rhyming practices do not take either the Kai-He distinctions or the various grades into consideration. Pulleyblank reconstructs both medial vowels and medial glides. Evidence for such a distinction is found in Cantonese

and Zhong-shan. The word guan 官 (134-1) 'government official', for example, is LMC *kuan, Zhong-shan [ku:n⁵⁵] and Cantonese [ku:n⁵³], wherein the medial in Grade I of the Shan 山 rhyme group (He-kou series) is reconstructed as the vowel *u. In modern Zhong-shan and Cantonese, the nuclear vowel *a was lost, resulting in medial *u becoming the new nuclear vowel which was lengthened to compensate for the lost segment.

In contrast, the word guan 關 (138-7) 'to shut', which is found in Grade II of the same rhyme group and reconstructed as LMC *kwa:n, is [kwa:n⁵⁵] in Zhong-shan and [kwa:n⁵³] in Cantonese. This time the reconstructed medial is a glide, *w, which is preserved as a glide medial in both present day Zhong-shan and Cantonese. In the modern reflexes of many dialects of Chinese, the two reconstructed forms, *kuan and *kwa:n, have merged (e.g., both words 'government official' and 'to shut' are pronounced guan in Mandarin). In the Yue dialects such as Zhong-shan and Cantonese, however, one can see that the distinction between the two forms has been maintained. On the basis of Zhong-shan and Cantonese, it is evident that the reconstruction of a medial vowel versus a medial glide is important in historical phonology. Karlgren also distinguishes a "vocalic u" as opposed to a "consonantal w" in the two words discussed above, reconstructing guan 官 as Anc. *kuân and guan 關 as Anc. *kwan. (Note that Karlgren also reconstructs a qualitatively different nuclear vowel.) In the Zhong-shan data, it is therefore reasonable to posit a medial /w/ which arises from an historical medial *w.¹⁵

Medial /i/ in Zhong-shan, in contrast, has its source in an historical *i. On the basis of Pulleyblank's reconstructions,

while medial *j is lost in Zhong-shan, medial *i is still present in the dialect. It is maintained as the medial vowel /i/ in the colloquial layer of Grades III and IV words in the Geng 梗 rhyme group. In the corresponding literary layer, medial *i had become the nuclear vowel /i/ in Zhong-shan. Consider the word jing 鏡 (199-6) 'mirror', which occurs in Grade III, Geng 梗 rhyme group. Jing 鏡 is reconstructed by Pulleyblank as LMC *kiajŋ (= Anc. *kiǎŋ). It is /kia:ng²²/ in the colloquial layer of Zhong-shan and /king²²/ in the literary layer.¹⁶

Now, contrast jing 鏡 with geng 更 (192-8) 'watches of the night', which is /ka:ng⁵⁵/ in the colloquial reading, and /kang⁵⁵/ in the literary layer. No medial is present in the Zhong-shan forms for geng 更, which is a Grade II word. Pulleyblank reconstructs it with a medial *j: LMC *kja:jŋ (= Anc. *kŋŋ). Thus, in terms of Pulleyblank's reconstructions, Late Middle Chinese medial *j is lost in Zhong-shan, as demonstrated by the word geng 更. In contrast, medial *i is preserved in the dialect either as a medial vowel or nuclear vowel, as shown in jing 鏡. The preservation of the LMC glide medial *w as a medial /w/ in Zhong-shan, and the parallel preservation of a vocalic medial in Zhong-shan corresponding to the LMC medial *i lends historical support for not positing the same vocalic quality to the pair of medials in Zhong-shan.

Cross-dialectally, medial *i is also preserved as a medial segment in some dialects. Regarding the word qing 輕 (201-1) 'light (e.g., in weight)', for example, it is pronounced [tɕ'ian⁴⁴] in Wen-zhou (a Wu dialect). In Nan-chang (a Gan dialect), the same word has a colloquial reading [tɕ'ian⁴²] and a literary read-

ing [tɕ'ɪn⁴²]. In Mei-xian (a Hakka dialect), qing 輕 has a colloquial form [kian⁴⁴] and a literary form [kin⁴⁴]. (Zi-hui, p.257.)

The medial /i/ in the finals /iong/ and /iok/ in Zhong-shan is also derived from medial *i in Late Middle Chinese. The two finals are reconstructed by Pulleyblank as *ian and *iak respectively. (= Anc. *i̯ang and *i̯ak). The medial is also preserved in most Chinese dialects. The word liang 亮 (174-18) 'bright' (cf. Zi-hui, p.232), for example, has the syllable [li̯an] in (Peking) Mandarin and a number of other Mandarin dialects, Su-zhou (Wu), Chao-zhou (Southern Min), and the literary layer of Amoy (Southern Min). The syllable [li̯oŋ] is found in Nan-chang (Gan), Mei-xian, and the colloquial layer of Amoy. Zhong-shan pronounces the word liang 亮 as [lɔ̃ŋ²²], which is phonemicized as /liong²²/. Pulleyblank (1977) proposes that in Cantonese certain LMC finals (viz., Grade I finals in the Dang 宕 rhyme group), finals *-an and *-ak rounded to -ɔ̃ŋ and -ɔ̃k, just as *-a rounded to -ɔ̃ (in the Guo 果 rhyme group). He further postulates that in Grades III and IV (of the Dang 宕 rhyme group), *-ian and *-iak also rounded to -iɔ̃ŋ and -iɔ̃k as an intermediary stage, after which the palatal medial became fused with the following vowel by a process of umlaut, resulting in the finals -œŋ and -œk.

Zhong-shan data would suggest the following development: the vowel *a in the LMC finals *-a, *-an and *-ak rounded to -ɔ̃. The same process affected the *-a in the finals *-ian and *-iak. In the latter case with medial *i, the medial underwent a lowering and rounding to -œ as a result of the following back, rounded

mid vowel -ɔ. The result is the present Zhong-shan finals, [ɔɔŋ] and [ɔɔk].

Cantonese, on the other hand, may be a case of the lowering and rounding of medial *i to -ə. The nuclear vowel is subsequently lost, causing compensatory lengthening of -ə to -əː, yielding present day Cantonese finals [əːŋ] and [əːk]. Liang 亮, for example, is pronounced [lɛːŋ³³] in Cantonese. This lowering of medial *i in the Dang 宕 rhyme group in Cantonese parallels the lowering of medial *i to -ɛ in the Geng 梗 rhyme group. What is proposed here is that in Cantonese, medial *i lowered to -ɛ in the finals *-iajŋ and *-iajk. In this case, rounding of the medial does not occur since there is no condition for such regressive assimilation. However, as in the previous case, the nuclear vowel becomes lost, and -ɛ becomes the nuclear vowel. It is lengthened in compensation for the loss of the original nuclear vowel *-a. The finals that emerge in Cantonese are -ɛːŋ and -ɛːk. Thus, the colloquial reading of jing 鏡 is [kɛːŋ⁴⁴] in Cantonese. The nuclear vowel *-a is not lost in Zhong-shan; jing 鏡 is pronounced [kɛaːŋ²²] (phonemically /kiaːŋ²²/, as noted earlier).

Turning now to a synchronic analysis of the interaction between the medials and other segments in the syllable, medial /w/ will be discussed first. In the present data, the only two initials that occur with medial /w/ are /k/ and /k'/. Egerod and Chao, however, also include the velar nasal as another initial which can precede the labial medial. The cluster /ngw/ is merely mentioned by Egerod. In Chao's article it occurs only in the word wan 頑 (137-14) 'obstinate', phonemicized by as /ŋguaːn⁵¹/.

labial segment in Shi-qi depended on the individual speaker, although Macao shows a complete loss of /w/ after velars. Additional syllables containing a labial velar cluster recorded by Ball for Shi-qi is listed in (2) below. Ball states that these words are spoken by some people in Shi-qi, and attributes that to the imitation of Cantonese speakers. The asterisk (*) marks the column which Ball regards to be the pronunciation of some Shi-qi speakers. Regarding the character 瘡, it is used in Cantonese to mean 'to be tired', and is a word which is not used colloquially in Mandarin. Zhong-shan has its own colloquial word /na:j²²/, with basically the same meaning of 'to be tired'. (In the list below, "Cant." is "Cantonese", and "Zh." is "Zhong-shan".)

(2)	Ball's		Sample Word	Modern Cant.	Modern Zh.	Gloss
	<u>Cant.*</u>	<u>Macao</u>				
1.	kwe	ke	塊	?	?	?
2.	kwing	kang	肩	[kwɪŋ ³⁵]	?	'to bolt'
3.	kwit	kit	啗	?	?	?
4.	kwo	ko	戈	[wɔɪ ⁵³]	[kɔɪ ⁵⁵]	'spear'
5.	kwok	kok	國	[kwɔɪk ⁴]	[kɔɪk ²]	'nation'
6.	kwong	kong	光	[kwɔɪŋ ⁵³]	[kɔɪŋ ⁵⁵]	'bright'
7.	k'wong	k'ong	狂	[k'ɔɪŋ ²¹]	[k'ɔɪŋ ⁵¹]	'crazy'
8.	kwöü	köü	瘡	[kuɪj ³³]	[kuɪj ²²]	'to be tired'
9.	k'wöü	k'öü	僧	[k'uɪj ³⁵]	[k'uɪj ²²]	'middleman'
10.	kwu	ku	姑	[kuɪ ⁵³]	[kuɪ ⁵⁵]	'father's sister'
11.	k'wu	k'u	軛	[kuɪ ⁵³]	?	'wheel'
12.	kwun	kun	官	[kuɪn ⁵³]	[kuɪn ⁵⁵]	'government official'

Wan 頑 occurs in the He-kou series of the Shan 山 rhyme group. Apparently, it is the only common word from that set where the syllable /ngwa:n/, or the potential syllable /ngwa:k/ can occur. In consulting the principal informants as well as another Zhong-shan speaker concerning the word wan 頑, it was found that none of them preserve a labial segment in the word: they simply gave /nga:n⁵¹/.

For the present data at least, it will be concluded that the only initials which can occur with medial /w/ are /k/ and /k'/. The sequence /ngw/ is assumed to have merged with the plain/velar nasal. In other words, the Kai-He distinction has been lost after the velar nasal in the Shan rhyme group. The word wan 頑 is in fact the only word present in the dialect survey list which can be reconstructed as LMC * η wa:n. In contrast, there are a few common words with the syllable /nga:n/ from LMC * η ja:n and a small number of indigenous (characterless) words in Zhong-shan also containing the syllable /nga:n/. It is therefore not surprising to find that the word wan has lost its labial segment, and has merged with the more common syllable without labialization. In Cantonese (as in Mandarin), the word wan has lost its velar nasal initial, but has maintained the labial segment, and is pronounced [wa:n²¹].

Concerning the clusters /kw/ and /k'w/, these combine only with the nuclear vowels /i/ (found solely in the rhyme /ik/), /a/ and /a:/. Gaps in the final such as the non-occurrence of /*wa:m, *wam, *wap/ and so forth are the result of labial dissimilation, which is a phenomenon found in many dialects of Chinese.

According to Ball's data, the loss or preservation of the

The list in (2) prompts a low-level phonetic observation that might otherwise have been left unstated. In modern (Shi-qi) Zhong-shan and Cantonese, some lip-rounding occurs in the pronunciation of initials before the rounded vowel [u:].¹⁷ It is possible that this feature is absent in Macao, as reflected in Ball's recording of numbers (10) to (12) in the list above. A similar lack of lip-rounding on the initials may be interpreted from Ball's transcription of the Macao forms in (8) and (9).

Numbers (4) to (7) show a presence of labialization which is not evident in the Zhong-shan speech recorded by Chao, Egerod and the writer, although it is still preserved in Cantonese. That is, there is a phonemic contrast in Cantonese between /k/ and /kw/ and between /k'/ and /k'w/ before the vowel [ɔ:], as we have mentioned earlier, exemplified by the words ge 個 and guo 過.

Egerod (p.3) makes the observation that although the dialect spoken in Macao has now shifted to the standard Yue dialect, Cantonese, there are still a few vestiges of the local dialect, among which is the fusion of /k/ and /kw/. In studying the Sino-Portuguese glossary of circa 1750, nevertheless, it can be strongly substantiated that although the medial /w/ was lost after /k/ when followed by the mid back vowel which is now [ɔ:], the distinction between the presence or absence of a labial after the velar stop was still maintained before low vowels at the time that the three hundred and ninety-five Portuguese entries were transcribed into Chinese. While the characters ge 哥, ge 歌 and ge 個 (Cantonese [kɔ:]), were used most frequently to represent Portuguese /ko/, the characters guo 果 and guo 過 (Cantonese [kwɔ:]) were nonetheless used for the same purpose, thereby

suggesting a loss of distinction between /k/ and /kw/, at least in that particular environment. As in the (Shi-qi) Zhong-shan dialect today, however, the Sino-Portuguese data show that this distinction was preserved before low vowels at that time, reflecting either the speech of the transcriber only, or the eighteenth century Macao dialect in general. In the glossary, the characters jia 架, jia 假 and jia 家 were consistently used to transcribe Portuguese words which do not contain labial segments. All three characters belong to the Kai-kou series of the Jia 假 rhyme group and are pronounced [kA:] in both present day Cantonese and (Shi-qi) Zhong-shan. It is therefore significant that gua 瓜 ([kWA:] in both Cantonese and Shi-qi Zhong-shan), which is the only He-kou word from the Jia rhyme group, should be used to transcribe the word quatro 'four' (entry number 328 in the glossary). In turn, quatro is the only Portuguese word reconstructed in the glossary that contains a velar initial followed by a labial segment. Assuming that the transcriber's speech reflects the norm at the time, one can quite safely conclude from the observation above that, with respect to low vowels, a Kai-He distinction was still preserved in the eighteenth century Macao data.

Turning now to a discussion of medial /i/, the medial combines with one of two possible nuclear vowels: /a:/ or /o/. When it combines with /a:/, medial /i/ may follow labials (except /f/ and /w/), dentals, sibilants, velar stops and laryngeal /h/. Re-interpreting Chao's data from this perspective, his medial /i/ is phonetically somewhat more open than the vowel [i] (cf. fn.16 of the present chapter). Egerod and the writer transcribe this sound as [ɛ]. At the same time, medial /i/ is sometimes heard as

a palatal [j]. Thus, the word jing 頸 'neck', for example, may be pronounced [kɛa:ŋ¹³] or [kja:ŋ¹³] in free variation. It is only in the environment after laryngeal /h/ that palatalization of the medial does not occur. As suggested by Pulleyblank upon observing this phenomenon in the data, it may be a case of the dialect attempting to produce a palatal medial to correspond to the labial one, thereby creating greater symmetry in the system. The fact that medial /i/ is never pronounced as a palatal glide when it follows /h/ is probably due to the efforts of the speakers not to palatalize /h/, since the result of palatalizing /h/ would be perceived by the native ear as being quite aberrant from the original laryngeal initial.

In general, Yang tends to produce more palatal [j] medials than Chen. At the same time, it is also Yang who pronounces the medial /i/ vowel higher than Chen. The more open pronunciation of the vowel by Chen may be an influence from Cantonese in which the Zhong-shan sequence [ɛa:], originating from the sequence "medial /i/ + nuclear vowel /a:/", corresponds to the Cantonese long (nuclear) vowel [ɛ:].

In the environment before /o/, medial /i/ is lowered and rounded as a result of regressive assimilation. In this environment, medial /i/ is pronounced [ø]. The sequence /io/ only occurs in the finals /iong/ and /iok/, phonetically [øŋ] and [øk] respectively. These two finals are treated by Chao as /œng/ and /œk/. Note that Egerod also treats the final [ɛ:] as the vowel cluster /øa/. The writer analyzes this final as phonemic /ø/ rather than the cluster /io/. Chao treats it phonemically as /œ/.

Distributionally, the finals /iong/ and /iok/ occur with

dentals, sibilants and velar stops. Initial /h/ combines only with the /iong/ final. Present in both Chao and Egerod's data are the syllables [jɔ̃ɔŋ] and [jɔ̃ɔk], which correspond to [jɔ̃ɔŋ] and [jɔ̃ɔk] in the present data. Ball (p.531) records the syllable /yöng/, exemplified by the word yang 洋 (193-5) 'ocean', for both Cantonese and Macao, but records /yong/ for Shi-qi (fn.120). Presumably, the corresponding stop ending reflects the same pattern, although it was not made explicit in Ball. The present Zhong-shan data and modern Cantonese concur with Ball's observation: Zhong-shan has the syllables [jɔ̃ɔŋ] and [jɔ̃ɔk] while Cantonese has [yœ̃ɔŋ] and [yœ̃ɔk].

Based on Ball's observations and the writer's data, one could suggest that syllables [jɔ̃ɔŋ] and [jɔ̃ɔk] are the indigenous forms in the Shi-qi speech, and that the syllables [jɔ̃ɔŋ] and [jɔ̃ɔk] recorded by Chao and Egerod are due to Cantonese influence. The writer, however, would prefer to suggest that the difference observed between the present data and those of Chao and Egerod is strictly a case of a sub-dialectal variation. First of all, Chao (p.51) explicitly describes the initial segment of his syllable /iæŋ/ phonetically as the unrounded front glide [j]. Thus Chao's syllable appears to be mid-way between the syllable found in the present Zhong-shan data and that in Cantonese. Phonetically, Chao's syllable is [jɔ̃ɔŋ], whereas the Cantonese syllable is [yœ̃ɔŋ].

Secondly, except for this syllable [jɔ̃ɔŋ], and the syllable with the corresponding stop ending, the phonological system recorded in Chao and Egerod is identical to the present Zhong-shan one. There is no reason to expect such a unique borrowing.

Third and lastly, there are a few colloquial terms in Chao's article that show slight phonological variations between his informant's speech and the speech of the writer's informants. In the deictic word 'this', for example, Chao records the variant forms of /ko²²/ and /ko⁵⁵/ whereas the present data show /ku⁵⁵/. (On one occasion, nonetheless, the writer heard Chen's mother use /ko⁵⁵/ for 'this'.) In the reading of isolated words, Chao's informant also pronounces some words with an initial or final that differs from the pronunciation of the writer's informants. The word ku 苦 (16-24) 'bitter', for instance, is recorded by Chao as /k'u¹³/ and by the writer as /hu¹³/. In terms of the overall pattern of correspondences to the historical phonological categories, however, the data from Chao, Egerod and the writer are in agreement.

In summary, there is evidence of low-level, sub-dialectal variations that, in general, do not affect either the Zhong-shan phonological system on the whole, or the dialect's historical correspondences. One can see no reason to suppose that there has been an isolated case of substituting a Cantonese syllable for a Zhong-shan one. The conclusion, therefore, is that among some Zhong-shan speakers, the syllable [jɔŋ] is used, whereas others use [jɔ:ŋ]. One would suspect, given Chao's observation of an initial [j] that the following segment is probably slightly less rounded than cardinal [ɔ].

Cross-dialectally, the syllable [jɔŋ] is also found in other dialects. The word yang 陽 (173-8) 'bright' (Zi-hui, p. 236) has the syllable [jɔŋ] (or [iɔŋ]) in Nan-chang (Gan), Mei-xian (Hakka), and Amoy (S. Min). The Mandarin dialects generally

pronounce the word as [ja:ŋ] (transcribed in the Zi-hui as [iaŋ]). Of the dialects represented in the Zi-hui, only Cantonese has the syllable [ɤə:ŋ] ([jəŋ] in the Zi-hui). Fu-zhou (N. Min) has the syllable [yɔŋ] for yang 陽. Both yang's 洋 and 陽 are reconstructed as LMC *jiaŋ.

1.2.3. Endings

The inventory of endings present in Zhong-shan is identical to that found in Cantonese. There are three nasals: /m/, /n/ and /ŋ/; three corresponding stops: /p/, /t/, /k/; and two glides: /w/ and /j/.

The stops are unreleased, and often preglottalized in Zhong-shan. The ending /k/ is moreover often simply reduced to a glottal stop. Syllables with stop endings usually occur in level tones only. Exceptions result from changed tones, to be elaborated upon later.

Chao notes that after long nuclear vowels (i.e., in the endings [A:w] and [i:w]), /w/ is more open than after short nuclear vowels (as in the endings [ɛw] and [ow]).

The glide /j/ is phonetically [j] with one exception: following the front rounded vowel /ø/, /j/ is phonetically the rounded semi-vowel [ɥ]. Thus, the word rui 蕊 (61-15) 'stamen' /jøj¹³/, for example, is phonetically [ɥøɥ¹³], in which both the preceding and the following semi-vowel segments are rounded to [ɥ] as a result of assimilation to the rounding of the nuclear vowel.

1.2.4. Syllabic Nasals

There are two syllabic nasals in Zhong-shan which constitute the only segment in the syllable, and affect a very restricted lexicon. These two segments are /m/ and /ng/, pronounced [m̩] and [ŋ̩] respectively. The syllable /m/ only occurs colloquially, as the negative marker 唔 /m⁵¹/ 'not' (also found in Cantonese). Words with the syllable /ng/ include: wu 五 /ng¹³/ 'five', wu 吳 /ng⁵¹/ 'Wu (a surname; a Chinese dialect group to which the Shanghai dialect belongs)', and wu 悟 /ng²²/ 'to realize'. The syllable /ng/ occurs in all but the high level tone. Words possessing syllabic /ng/ historically bore a velar nasal initial, and are reconstructed as LMC *ŋua. Some of the dialects still preserve the velar nasal initial, as exemplified by the pronunciation of the word wu 悟 in such dialects as Su-zhou (Wu): [ŋəu³³¹], Shuang-feng (Xiang): [ŋv²³], Mei-xian: [ŋu⁴²], Xia-men: [ŋɔ³³], Chao-zhou: [ŋo³⁵], and Fu-zhou: [ŋuo²⁴²] (Zi-hui, p.94).

1.3. Tones

Pitch variation which is used to differentiate the meanings of words is called tone. In its function as a tonal phenomenon, pitch carries relative value only, with the height and range of the pitch dependent upon such factors as the age and sex of the speaker. Chao's numerical system, which is used here for transcribing the tones in Zhong-shan, is based on the subdivision of the normal pitch range of a speaker into five pitch levels, with "5" designating the highest pitch and "1" the lowest. The tones in Chinese may be specified by a single pitch level or the movement of the pitch from one level to another. (In the case of the

third tone in Mandarin, for instance, which has a falling-rising contour, a multi-directional movement is involved.)

Besides differentiating lexical meaning, tone also differentiates grammatical (morphological) meaning. It is important to bear in mind this second function, to which we will later return. For the present, however, the focus will be on the first function, in continuation of the phonological analysis of Zhong-shan.

1.3.1. Tonal System

In traditional, historical analysis, there are four tones, or sheng¹⁸ 聲 in Chinese: Ping-sheng 平聲 'even tone', Shang-sheng 上聲 'ascending tone', Qu-sheng 去聲 'departing tone', and Ru-sheng 入聲 'entering tone'. While syllables containing the first three tones end in a long vowel, a glide, or a nasal, Ru-sheng syllables end in a stop consonant (i.e., /p/, /t/ or /k/) and is sometimes referred to as "checked" syllables. As a result of the abrupt closure at syllable-final position, Ru-sheng syllables normally are level in pitch and shorter in duration than their non-checked counterparts. In terms of western, structural linguistic theory and analysis, the Ru-sheng is in complementary distribution with level pitch tones and should not be isolated and treated as phonemically distinct. For diachronic studies and dialectal comparisons, it is nonetheless convenient to distinguish syllables ending in /p,t,k/ from those containing other endings. Or more generally, the adoption of the Chinese terms is useful for analyzing the modern reflexes of these historical Chinese tones both within a given dialect and across dialects.

Traditionally, the tones in Chinese are further divided

into "upper" (yin 陰 , or shang 上) and "lower" (yang 陽 , or xia 下) registers, which reflect the nature of the historical initials, to be discussed later. Suffice it to say for now that the Yin-Yang split was taken into consideration by Chao in his tonal analysis of Zhong-shan.

The numerical values originally assigned by Chao for Zhong-shan, and subsequently by Egerod as well, are adopted here with the minor modification of taking into account the shorter duration of the Ru-sheng by assigning to it single numbers, as opposed to double numbers for the other tones. In the enumeration of Zhong-shan tones according to the Chinese approach, there are a total of six tones in the dialect; but according to western phonemic analysis, there are only four of them. The four phonemic tones in Zhong-shan are given in Table 3 (a) below. The present enumeration of the tones as Tone 1 through Tone 4 rather than the traditional terms as used by Chao, recorded in the table for comparative purposes, is primarily to avoid confusion with the historical tones. Table 3 (b) is a comparison of Zhong-shan tones with the Cantonese ones transcribed by Hashimoto. Traditional names for the Cantonese tones are used in the table.

Table 3 (a). Tonal System of Zhong-shan.

<u>Chan</u>	<u>Chao</u>
Tone 1: 55 (or 5*)	Yin-ping 陰平 /Yin-ru 陰入 : 55
Tone 2: 51	Yang-ping 陽平 : 51
Tone 3: 35	Shang 上 : 35
Tone 4: 22 (or 2*)	Qu 去 /Yang-ru 陽入 : 22

(* Used for checked syllables only.)

Table 3 (b). A Comparison of Cantonese and Zhong-shan Tones.

Cantonese			Zhong-shan	
Yin-ping	陰平	55/53	55	Tone 1
Yang-ping	陽平	21/22	51	Tone 2
Yin-shang	陰上	35	} 13	Tone 3
Yang-shang	陽上	24		
Yin-qu	陰去	44	} 22	Tone 4
Yang-qu	陽去	33		
Shang Yin-ru	上陰入	5	5	Tone 1
Zhong Yin-ru	中陰入	4	} 2	Tone 4
Yang-ru	陽入	3		

Concerning Zhong-shan tones, Tone 1 is high and level in non-checked finals. Both Ball (p.510) and Egerod (p.14) observe that the Zhong-shan upper even tone is slightly lower in pitch than its Cantonese counterpart. Chao (p.54) notes that in Zhong-shan, the starting pitch of the Yin-ping (Tone 1) is slightly lower than the Yang-ping (Tone 2). It is therefore possible to record Tone 1 as /44/. However, for the sake of greater phonemic contrast, /55/ is used by Chao, Egerod and the writer to represent the phonemic tonal value of the Yin-ping tone.

/5/ is used for Tone 1 in those Ru-sheng, or checked, finals which Chao terms "Yin-ru". Because Ru-sheng syllables end in a stop consonant, these syllables are relatively short in comparison to those with open syllables or those ending in a nasal or glide. /5/ parallels the high level /55/ tone in that its pitch height is slightly lower than the Shang Yin-ru, or the

high upper entering tone of Cantonese (which Hashimoto and others transcribe as /5/).

Tone 2 is a high falling tone, transcribed by Chao and the writer as /51/.

Tone 3 is recorded phonemically as /13/, although Chao observes that it is in fact closer to [12]. Again, for the purpose of maximizing phonemic distinction, /13/ was chosen instead. It was noticed in the present data that Tone 3 was produced with a minute dip to the tone; that is, there is a slight fall before the rise. Ball (p.510) also describes the tone in Macao as a tone which "descend(s) a short space--beginning at the same pitch of voice as the Cantonese 下去, há hōü (or Yin-qu--Hashimoto's /44/), lower retiring voice, it falls a little lower at its end than the Cantonese 下平, há p'ing (or Yang-ping--Hashimoto's /21/), lower even tone".

Tone 4 is a mid-low tone, recorded by Chao as /22/. It is here recorded as /22/ in non-checked syllables. The shorter /2/ is used for stop endings.

1.3.2. Tone Sandhi

It is noted by Egerod (p.14) that one tone sandhi phenomenon in Zhong-shan operates in the following manner: when two or more low level tones (i.e., /22/) occur in a sequence, the first tone is pronounced slightly higher than the succeeding, phonemically identical tone(s), and may be transcribed phonetically as [33]. Thus 事幹 /si²² kon²²/ 'work, affair' would be phonetically [si:³³ kɔ:n²²]. The same sandhi phenomenon is observed in the present data.

Egerod also notes that in non-final position (i.e., in environments not preceding open juncture or pause), the rising tone (Tone 3) only exhibits a slight rising contour, or even a low level tone, phonetically [12] or [11]. The present Zhong-shan data agree with Egerod's observations, with the additional remark that the rising tone in such environments tends to be shorter in duration than when it occurs before a pause, such as at the end of a clause or in sentence-final position.

1.3.3. Tone Change

"Tone change", or bian-yin 變音 'changed tone', refers to the morphological and syntactic use of tone distinct from its lexical function. Unlike Cantonese, which has a rich distribution of syllables exhibiting the tone change phenomenon serving various purposes, the grammatical use of tone in Zhong-shan is very limited. There are two changed tones in Zhong-shan, as there are in Cantonese: a high level /55/ and a lengthened, high rising /35/, which we will here term "Modified Tone 1" and "Modified Tone 3" respectively. Only Modified Tone 3 is described by Chao and Egerod. It is a high rising tone which Egerod transcribes as /35/. The examples that Chao and Egerod give involve syllables which originally had Tone 3 or Tone 4.

Although experimental studies need to be conducted on the basic and changed tones in Zhong-shan before one can describe in more detail and with greater precision the tone change situation, perceptually, at least, the modified tones are slightly longer in duration than their basic forms, and are more prominent in the speech of the female informants than the male informant. More-

over, it has been observed in the present data that the other tones in the dialect also can undergo tone change. In representing bian-yin, the original tone is given first, with the changed tone following, separated from the original by a comma. The character undergoing the tone change is also marked by an asterisk (e.g., chi 吃 /ja:k²/ 'to eat', 吃* /ja:k^{2,35}/ 'to have eaten' (eat + PERFECTIVE)).

Modified Tone 1 does not differ significantly from the regular Tone 1 in terms of pitch height. It is the increase in syllable length which is most prominent. Ball (p.511) describes the Modified Tone 1 in the Macao (Zhong-shan) dialect as only slightly higher in pitch level than the regular Tone 1. The Modified Tone 1 is, in fact, of the same pitch height as the ordinary Yin-ping tone in Cantonese (recalling that the Zhong-shan Yin-ping has been noted as being lower in pitch than the Cantonese one). Tone 1 words which underwent tone change will be indicated using an asterisk (e.g., la 拉 /la:j⁵⁵/ 'to pull', 拉* /la:j^{55*}/ 'to have pulled' (pull + PERFECTIVE)).

One of the functions of bian-yin uses Modified Tone 1 to indicate familiarity, or colloquial speech. Such changes are highly unpredictable. Zuo 昨 'yesterday' /tsok²/ and ri 日 'day' /jat²/, for example, combine to form the word 'yesterday', which is colloquially pronounced /tsiok² jat^{2,5}/, with a vocalic change in the final of zuo 昨 and a tone change in ri 日. These changes reflect colloquial, daily usage, whereas the pronunciation of zuo-ri 昨日 /tsok² jat²/ reflects a more literary form.

Likewise, ming 明 'light' /ming⁵¹/ combined with ri 日 'day' /jat²/ is highly literary for 'tomorrow'. The Zhong-shan

casual word for 'tomorrow' is based on the combination of ming plus zao 早 'early' /tsow¹³/ to produce /min^{51,55} tsow¹³/. In this case, the tone change on ming 明 is accompanied by a change in the articulation of the nasal ending as well.¹⁹

The word ya 壓 'to press' has the formal pronunciation of /a:t²/, which would be used in terms such as ya-li 壓力 'pressure' /a:t² lik²/. Colloquially, the word is /a:t^{2,5}/ to mean 'to press', and /a:t²/ for the passive meaning of 'to be pressed', as in ya-zhu 壓住 ('press + cease').

In the word yi 姨 'sister of one's wife or mother', /i⁵¹/, when it occurs in direct address, it combines with a 亞 (or its graphic variant 阿 /a²²/) to form /a²² i^{51,55}/. (A 亞 is an empty prefixal form which serves to prevent monosyllabicity in appellations.) In Zhong-shan, a-yi 亞姨* is 'mother's younger sister'. The tone change to Modified Tone 1 is obligatory. 'Mother's older sister' in Zhong-shan is yi-ma 姨媽 /i⁵¹ ma⁵⁵/, with no tone change in yi 姨.

In words such as 收尾 'finally' /saw⁵⁵ mi¹³/, tone change is optional, with /saw⁵⁵ mi^{13,55}/ equally permissible. A synonym, 後尾 /haw²² mi¹³/ is usually pronounced /haw^{22,55} mi^{13,55}/ in the speech of the Zhong-shan informants in the study, although Hashimoto (p.97) indicates the optionality of [həw³³ mej²⁴] versus [həw³³ mej^{24,55}]. Note also that in Zhong-shan, both syllables undergo tone change.

We turn now to the more systematic grammatical function of tone change, all of which involve Modified Tone 3. One function of Modified Tone 3, for instance, is to intensify the adjective in a reduplicating, monosyllabic adjective in which the tone change

occurs on the first member of the reduplicating pair. Thus, 'good', for example, is hao 好 /how¹³/, and 'very good' is 好* 好 /how^{13,35} how¹³/. Correspondingly, 'big' is da 大 /ta:j²²/, while 'very big' is 大* 大 /ta:j^{22,35} ta:j²²/. As already stated, the derived tone is longer, containing a high rising contour.

Besides intensification, a reduplicated adjective also has the meaning of 'however + ADJECTIVE'; thus, 大* 大 /ta:j^{22,35} ta:j²²/ also has the meaning of 'however big', as in the following clause ("NEG" = negative):

- (3) 大* 大 都 有 用
 ta:j^{22,35} ta:j²² tu⁵⁵ mow¹³ jung²²
 (BIG BIG STILL NEG-HAVE USE)
 'However big (it is), (it's) still no use.'

In the case of an adjective modified by the character hao 好 /how¹³/, meaning 'very', emphasis can be placed on the word 'very' by means of tone change to intensify the adjective following it. Thus, the phrase 'very far' 好遠 /how¹³ yn¹³/ can be stressed by rendering it as 好*遠 /how^{13,35} yn¹³/, denoting even greater distance.

The character ji 幾 /ki¹³/, on the other hand, has the meaning of 'fairly, rather', and only in the modified tone does it acquire the meaning of 'very', serving to intensify the adjective. 'Quite good', for example, is 幾好 /ki¹³ how¹³/, while 幾*好 /ki^{13,35} how¹³/, with the changed tone, means 'very good, stupendous'. A rough translational equivalent of sentence (4), for example, would be 'It sure tasted good!' or 'It sure was good!' ("S" = sentence, "PRT" = particle.)

- (4) [★]
 幾 好 吃 O
 ki^{13,35} how¹³ ja:k² la²²
 (VERY GOOD EAT S-PRT)
 'It was very good (to eat).'

Another regular function of the bian-yin is to compensate for a deleted syllable containing a high tone /5/ or /55/; that is, the pitch of the tone is absorbed by the immediately preceding syllable when the syllable which originally carried it was deleted. One case of such a usage is when there is a change in the tone of a verb. The tone change serves to mark perfectivity in lieu of the post-verbal perfective marker /p'ow⁵⁵/ in Zhong-shan. Variant forms of /p'ow⁵⁵/ are /how⁵⁵/ and /ow⁵⁵/. The perfective marker may sometimes be the repeat of the final on the verb in which the repeated final carries the high pitch of Tone 1. In the case of qu 去 'to go' /hy²²/, for example, the perfective of the verb may be /hy²² p'ow⁵⁵/ (or its variants), or /hy²² y⁵⁵/. Perfectivization through tone change would yield /hy^{22,35}/. In Zhong-shan, the marker of perfectivity 咁 (or 咗) /tso¹³/ is also used, but it is considered a more formal or polite form borrowed from Cantonese.

In analyzing the perfectivization of verbs by means of tone change, one theory that has been advanced for Cantonese is likewise proposed here, namely, that the tone change is a result of copying the high pitch of the perfective marker onto the end of the preceding syllable, which is the verb. When the perfective marker is deleted, a trace remains in the compensatory lengthening of the preceding syllable, with a concomitant rise in the contour of that syllable at its end point.

There are a few cases of tone change connected with the

deletion of ji 一 'one' /jat⁵/. Three cases of yi-deletion and concomitant tone change will be discussed. As in perfectivization by means of bian-yin above, the tone change here also serves a compensatory role. The first case of yi-deletion involves trisyllabic phrases in which the first syllable is a monosyllabic verb, the second yi 一, and the third the reduplication of the monosyllabic verb. The deletion of yi results in the first verb form acquiring Modified Tone 3. Thus, 'to take a look' kan-yi-kan 看一看, for instance, is /hon²² jat⁵ hon²²/ ('look one look'). The deletion of 'one' /jat⁵/ produces the long, high rising tone on the first syllable yielding 看*看 /hon^{22,35} hon²²/. As observed by Kwok (1971:50) for Cantonese, the resultant reduplicated verb form denotes a brief duration of action denoted by the verb. In his analysis of Mandarin, Chao (1968:204) refers to this reduplication as the "tentative aspect of verbs".

In the second case of Modified Tone 3 arising from the deletion of 'one' /jat⁵/, the singular occurrence of an action can be specified using the expression yi-xia 一下 /jat⁵ ha¹³/ 'one time/occasion'. (Xia 一下 (or 下) is a classifier for the number of occurrences of an action.) When an action occurs once, the number 'one' is usually omitted. Thus, kan yi-xia 看一看 'to look once' /hon²² jat⁵ ha¹³/ ('look one time') becomes 看*一下 /hon^{22,35} ha¹³/, with a tone change on the verb. The meaning of /jat⁵ ha¹³/ is sometimes extended so that it does not necessarily always have the literal meaning of 'one time/occasion', as shown in (5). (A circle "O" is used to designate a colloquial word with no written character associated with it. "CL" = classifier.)

- (5) a. 看^{*} 吓 先 算^{*}
 hon^{22,35} ha¹³ sin⁵⁵ syn²²
 (LOOK+ONE CL BEFORE PLAN)
 'We'll see.'/'Wait and see first.'
- b. 好 遠^{*} 吓
 how¹³ yn^{13,35} ha¹³
 (GOOD FAR+ONE CL)
 'It's kind of far.'/'It's quite far (contrary to expectation).'
- c. 影^{*} 吓 就 唔 記 得
 ja:ng^{13,35} ha¹³ tsaw²² m⁵¹ ki²² tak⁵
 (SHADOW+ONE CL THEN NEG REMEMBER ABLE)
 'One moment later (I) (already) forgot!'
 (i.e., in an instant, very quickly)
- d. 渠 O^{*} 吓 就 喊
 k'y⁵¹ ha:j^{55*} ha¹³ tsaw²² ha:m²²
 (HE/SHE TOUCH CL THEN CRY)
 'As for him, just brush against (him) lightly and (he) cries.'

In the third case of compensatory tone change after yi-deletion, the change of Modified Tone 3 occurs when the second yi is omitted in expression containing "yi + CL + yi + CL", such as yi-kuai-yi-kuai 一塊一塊 'piece by piece' (i.e., one piece after another) /jat⁵ fa:j²² jat⁵ fa:j²²/ ('one piece one piece'). Deletion of the second yi yields 一塊*塊 /jat⁵ fa:j^{22,35} fa:j²²/. This tone change is a general one affecting any reduplicated classifier in the above environment. Note that if a classifier is simply reduplicated, the expression has the meaning of "every + CL". In Zhong-shan the first member of such a reduplicated pair does not undergo tone change. Thus, 塊塊 /fa:j²² fa:j²²/ (phonetically [fa:j³³ fa:j²²] due to tone sandhi noted earlier) means 'every piece'. (Contrast this with Cantonese 塊*塊 [fa:j^{44,35} fa:j⁴⁴] 'every piece'.)

There are also some cases of compensatory tone change due

to syllable deletion that is highly idiosyncratic and hence non-productive. The expression 幾多 /ki¹³ to⁵⁵/ 'how much, how many', for example, is often reduced to simply 幾* /ki^{13,35}/. Thus, the question 'How much did it cost?' may be uttered as (6a) or (6b). ("Q" = question.)

(6) a. 幾 多 錢 買 呀
 ki¹³ to⁵⁵ tsin⁵¹ ma:j¹³ a²²
 (HOW-MUCH MANY MONEY BUY Q-PRT)
 'How much did (it) cost?'

b. 幾* 錢 買 呀
 ki^{13,35} tsin⁵¹ ma:j¹³ a²²
 (HOW-MUCH MONEY BUY Q-PRT)
 'How much did (it) cost?'

Tone change can also serve to replace the word dou 都 'also, likewise' /tu⁵⁵/ as a marker of inclusion (INCL). (Note that dou 都 has the same meaning in Cantonese that it has in Zhong-shan, but in Mandarin dou means 'all, altogether'.) The sentence 'I'm going, too', for example, may be uttered as 7 (a) or (b).

(7) a. 我 都 去
 ngo¹³ tu⁵⁵ hy²²
 (I ALSO GO)
 'I'm going, too.'

b. 我* 去
 ngo^{13,35} hy²²
 (I+INCL GO)
 'I'm going, too.'

The resultative or serial verb 'to return, give back (something)' 〇返 /pia:ng¹³ fa:n⁵⁵/ is often reduced to /pia:ng^{13,35}/, as in (8).

(8) a. 我 〇 返 渠 〇
 ngo¹³ pia:ng¹³ fa:n⁵⁵ k'y⁵¹ lu²²
 (I GIVE RETURN HIM/HER S-PRT)
 'I have returned (it) to him.'

- b. 我¹³ 渠⁵¹ 渠⁵¹ 渠²²
 ngo¹³ pia:ng^{13,35} k'y⁵¹ lu²²
 (I GIVE+RETURN HIM/HER S-PRT)
 'I have returned (it) to him.'

There are also at least a couple of tone changes to Modified Tone 3 which are highly irregular. The verb you 由 'by (someone--in passive constructions)' /jaw⁵¹/ in the changed tone means 'to allow, to be up to (someone to decide)', as in sentence (9).

- (9) 由^{51,35} 渠⁵¹ 渠²²
 jaw^{51,35} k'y⁵¹ la²²
 (ALLOW HIM/HER/IT S-PRT)
 'Let it be./Don't bother with it./Leave it alone.'

Another example is the word mang 盲 'blind' /ma:ng⁵¹/ which, in the Modified Tone 3 /ma:ng^{51,35}/, is used to describe some action done blindly, fervently or persistently, as in (10).

- (10) 渠⁵¹ 盲^{51,35} 咁²² 吃²
 k'y⁵¹ ma:ng^{51,35} kam²² ja:k²
 (HE BLINDLY THUS EAT)
 'He kept on eating (furiously).'

The last example involves interrogatives containing the colloquial word dian 點 'how' /tim¹³/. In Cantonese, a colloquial expression such as 'how, in what way' is 點樣 (or 點樣) [ti:m³⁵ yæ:ŋ³³]. In Zhong-shan, 點 /tim¹³/ undergoes tone change to the high, rising Modified Tone 3 for the same expression: 點樣 /tim^{13,35} jong²²/. Likewise, other combinations with /tim¹³/ for interrogatives result in a tone change in the word; for example, 點解 'why' is /tim^{13,35} ka:j¹³/; 點^{*} 渠^{*} /tim^{13,35} tsi¹³/ means 'how, by what means'.

1.4. Combination of Initials and Finals

Phonemically, including the zero initial, there are eighteen initials in Zhong-shan. Of the finals there are a total of seventy, in which tonal distinctions have not yet been taken into account. When these are also considered, the combination of the initials and finals, together with tonal differentiation, yields a sum of at least 1,600 different syllables in the Zhong-shan dialect. This figure is, of course, less than the absolute potential number, which may be the result of natural gaps here and there, occurring at random in a language, arising from a "defective" distribution of some segments; that is, there are potentially permissible combinations that are not actualized in the dialect. Some of the gaps are systematic, and may be the consequence of mergers in the dialect which are phonologically conditioned, a point which will become clearer later. Other gaps are the result of co-occurrence restrictions. The most widespread case of co-occurrence restriction among the Chinese dialects is labial dissimilation, which is also characteristic of Zhong-shan. It is a topic that will be discussed next.

Besides the phenomenon of labial dissimilation, we will also examine that of syncope, the deletion or loss of a phonological segment resulting in the contraction of a word. The partial reduction of a word creating a sesquisyllabic structure will also be studied, with a discussion of the distinction between colloquial versus literary forms in the dialect concluding this chapter.

1.4.1. Labial Dissimilation

There are several environments in which the labial

dissimilation process occurs in Zhong-shan. They are essentially the same environments as those found in Cantonese. In both dialects, labial initials (including velars followed by medial /w/, alternatively analyzed in Cantonese as labialized velar initials) cannot occur together with labial consonantal endings. Nor can the labial glide initial co-occur with the labial glide ending. Thus, the following are examples of impermissible syllables in both Zhong-shan and Cantonese: [*ma:p, *p'i:p, *mɔ:m, *fɔ:m, *kwɪ:m, *k'wa:p, *wɔ:p, *wɛw].

There is also a prohibition of front rounded vowels either preceded by a labial initial, or followed by a labial ending. The syllables [*øw, *øp, *y:p, *pø, *p'y:], for instance, do not occur in either Zhong-shan or Cantonese.

1.4.2. Syncope

A few examples will be cited. The colloquial expression for 'what', for instance, is 乜野 /mat⁵ ja¹³/ which, when shortened by syncope, becomes /mia⁵¹/. The negative imperative 'don't' 唔好 /m⁵¹ hou¹³/ ('not good') is sometimes reduced to /mow¹³/. (The alternative term of 咪 [mɛj²⁴] in Cantonese is not used in Zhong-shan.) 'Twenty' is er-shi 二十 /ngi²² sap²/ ('two ten'), which can be syncopated to 廿 /ngap²/. This syncopated form is more frequently used for figures between twenty-one and twenty-nine inclusive than for the number 'twenty' by itself; for example, 'twenty-three' is rendered 廿三 /ngap² sa:m⁵⁵/ from er-shi-san 二十三 /ngi²² sap² sa:m⁵⁵/ ('two ten three'). (In Zhong-shan, 'thirty' san-shi 三十 /sa:m⁵⁵ sap²/ ('three ten') often becomes simply 卅 /sa⁵¹/, since the preceding process of syncope, if

applied to the number 'thirty', would have yielded /sap²/, leading to confusion with the same syllable already being used to mean 'ten'.)

There are some words for which only the syncopated form seems to have survived. The deictic words 'here' and 'there' appear to be a fusion of O /ku⁵⁵/ 'this' and the diminutive particle er 兒 /ngi⁵¹/ to yield O /kuj⁵⁵/ 'here', and O /nu⁵⁵/ 'that' plus /ngi⁵¹/ combine to form O /nuj⁵⁵/ 'there'. This is parallel to Mandarin zhei 這 for 'this' and na 那 for 'that', with the corresponding locative terms zher 这儿 (zhei 這 + er 兒) for 'here' and ner (na 那 + er 兒) for 'there'. In Zhong-shan, /kuj⁵⁵/ and /nuj⁵⁵/ also mean 'this thing/matter' and 'that thing/matter' respectively.

The same particle er 兒 /ngi⁵¹/ mentioned above was probably also fused in the interrogative word O /naj⁵⁵/ 'where', as was postulated by our informant, Chen, in which O /naj⁵⁵/ is the syncope of na 那 /no⁵¹/ 'where' (which only occurs in literary usage) and the diminutive particle er 兒 /ngi⁵¹/. (Compare this with Mandarin nar (na 那 + er 兒) 'where'.)

1.4.3. Sesquisyllabic Structures

While the examples in the preceding section show the reduction of two syllables to a single one by syncope, there are other syllables in Zhong-shan where this merger is only partially accomplished, resulting in a "sesquisyllabic structure", a term used by J. Matisoff (1973:86) to refer to morphemes in Proto-Austro-Asiatic (a linguistic superstock which includes, among its members, Mon-Kmer and Viet-Muong) which were "a syllable and a half" in

length²⁰: "(t)hat is, the prevocalic consonant was often preceded by a 'pre-initial' consonant, as in the modern Cambodian words psaa 'market', tkiam 'jaw', ckaɛ 'dog', knaok 'peacock'".

In Zhong-shan, there are a few cases of words which can be said to contain sesquisyllables. Such words in the dialect have consonant clusters which are separated by an epenthetic schwa. From a synchronic level, these sesquisyllabic structures can be analyzed as reductions of full form which are polysyllabic in origin. This process of schwa-reduction is moreover restricted to words in which the second syllable undergoing reduction contains the initial /l/. The schwa-reduction process actually affects a very limited vocabulary. With the exception of a small handful of colloquial expressions found in the data thus far, other manifestations of this phenomenon involve onomatopoeic types of words.

Both the full and reduced forms are found in Zhong-shan, with the full form essentially citation forms. It is the reduced forms that are normally used in daily, conversational speech. Given the syllable structure that normally does not admit to a sesquisyllabic structure, the synchronic analysis very naturally seeks to derive the reduced form from a full, polysyllabic one. Diachronically, however, there are arguments for proposing original initial consonant clusters for at least some of the sesquisyllabic forms in Zhong-shan; that is, some of the sesquisyllabic forms can be associated with words which have been reconstructed in Old (or Archaic) Chinese as containing initial consonant clusters.

Consider, first, the colloquial word for 'corner' (e.g., of a room). The characters usually given for it in Cantonese and Tai-shan (another Yue dialect) are 角落頭. They are pronounced

[kɔ:k⁴ lɔ:k⁵ t'ɛw³⁵] in Cantonese and [kɔk¹ lɔk⁵ hau³⁵] in Tai-shan. The same term is also found in Zhong-shan. The citation form for it is [kɔ:k² lɔ:k⁵ t'ɛw⁵¹]. Colloquially, the word is usually reduced to [k^əlɔ:k⁵ t'ɛw⁵¹] (/klok⁵ t'aw⁵¹/). Hashimoto (1972b: 34) expresses doubt concerning the connection between the second syllable and the character luo 落 (169-21), which is normally pronounced in a low tone in Zhong-shan, as it is in Cantonese. Hashimoto suggests that both the first and the second syllable in fact stand for the character jiao 角 (183-20), and further proposes that jiao 角 is derived from a historical *k₁- cluster in proto-Yue. (Tou 頭 is simply a word-formative suffix (Kratochvil, 1968:68), and is not relevant to the present discussion.) Hashimoto's evidence for claiming that the first two syllables both represent the character jiao is based on fan-qie: jiào 角 has two different fan-qie's which demonstrate that it has both a *k- and an *l- initial. Accordingly, Hashimoto hypothesizes that when initial clusters fell out of usage, the only means whereby these clusters could survive was by having a syllable inserted between the two consonants in the cluster. (Yang (1971), for example, referred to such an insertion--that of a vocalic element between adjacent consonants--as a "process of anaptyxis".) To account for the tonal difference between the first and second syllable in the word [kɔ:k⁴ lɔ:k⁵ t'ɛw^{21,35}] 'corner', Hashimoto suggests that the high tone of the second syllable is a result of tone change, since such a change is not uncommon in reduplicated syllables--or, in this case, pseudo-reduplicated syllables--in the Yue dialects.

Various Chinese phonologists have likewise reconstructed

an initial consonant cluster for jiao 角, which is a Grade II word. Jiao 角 has been reconstructed by Fa-kao Chou as Archaic Chinese *krewk, for instance, and by Pulleyblank as Old Chinese *krak^w. The Zhong-shan sesquisyllabic form for 'corner' would therefore lend support for some kind of *k_l- or *kr- initial consonant cluster for jiao in Old Chinese, a cluster which had survived in proto-Yue, and apparently in earlier forms of other dialects as well, as witness [kə⁵⁵ lər³⁵] 角落 in (Peking) Mandarin for 'a hidden corner' (Hashimoto, 1972b:33-34). The tri-syllabic "full" form for the word 'corner' in Zhong-shan is basically a citation form which expands the sesquisyllable to fit the more common CVC syllable structure in the dialect. The process of "dimidiation"²¹, which parallels the historical process proposed by Hashimoto, is used in such situations as teaching the word to a child, or repeating the word slowly to an inquisitive and persistent linguist.

It should be noted that despite the full form given by Hashimoto for the word 'corner' in Cantonese, McCoy (1966:185,fn. 27) in fact argues that this word is one of a very rare number of words in Standard Cantonese which possess atonic syllables. McCoy indicates such syllables by using the tone diacritic [°]. The nuclear vowel in these syllables is also reduced to a schwa and linked to the following syllable by a hyphen to show close juncture. Of the words in his data, McCoy found only two which contain an atonic syllable: [kə° - lɔ:k⁴ t'ɛw³⁵]²² 'corner' is one of them, and [hɛm³³ bə° - lA:ŋ³³] 'all, completely' is the other. (We will return to the second word later.)

In all probability, McCoy's atonic syllable, which has

close juncture with the following full syllable, is what we are treating here as a sesquisyllable. However, McCoy seems to deny the existence of the full, citation form; he notes that the forms containing neutral tone syllables cited in dictionaries are recorded "as if" they were pronounced with full tones. The fact that both full and reduced forms can be elicited from the present informants indicates at least that both variants do exist and are not mutually exclusive. As suggested earlier, the citation form is likely an attempt to expand the sesquisyllabic form to conform with the more orthodox syllable structure of the dialect.

Another colloquial expression in Zhong-shan which has a sesquisyllabic structure is the word 'knot'. The citation form is [k'it⁵ li:t⁵], and the reduced form [k'°li:t⁵]. Hashimoto (1972b:37, fn.19; 38, fn.26) notes that K. Whitaker (1952:47-48), in her dissertation on the "Characterization of the Cantonese dialect with special reference to its modified tones", proposes an initial *k1- cluster for the word 'knot' by making a connection between the literary word for 'knot' jie 結 (133-1) [ki:t⁴] (/kit²/ in Zhong-shan) and the colloquial word for 'knot' in Cantonese, which has the variant forms of [ki:t⁴] and [li:t⁴]. Hashimoto (1972b:33), however, rejects Whitaker's proposal based on the alternative pronunciation of the colloquial word for 'knot' on the premise that the latter has no fan-qie evidence to support her claim. Hashimoto proposes, instead, a connection between the word xie 紮 [si:t⁴] 'to tie; a bridle' and the colloquial word [li:t⁴]. She bases her claim on the observation that the character 黑柴, for example, was supposed to have had an *1- initial according to fan-qie spelling. (However, the fan-qie for xie 紮 in

both Chou (1973) and the Ci-hai dictionary, for instance, shows an *s- initial only.) Nonetheless, on the basis of her rather tenuous fan-qie evidence, Hashimoto posits an *sl- cluster for the word xie 紕.

Zhong-shan evidence, on the other hand, would tend to support Whitaker's claim of a *kl- cluster. While Cantonese alternates between a /k/ and an /l/ initial for the colloquial word 'knot', in Zhong-shan the same word has a disyllabic structure /k'it⁵ lit⁵/, or the sesquisyllabic form of /klit⁵/. If one can assume that the words 'corner' discussed above, and the present word 'knot' underwent a similar process in the breakdown of initial consonant clusters, there is sufficient basis for suggesting that the word jie 結 /kit²/ 'knot' originally bore some kind of *kl- cluster.

Historically, the reconstruction of a *kl- cluster for jie 結, a Grade IV word, has been suggested by Pulleyblank (1962), then as a *kɿ- cluster. Pulleyblank distinguishes between clusters in Old Chinese which contain *-l- and those which contain *-r-: *-r- occurs with Grade II words (e.g., jiao 角), and *-l- with Grade IV words (e.g., jie 結). Very briefly, Pulleyblank was motivated to postulate a *kl- cluster for such Grade IV words as ji 吉 (154-16) 'lucky' /kat⁵/ (Middle Chinese *kjit) and jie 詰 (154-17) 'to investigate' /k'it²/ (Middle Chinese *k'jit) in order to explain why they did not have palatal initials in Middle Chinese, whereas Grade III words, such as zhi 支 (48-12) 'branch' /tsi⁵⁵/ (Early Middle Chinese *tɕiǎ) did develop palatal initials. It was the presence of *-l- in the Old Chinese forms of Grade IV words such as ji 吉 and jie 詰 which blocked palatalization at

the Middle Chinese stage.

In the modern Zhong-shan form of /k'lit⁵/ for 'knot', one still needs to account for the presence of an aspirated initial instead of the unaspirated one if an association is to be made between the Zhong-shan colloquial term for 'knot' and the literary one of jie 結 /kit²/. There is also the question of the difference in tone between the two forms. Neither poses a major difficulty. A number of colloquial (and literary) words which are pronounced with an aspirated stop initial in Zhong-shan have been reconstructed with plain stops. Words containing the Jian 見 (*k-) initial, for example, include gua 掛 (45-1) 'to hang' /k'wa²²/ and guang 逛 (180-1) 'to stroll' /k'wa:ng²²/. Cantonese has [kwa:⁴⁴] and [kwa:ŋ³³] respectively for the two words. Mandarin, it may be noted, likewise shows unaspirated initials for gua 掛 and guang 逛. It is therefore not implausible to consider the reconstruction of a plain *k1- cluster despite the colloquial word 'knot' in Zhong-shan showing aspiration on the initial segment.

Concerning the problem of a tonal difference in the two forms for 'knot', one might first look at the colloquial form for 'corner'. In /kok² lok⁵ t'aw⁵¹/, the first syllable preserves the tonal value of the word jiao 角 /kok²/. Presumably, the second syllable /lok⁵/ is the result of a tone change such that it originally bore tone /2/ (i.e., /lok^{2,5}/). In the word 'knot' /k'it⁵ lit⁵/, neither syllable has preserved the Zhong-shan reflex of the tone for jie 結 /kit²/, namely tone /2/. It is possible that the word 'knot' may have undergone an intermediary stage during which only the second syllable was at first affected by tone change (as in the case of the word 'corner'), and it is only

subsequently that the first syllable was also thus affected.

As noted earlier, besides the word 'corner', McCoy (1966: 185, fn.27) also mentions the Cantonese word 'all, completely', which is phonetically [həm³³ bə° - 1A:n³³]. The same word is transcribed as [həm³³ pA:n³³ 1A:n³³] by Hashimoto (p.333). The phoneticization of Huang's (1970:394) transcription of 'altogether, all told' is [həm³³ pA:n³³ 1A:n³³]. In Zhong-shan, this word 'all' is pronounced /ham⁵¹ pa⁵¹ la:ng⁵¹/ in citation form and /ham⁵¹ pla:ng⁵¹/ in daily speech. In narrow phonetic transcription, /p/ assimilates the voicing of the preceding segment and is pronounced [b]: [həm⁵¹ b[°] 1A:n⁵¹]. Except for tonal differences, McCoy's form for Standard Cantonese and the corresponding Zhong-shan form are identical. It is instructive to add that two other Yue dialects recorded by Hashimoto (p.19) likewise appear to contain sesquisyllables for the word 'all': Hashimoto records [hom² plaŋ²] for 'all' in Teng-xian, and [ʔham °plaŋ] in Tai-shan.

Regarding the portion of the colloquial word 'all' which is the sesquisyllable (e.g., /pla:ng⁵¹/ in Zhong-shan, or the corresponding Cantonese sequence [pA:n³³ 1A:n³³]), Pulleyblank (personal communication) suggests linking it to the literary word fan 凡 (109-1) 'all', derived from LMC *fɦa:ɿm < EMC *buam. (Fan is pronounced [fA:n⁵¹] in modern Zhong-shan and [fA:n²¹] in Cantonese.) Pulleyblank points out that fan 凡 is the phonetic in a character such as fan 梵 (109-7) (/fa:n⁵¹/, EMC *buam), which had been used to transcribe the word 'Brahma'. Fan 凡 is also the phonetic in lan 嵐, which is LMC *lam, and modern Cantonese [1A:n²¹].

It is not inconceivable that the word fan 凡 once bore a

consonant cluster *bl- or *br-. In Zhong-shan, the presence of a velar nasal ending in the modern reflex /pla:ng⁵¹/ can be easily explained in terms of labial dissimilation, changing *-m to -ŋ in the presence of the labial initial *b-. In the syllables /pa⁵¹ la:ng⁵¹/ and the sesquisyllable /pla:ng⁵¹/, the tone is /51/ thus corresponding to the same tonal reflex that is in the literary word fan ㄉㄢ /fa:n⁵¹/. Of the Yue dialects mentioned above, only in Zhong-shan has the regular tonal reflex of fan ㄉㄢ been preserved. The tones in Cantonese [pa:³³ la:ŋ³³], for example, did not preserve the Yang-ping [21] tone of fan ㄉㄢ [fa:n²¹].

What is still not entirely clear is the role of the syllable /ham⁵¹/ in Zhong-shan /ham⁵¹ pla:ng⁵¹/. It is possible that the nasal segment /m/ serves to preserve the voicing of the historical voiced *b- initial, when voicing was no longer phonologically distinct in the initial segment /p/ of the syllable /pla:ng⁵¹/²³. The observation by McCoy and later by the writer that /p/ is phonetically [b] in the modern colloquial word 'all' may not be fortuitous after all. The syllable /ham⁵¹/ ([həm³³] in Cantonese) may be regarded as an intrinsic part of the historical reconstruction of the word fan ㄉㄢ : it bears the voicing feature which would otherwise have been lost when *b- no longer contrasted with the corresponding voiceless labial stops in the phonological system of the dialect.

Another colloquial word in Zhong-shan which can be associated with a word which once contained an initial consonant cluster is /ka²² la²² wa:ng⁵¹/, or /kla²² wa:ng⁵¹/ 'crosswise; at right angles to'. Long-du has a similar form for 'crosswise': /kaa³³ laa³³ waaq³³/ (tone numerals are used instead of Egerod's tone

diacritics, and /q/ = [ŋ]) ○ ○ 横 (Egerod, p.91). J. Norman (personal communication) does not recognize this word as a regular Min colloquialism, and can only presume that it is borrowed from Zhong-shan.²⁴ Ignoring tonal differences between the two dialectal forms for the moment, one can propose that the polysyllabic form of the word 'crosswise' in both dialects contain traces of an original initial consonant cluster. More precisely, the complete forms of Zhong-shan /ka²² la²² wa:ng⁵¹/ and Long-du /kaa³³ laa³³ waaq³³/ can be connected to the word heng 横, which is a Xia 匣 initial, Grade II word reconstructed by F.K. Chou, for example, as Archaic Chinese *grwang. The sesquisyllable /kla²²/ then preserves the initial *gr- cluster, and /wa:ng⁵¹/ is simply the syllable-final of the word.

Regarding initial *g- in the cluster, phonologists have observed that at least some of the words containing the Xia initial in Middle Chinese had common origins with velar stops, as reflected in the reconstruction of initial *g- in Archaic Chinese by Chou for heng 横, for example, and an aspirated *g'- by Karlgren. In terms of historical phonology, the Zhong-shan polysyllabic form for 'crosswise' thus lends support for the reconstruction of an earlier initial cluster which contains a velar element. More generally, the Zhong-shan polysyllabic form provides evidence for an initial consonant cluster for the word heng 横.

Turning now to the question of the tonal values recorded for the word 'crosswise' in Zhong-shan as well as in Long-du, one observation should first be made concerning heng 横 (Zhong-shan /wa:ng⁵¹/, Long-du /waaq³³/). Both dialectal forms are regular

reflexes of the historical Yang-ping tone with respect to their respective pattern of correspondences to the historical phonological system. Thus, the tones in all three syllables in the Long-du form /kaa³³ laa³³ waaq³³/ are completely regular. In Zhong-shan, while /51/ is the regular reflex of Yang-ping, /22/ in the syllables /ka²² la²²/ and the sesquisyllable /kla²²/ is not. One possible explanation for the exceptional tonal reflex is that /ka⁵¹/ and /la⁵¹/, which would be the expected reflexes for Zhong-shan, are extremely rare. In the present data, /ka⁵¹/ only occurs in a colloquial, characterless word which refers to a leg-astride, standing position, while /la⁵¹/ occurs in the combination /la⁵¹ a:j⁵⁵/ 〇埃 meaning 'dirty', and as a sentence-final particle. In contrast, tone /22/ counterparts of these syllables are much more numerous, and can be found in regular lexical items. Perhaps the rarity of syllables /ka⁵¹/ and /la⁵¹/ motivated the tone change to /22/ in Zhong-shan. No firm conclusions will be attempted at this time.

In the next word, Zhong-shan has two citation forms and one corresponding sesquisyllabic form. To describe an instrument or object that is very straight, or a road or route that is very straight or direct, Zhong-shan uses the phrase /tim²² pat⁵ lat⁵/ 拈 〇 〇, or /tim²² pat⁵ pat⁵/. The sesquisyllabic form is /tim²² plat⁵/. For the first syllable /tim²²/, Cantonese likewise has the word [ti:m³³] meaning 'straight', and coined the character 拈 to represent that colloquial word.

What interests us here is the sesquisyllable /plat⁵/ which one would like to associate with the word bi 筆 (153-12) 'a writing brush; straight, direct', which has been reconstructed

with an initial *p1- cluster. Karlgren, for example, reconstructs bi 筆 as Archaic Chinese *pliət; Chou reconstructs it as *pliwet. A *p1- cluster has also been postulated by Pulleyblank (1962:111) for bi 筆, which is a Grade III word belonging to the so-called chong-niu 重紐 ('double knot') or Grade III/IV doublet finals. Xie-sheng evidence in Middle Chinese shows contact of phonetic 聿 with both initial *p- as in bi 筆 /pat⁵/ and *l- in lü 律 (162-10) 'a law' /löt²/. Pulleyblank also brought the writer's attention to historical evidence of bu-lü 不律 (Zhong-shan /pat⁵ löt²/) being used to render the pronunciation of bi 筆.

It would appear that in Zhong-shan, the inclusion of 掂 /tim²²/ meaning 'straight' was used to reinforce the meaning of /plat⁵/ as the association of bi 筆 to the *p1- initial cluster became opaque after the general loss of initial clusters in Chinese. Evidently, syllables containing /pl/ then became viewed as some sort of onomatopoeic syllable. One should suspect that of the two citation forms /tim²² pat⁵ lat⁵/ and /tim²² pat⁵ pat⁵/, the latter is a more recent innovation, where the original meaning of /pat⁵ lat⁵/ or /plat⁵/ is completely obscured.

Somewhat more tentative is the linkage between the Grade III, He-kou word juan 卷 (142-13) /kyn¹³/ or /kun¹³/ 'a roll' and the colloquial word for 'somersault' supplied by Karl Lo, another Zhong-shan speaker: /kwa:n⁵⁵ la:n⁵⁵ taw¹³/ 〇〇斗 in citation form and /kla:n⁵⁵ taw¹³/ in reduced form. Although no initial *k1- cluster is usually reconstructed for the word juan 卷 (e.g., Karlgren: Archaic Chinese *kiwan) due to the absence of xie-sheng evidence, it might be observed that an initial *k1- was hypothesized by Pulleyblank (1962:126) for the word. In this

case, Pulleyblank treats *-l- as a derivational infix based on Wulff's theory of a morphological infix *l.²⁵ Thus, juan 卷 'turn around' is Middle Chinese *kiwan, whereas juan 卷 'roll' is Middle Chinese *kiwen < Old Chinese *kwlān.

If Zhong-shan /kwa:n⁵⁵ la:n⁵⁵/ and /kla:n⁵⁵/ can be linked to the word juan 卷, it is interesting that the citation form would be the one that in fact preserves the labial medial. In this case, one would expect that the citation form and the sesquisyllabic form both evolved simultaneously from the dimidiation of the initial cluster, with the citation form preserving the He-kou feature. Conceivably, at an earlier stage, the sesquisyllabic form had initial *kw^əl-. The final in the Zhong-shan colloquial expression still presents a problem since the regular Zhong-shan reflex for juan 卷 is /yn/. The writer will leave this problem for future investigation.

Finally, there is also the literary word ge 胳 (170-10) 'armpit' /kok²/, which Karlgren has reconstructed as Archaic Chinese *klâk. A *kl- cluster has also been postulated by other phonologists, sometimes with the historically homophonous word ge 各 (170-7) 'each' /kok²/ representing ge 胳 and others in this set of Grade I words. Thus, Li (1974:251) and Pulleyblank (1962:119), for example, both posit an original *kl- initial cluster for ge 各: Archaic Chinese *klak by Li, and Old Chinese *k^hak (since revised as *klak) by Pulleyblank.

Colloquial data from a number of Chinese dialects (cf. especially Yang, 1971) strongly supports the postulation of an initial consonant cluster for ge 胳. Consider first the Cantonese example. Included among the various colloquial forms for 'armpit'

in Cantonese is that of [kA:k⁴ lA:k⁵ tɛj³⁵] (Hashimoto, pp.242, 330), for which Hashimoto uses the characters ge-le-di 胳膊底. Parallel to the case of the word 'corner', one can postulate that the first two syllables, [[kA:k⁴] and [lA:k⁵], both represent the word ge 胳膊, which originally bore a *kl- cluster initial, as reconstructed by Karlgren and others. (The suffix di 底, which means 'underside, base', does not enter into the reconstruction of the word ge 胳膊.) Also parallel to the case of the word 'corner' is the tone change in the second syllable: the basic tone of the character le 肋 is Zhong Yin-ru /4/ (i.e., [lA:k⁴]). As argued in the word 'corner', the character used to represent the second syllable is essentially a dummy element with both the first and the second syllable having been derived from the first character historically.

Dong-guan, another Yue dialect, has a colloquial form for 'armpit' which is very close to the Cantonese form: [kak lak ha] 胳膊下 (from Yang, 1971--no tone marks provided). (The suffix xia 下 means 'below, under', and does not participate in the reconstruction.) The same arguments used in the Cantonese form for postulating a *kl- cluster can be applied here.

Zhong-shan also has a colloquial form for 'armpit' which reveals an initial *kl- cluster. The Zhong-shan form, however, had undergone attrition of the final /k/ ending and pitch-raising to a high tone yielding /ka⁵⁵ la⁵⁵ ha²²/ 咯咯下 as the citation form, and /kla⁵⁵ ha²²/ as the sesquisyllabic form. It is instructive to know that the Fu-zhou form (supplied by Norman), like the Zhong-shan one, shows loss of the stop ending, and is phonetically [ko²² rou²² a²⁴²] 咯落下. Since it is atypical for Zhong-shan

to lose its stop endings, it is possible that the attrition of final /k/ in the Zhong-shan form may be due to influence from Fu-zhou or another Northeastern Min dialect. On the basis of comparisons with the Cantonese, Dong-guan and Fu-zhou forms, one can be quite confident that the Zhong-shan form likewise represents an initial consonant cluster for the word ge 胳.

The writer is actually not the first to use polysyllabic, colloquial forms to support the reconstruction of a *k1- cluster for ge 胳. Among the pioneers to do so is Yang (1971) who has not only collected such forms from a number of Chinese dialects, but has also included cognates in other East Asian languages in order to support arguments for an earlier existence of a *k1- cluster in the word ge 胳 'armpit'. Thus, cognates which Yang found for the word 'armpit' include kliək in Khmer (Cambodian) and kelek in Malay.

Pulleyblank (personal communication) also proposes that the colloquial, polysyllabic word in Mandarin for 'armpit' [ka⁵⁵ tʂɿ wu⁵⁵] may be identified with the word ge 胳 (*klak) or a closely related form. For instance, in what Pulleyblank calls his Type B syllables (for our present purposes, they are Grade III and IV syllables which he reconstructs as containing medial *-i- in the Kai-kou series in LMC), the development of Old Chinese *klak is *klak > *k-ɟiajk > k-tɕiajk > k-tɕi (reconstruction his). A velar for the initial consonant and an affricate (palatal or retroflex) for the second syllable seems to be quite prevalent among the Mandarin dialects. The same pattern is also found in Su-zhou (Wu). (See, e.g., Yang, 1971; Han-yu Fang-yan Ci-hui ('A collection of Chinese dialectal words') by the same editors as the

Zi-hui (hence, hereafter 'Ci-hui' for short) (1964:195).)

Concluding the subject of ge 咯, it should be noted that although the Zhong-shan citation form /ka⁵⁵ la⁵⁵ ha²²/ merely adds to Yang's already long list of polysyllabic forms in various Chinese dialects for 'armpit', the sesquisyllabic form /kla⁵⁵/ is significant in that it may attest to an earlier stage of the evolution of the consonant cluster. In the present as well as previously discussed reduced forms, one may regard the schwa inserted between the initial consonants in the sesquisyllable as the first stage in the anaptyxis process; that is, the sesquisyllabic structure may represent the stage at which adjacent consonants in syllable-initial position were separated by means of schwa-epenthesis, thus creating a sesquisyllable. Subsequent changes led to tone alterations in some cases, and attrition of segments in others. The breaking up of the initial consonant cluster, nonetheless, is captured and preserved in the sesquisyllabic form.

As observed in McCoy's recording of the colloquial word 'all' and Hashimoto's recording of the same word in Teng-xian and Tai-shan, it appears that the sesquisyllable exists in other Yue dialects besides Zhong-shan, and may in fact be present in non-Yue dialects also. The existence of the citation form, which is the form normally recorded in fieldwork, is then a further progression away from the initial clusters. As suggested earlier, the citation form essentially represents an original sesquisyllable which had been made to conform to the more prevailing CVC structure.

1.4.4. Colloquial versus Literary Forms

Among many Chinese dialects, there is a distinction between what are recognized as colloquial, or bai 白, forms and what are regarded as literary, or wen 文, forms of words which are phonologically and semantically related. Generally speaking, the literary forms reflect influence from the standard language. In the case of a dialect which is influenced by both a regional and a national standard, or one which incorporates forms from one or more dialects at different stages in its history, several forms for a word may exist side by side, reflecting the various sources or layers of borrowing. One example is the Min dialect in southern China in which one often encounters as many as three layers of pronunciation for a given word.

As in Cantonese, Zhong-shan has two major categories of colloquial morphemes. The first category consists of purely colloquial terms which generally lack character representation, with the exception of those special characters coined for Cantonese which can also be used in Zhong-shan to represent certain characterless words. A number of these colloquial Zhong-shan terms are included in the lexicon in Chapter 3.

The second major category of colloquial morphemes consists of characters which have both a colloquial and a literary reading. The two forms can normally share the same syntactic environment. The colloquial form is normally used in daily or informal speech, while the literary form only occurs in formal speech or in the reading of written texts. In general, what is analyzed as the colloquial reading reflects an earlier layer of the Chinese language, and the literary reading a later layer.

The distribution of the colloquial versus literary forms is, as Hashimoto (p.118) emphasizes, not necessarily exclusive. This is particularly the situation with regard to polysyllabic words which may utilize a colloquial form in one combination and a literary form in another. Thus, colloquially, a 'provincial capital' is called sheng-cheng 省城 /sang¹³ sia:ng⁵¹/, with the morpheme cheng 城 (200-21) given the colloquial reading. A 'city', however, is cheng-shi 城市 /sing⁵¹ si¹³/; here, the literary pronunciation of cheng is used instead. There is no known general rule governing the choice of a colloquial rather than a literary form (or vice versa) in a particular combination. There are also morphemes which do not have stylistic alternants, with one form serving all functions. The morpheme qing 清 (2-0-7) /ts'ing⁵⁵/ 'clear, pure', for instance, only has the literary form regardless of usage or combination, whereas the morpheme jing 頸 (202-1) /kia:ng¹³/ 'neck' only has a colloquial form.

Given the non-exclusiveness in the distribution of the colloquial and literary forms, it is obvious that the term "colloquial" does not apply specifically and solely to "spoken" forms, any more than does the term "literary" apply only to "written" forms. Hashimoto (p.119) contends that although the division of items in terms of colloquial versus literary is based primarily on an actual stylistic distinction between the two sets of forms, this division should be considered a phonological one since items not only conform to stylistic distinctions, but they also follow certain patterns of phonological behaviour. It is the phonological criterion which is particularly important both in proposing general statements about the historical development of Cantonese and Zhong-

shan, and in formulating reconstructed forms for proto-Yue. The historical significance of the colloquial versus literary readings will be clarified in the second part of this study. For the present, three main types of colloquial versus literary forms will be shown in this section.

In the first set, there is an alternation of initials and tones. The morpheme containing an aspirated initial together with tone /13/ is the colloquial form, while the morpheme with the unaspirated form in tone /22/ serves as the literary counterpart. Examples are presented in Table 4 (a).

The second set of alternants reflecting colloquial and literary readings is /a:ng/ versus /ang/ finals. (This includes the corresponding stop finals.) The colloquial forms contain final /a:ng/ and the literary forms final /ang/. A list of such alternations are given in Table 4 (b).

The third and final set shows an alternation between /ia:ng/ and /ing/ finals (and between the corresponding stop finals). The /ia:ng/ final is used in colloquial speech and the /ing/ final is used for the reading pronunciation. A list of such stylistic alternations is presented in Table 4 (c). Syllables with the corresponding stop consonant endings are also included in the three tables.

Table 4 (a). Colloquial versus Literary Forms: Tone /13/
Aspirated Initial and /22/ Unaspirated Initial.

<u>Number</u>	<u>Word</u>	<u>Colloquial</u>	<u>Literary</u>	<u>Gloss</u>
5-10, 6-9	坐	/ts'o ¹³ /	/tso ²² /	'to sit'
29-12	在	/ts'oj ¹³ /	/tsoj ²² /	'to be located, at'
95-18, 96-9	淡	/t'a:m ¹³ /	/ta:m ²² /	'light'
134-18	斷	/t'yn ¹³ /	/tyn ²² /	'broken'
155-10, 156-2	近	/k'an ¹³ /	/kan ²² /	'near'

Table 4 (b). Colloquial versus Literary Forms: /a:ng/ and /ang/
Finals.

<u>Number</u>	<u>Word</u>	<u>Colloquial</u>	<u>Literary</u>	<u>Gloss</u>
184-21	恆	/ha:ng ⁵⁵ / ^a	/hang ⁵¹ /	'constant'
192-4	生	/sa:ng ⁵⁵ /	/sang ⁵⁵ /	'raw'
192-5	牲	/sa:ng ⁵⁵ /	/sang ⁵⁵ /	'animal'
192-8	更	/ka:ng ⁵⁵ /	/kang ⁵⁵ /	'watches of the night'
192-13	亨	/ha:ng ⁵⁵ / ^b	/hang ⁵⁵ /	'to pervade'
192-14	行	/ha:ng ⁵¹ /	/hang ⁵¹ /	'to walk'
192-16	猛	/ma:ng ¹³ /	/mang ¹³ /	'fierce'
192-18	冷	/la:ng ¹³ /	/lang ¹³ /	'cold'
195-5	爭	/tsa:ng ⁵⁵ /	/tsang ⁵⁵ /	'to struggle'
195-7	睜	/ts'a:ng ²² /	/tsang ⁵⁵ /	'to open the eyes'
195-8	耕	/ka:ng ⁵⁵ /	/kang ⁵⁵ /	'to farm'

^a In the name of a village in the first qu in Zhong-shan county:
恆美 /ha:ng⁵⁵ mi¹³/.

^b In the name of a neighbouring village: 亨尾 /ha:ng⁵⁵ mi¹³/.

Table 4 (c). Colloquial versus Literary Forms: /ia:ng/ and /ing/ Finals.

Number	Word	Colloquial	Literary	Gloss
197-14	平	/p'ia:ng ⁵¹ /	/p'ing ⁵¹ /	'flat'
198-3	驚	/kia:ng ⁵⁵ /	/king ⁵⁵ /	'to fear, afraid'
198-15	影	/ja:ng ¹³ /	/ing ¹³ /	'shadow'
199-1	柄	/pia:ng ²² /	/ping ²² /	'handle'
199-2	病	/pia:ng ²² /	/ping ²² /	'sick'
199-3	命	/mia:ng ²² /	/ming ²² /	'life'
199-4	敬	/kia:ng ²² /	/king ²² /	'to respect, be careful'
199-6	鏡	/kia:ng ²² /	/king ²² /	'mirror'
200-2	名	/mia:ng ⁵¹ /	/ming ⁵¹ /	'name'
200-3	精	/tsia:ng ⁵⁵ /	/tsing ⁵⁵ /	'sharp, quick-witted'
200-9	晴	/ts'ia:ng ⁵¹ /	/ts'ing ⁵¹ /	'clear sky'
200-19	聲	/sia:ng ⁵⁵ /	/sing ⁵⁵ /	'sound, voice'
200-20	成	/sia:ng ⁵¹ /	/sing ⁵¹ /	'accomplished, entire'
200-21	城	/sia:ng ⁵¹ /	/sing ⁵¹ /	'city'
201-1	輕	/hia:ng ⁵⁵ /	/k'ing ⁵⁵ /	'light (e.g., in weight)'
201-5	贏	/ja:ng ⁵¹ /	/ing ⁵¹ /	'to win'
201-7	領	/nia:ng ¹³ /	/ling ¹³ /	'collar'
		/lia:ng ¹³ /	/ling ¹³ /	'to apply for'
201-8	嶺	/lia:ng ¹³ /	/ling ¹³ /	'hill'
201-9	井	/tsia:ng ¹³ /	/tsing ¹³ /	'a well'
201-10	請	/ts'ia:ng ²² /	/ts'ing ²² /	'to invite'
202-5	淨	/tsia:ng ²² /	/tsing ²² /	'clean'
202-7	姓	/sia:ng ²² /	/sing ²² /	'surname'
202-9	正	/tsia:ng ²² /	/tsing ²² /	'upright'
203-10	惜	/sia:k ² /	/sik ⁵ /	'to be fond of'

203-16	爨	/tsia:k ² /	/tsik ² /	'to burn'
203-17	赤	/ts'ia:k ² /	/ts'ik ² /	'red'
204-8	拼	/p'ia:ng ⁵⁵ /	/p'ing ⁵⁵ /	'to risk (e.g. one's life'
204-9	瓶	/p'ia:ng ⁵¹ / ^a	/p'ing ⁵¹ /	'bottle'
204-16	釘	/tia:ng ⁵⁵ /	/ting ⁵⁵ /	'nail'
204-20	聽	/t'ia:ng ⁵⁵ /	/t'ing ⁵⁵ /	'to listen, hear, obey'
204-23	亭	/t'ia:ng ⁵¹ / ^b	/t'ing ⁵¹ /	'pavilion'
205-2	靈	/lia:ng ⁵¹ /	/ling ⁵¹ /	'efficacious'
205-3	零	/lia:ng ⁵¹ /	/ling ⁵¹ /	'remainder, plus, over'
205-8	青	/ts'ia:ng ⁵⁵ /	/ts'ing ⁵⁵ /	'blue, black'
205-11	腥	/sia:ng ⁵⁵ /	/sing ⁵⁵ /	'smelly (of fish, blood)'
206-1	頂	/tia:ng ¹³ /	/ting ¹³ /	'top; (classifier for hat)'
206-7	醒	/ts'ia:ng ¹³ /	/sing ¹³ /	'to awake'
206-8	釘	/tia:ng ⁵⁵ /	/ting ⁵⁵ /	'to nail'
206-9	訂	/tia:ng ²² /	/ting ²² /	'to subscribe'
206-10	聽	/t'ia:ng ⁵⁵ /	/t'ing ⁵⁵ /	'to let'
206-11	定	/tia:ng ²² /	/ting ²² /	'to fix, to order'
207-25	錫	/sia:k ² /	/sik ⁵ /	'tin'

Additional morphemes not in the dialect survey list:

1. 鯪 /lia:ng⁵¹/ /ling⁵¹/ '(a kind of fish)'
2. 蓆 /tsia:k²/ /tsik²/ 'straw mat'
3. 瀝 /lia:k²/^c /lik⁵/ 'to drip, to trickle'

^a Only in the combination 油瓶 /jaw⁵¹ p'ia:ng⁵¹/ 'child brought to a second marriage'.

^b In such combinations as 地亭 /ti²² t'ia:ng⁵¹/ 'the ground in front of the house in the villages used for drying grains, etc.'.

^c In the names of two villages, 大瀝 /ta:j²² lia:k²/ and 細瀝 /saj²² lia:k²/ (from Chao).

Notes to Chapter 1

1. The segment called the "medial" was probably first extracted from the final by Bernhard Karlgren, whose reconstruction of Chinese remains the groundwork for most studies on historical Chinese phonology in this century.
2. Ball's system of transcription is not phonetic, nor is it truly phonemic since there are a number of redundancies. However, rather than introduce another set of bracketing notation that would be purely ad hoc, Ball's system will be treated as if it is phonemic.
3. The character ni 泥 has conventionally been used by Chinese phonologists to represent a class of words (of which it is a member) containing an initial which has been reconstructed as *n. The names of other initials are derived in a similar manner--a member containing a certain initial is used to represent the group possessing the same initial.
4. A discussion of "colloquial" and "literary" readings of characters is presented in section 1.5.
5. This complementary distribution of the dental nasal and the lateral initials in Amoy was brought to the writer's attention by Pulleyblank.
6. The semi-circle, which may or may not be underlined, is used by some traditional Chinese phonologists to mark tone. The presence of underlining indicates the Yang register, and its absence the Yin register. The semi-circle at the bottom-left corner of the transcription designates the Ping tone, top-left corner the Shang tone, top-right corner the Qu tone, and bottom-right corner the Ru tone. The names of the tones

refer to historical phonological classifications, while the Yin-Yang dichotomy reflects reflexes of historical initials. These terms will be further elucidated in this study at the appropriate place.

7. To conform with the present study, Chao's numerical system for tones rather than his tone letters is used for transcribing his Zhong-shan data. The velar nasal is transcribed as /ng/ for typographical reasons.
8. The zero initial / \emptyset / should not be confused with the vowel / \emptyset /, which will be introduced later, since the zero initial never occurs in the transcriptions. Moreover, they do not occur in the same environment.
9. As in the case of the names of the initials (see footnote 3 above), the character used to represent a given rhyme group also belongs to that group. Thus, Geng 梗 is both the name used for the rhyme group and is itself a member of that rhyme group. Furthermore, a rhyme group is composed of a number of "rhymes", which also possess names established by convention. As in the above cases, the character bearing the name of the rhyme is also a member of that rhyme.
10. The finals historically exhibit a four-way contrast of deng 等 'grade, division' (Karlgren translates the term as 'division', and Pulleyblank translates it as 'grade'). Prior to Pulleyblank's (1970-71) theory of the system of the four grades, in which the contrast among the grades is in terms of phonological distinctions in the medials, reconstruction of the grades had been accounted for partially in terms of distinctions in the medial and partially in terms of distinc-

tions in the rest of the final. The system of the grades will be explained in greater detail in chapter 2. For the present, let it suffice that the grade system in Pulleyblank's (1970-71) analysis concerns a four-way distinction of the medials involving the presence or absence of palatalization.

11. The Zi-hui is not strictly phonetic. Length, for example, is not marked, nor are glides consistently kept distinct from vowels. Moreover, initial glides which can be predicted from features in the following vowel may be omitted, as in the various Mandarin dialects.
12. Thanks is due to Pulleyblank for explaining the symmetry between [ɪ] and [ʊ], and hence providing additional support for the phonemic analysis proposed here in which they are treated as corresponding high vowels, /i/ and /u/ respectively.
13. The sequence [ɔ̯] is presented as the principal form for the cluster /ua/ in Egerod's vowel chart, with [ɔ̯:] included in round brackets. However, only the sequence [uɔ̯] occurs in the discussion of the various phonemes in the dialect. This latter form is probably a typographical error, and should in fact be [ɔ̯], which only appears on the vowel chart.
14. Unless stated otherwise, Cantonese pronunciations follow the phonetic transcription used by Hashimoto. A few minor changes are made in order that her transcription system conform with the present one; e.g., Hashimoto's glides [ĩ], [ỹ] and [ũ] are transcribed as [j], [ɥ] and [w] respectively, and her [k̚] and [k̚'] are transcribed as [kw] and [k'w].
Regarding [kw] and [k'w], whether one wishes to consider them as consisting of a sequence of sounds or a single labialized

segment is basically a phonological decision. In terms of historical phonology, it is advantageous to have the labial element separate from the initial and treated as a medial. Kai-He distinctions do not affect the historical initials but they do the medials, such that the labial element occurs in He-kou series, for example, whereas the palatal element (e.g., Zhong-shan medial /i/) occurs in the Kai-kou series. Synchronically, in terms of minimizing the total number of initials and finals, it is in fact more economical for both Cantonese and Zhong-shan to treat the labial segment as part of the initial by creating an extra pair of initials, namely labialized velars [kw] and [k'w]. Zhong-shan also has to contend with a palatal segment which has a very different distribution from /w/. Medial /i/ co-occurs with less than half of the rhymes (i.e., final minus the medial), but with almost all the consonantal initials. In this latter case, it is more economical to treat the palatal medial as part of the final than to create a palatalized series of initials, which would double the present inventory of initials. Thus, an alternate solution to what has been proposed here that would be more sympathetic to a synchronic analysis would be to create a labialized velar series for Zhong-shan, and recognize one medial only--namely, the vocalic medial /i/--which would be part of the final. A comparable solution is in fact adopted in setting up the Zhong-shan syllabary and the lexicon of colloquial Zhong-shan terms in chapter 3. The segments [kw] and [k'w] are treated there as part of the initial.

15. Obviously, among historical Chinese phonologists, there is not always consensus in interpretations and reconstructions. This is a case in point. J. Norman (personal communication), for instance, does not believe, as do Karlgren, Chao and Pulleyblank, that there was a distinction of medials between guan 關 and guan 官. Norman proposes that guan 官 (*kuən) passed through a stage *kuon and then became [ku:n] in Cantonese and Zhong-shan. Guan 關 (*kuän), on the other hand, Norman feels did not evolve in the same way because the nuclear vowel was front and hence much more resistant to rounding. Thus, Norman posits the difference between the two words in terms of a difference in the vowel rather than a difference in the medial.
16. Chao's medial /i/ in his syllables /ia/, /ia:ŋ/ and /ia:k/ is the full vowel [i]. These syllables are transcribed in the present study as /ja/, /ja:ŋ/ and /ja:k/ respectively, with /j/ analyzed as a full glide initial.
17. Norman pointed out that lip-rounding of the initial before [u:] also occurs in Peking Mandarin and probably in most other Chinese dialects.
18. Sheng 聲 also has the dictionary definition of 'sound, voice'.
19. Chao (p.68), on the other hand, records the phrase 'tomorrow morning' as 明朝早 [mən⁵¹ tsi:w⁵⁵ tsow¹³], with ming 明 pronounced [mən⁵¹] in this context.
20. The writer is indebted to David Strecker for bringing to her attention the concept of the "sesquisyllable" discussed in Matisoff's article. Another term for the phenomenon is that of the "minor syllable", which is used in England (Pulley-

blank, personal communication).

21. Pulleyblank informs the writer that the term "dimidiation" was used by Broodberg to refer to his theory that such rhyming compounds as kun-lun 崑崙, for the Kunlun Mountains in Tibet, were derived from monosyllables; thus, kun-lun 崑崙, for example, would be derived from *klun, etc.
22. Except for retaining the following in McCoy's transcription system: schwa [ə], symbol for the neutral tone [°], recording of a voiced [b], and use of a hyphen to indicate close juncture, his data has been phoneticized based on Hashimoto's system. A couple of variant forms for 'corner' recorded by McCoy (1966:185, fn.27) are: [kə°- lɔ:k³⁵] and [kə°- lɔ:k⁴].
23. The initial suggestion for the syllable /ham⁵¹/ in Zhong-shan was made by Pulleyblank.
24. Because Long-du is spoken in the Zhong-shan county and is moreover in the qu just west of Shi-qi (Qu II on Map 2), not only does the phonological system of (Shi-qi) Zhong-shan have the unique status of forming the Long-du literary pronunciations, but many Shi-qi forms have also been incorporated into the colloquial layer of the Long-du dialect.
25. Chinesisch und Tai, by K. Wulff, Copenhagen: Levin and Munksgaard, 1934.

CHAPTER 2. SYLLABARY AND LEXICON

A syllabary representing the repertoire of Zhong-shan syllables is presented in the following section. Wherever possible, a character is used to represent a given syllable. Single underlining of a character indicates colloquial reading, and double underlining specifies literary reading. Colloquial words with no character counterpart (or only coined characters to represent them) are marked using a circle "O", except for onomatopoeic syllables and foreign loans. The latter are distinguished by the use of an "X" in the syllabary since what is normally a rare or impermissible sequence can occur in an onomatopoeic expression or borrowed term. However, in the lexicon of colloquial Zhong-shan words that follow the syllabary, a circle is used to represent any characterless word, including onomatopoeic syllables and loan-words.

In both the syllabary and the lexicon, medial /w/ is treated as part of the initial in order to reduce the combinatory possibilities of initials and finals. Thus, besides /k/ and /k'/ there are also the clusters /kw/ and /k'w/. Medial /i/ continues to be treated as part of the final.

Besides the words elicited by the writer, the syllabary also includes some words recorded by Chao. Colloquial terms entered into the lexicon from Chao's article are also given explicit acknowledgement. In the dialect survey list, also, the source of data is likewise specified if no confirmation is made by the writer that a given word is also used by her informants or is pronounced in the same way by them.

For convenience of comparison, Chao's data are treated as

if they were transcribed using the present phonemic system. Hence, the final [ʊk], for example, is transcribed /uk/ for both the present data and Chao's. In Chao's original phonemic system, [ʊk] would have been transcribed as /ok/. (Note that in the present system /ok/, in turn, is phonetically [ɔ:k].)

Besides the ease of comparison, using a single phonemic system has another advantage: it facilitates collapsing of two sets of data with no real loss in information. Where the two sets of data differ, as in the case of the syllable [jɔ:ŋ] versus [jæ:ŋ], the present form of [jɔ:ŋ], phonemically /jong/, is used in the syllabary. Similarly, since the present data do not show the initial cluster /ngw/, no space is allotted for it in the syllabary.

As regards the lexicon, its primary purpose is to assign meaning to the many circles and X's scattered throughout the syllabary. Other items included merely serve as a sampling of Zhong-shan colloquial usage. No attempt is made here to produce an extensive lexicon. It should also be made clear that a number of the expressions, particularly the more vulgar or abusive terms, are not actually used by the writer's informants, but are expressions that can be found in the dialect and are used by the less educated.

In terms of format, the lexicon is arranged according to the Zhong-shan finals presented in Table 2 (a). The lexicon begins with the set of finals containing the high, front nuclear vowel /i/ (i.e., /i/, /iw/, /im/, etc.), followed by the set of finals containing /y/, and so forth. The following symbols and abbreviations appear in the lexicon:

~	=	repetition of the syllable that occurs at the left-most column
S	=	sentence
Q	=	question
CL	=	classifier
PRT	=	particle
sl.	=	slang
lit.	=	literally
esp.	=	especially
s.o.	=	somone
s.t.	=	something

Moreover, if no characters are assigned to a polysyllabic word, it will be assumed that the word contains characterless words, with or without the exception of the repeated syllable from the left-most column. Thus, there will be no case of "○~", "~○○", etc., actually recorded in the lexicon; they will simply be implied.

2.1. Syllabary Arranged According to Modern Zhong-shan Finals

[illegible]

[illegible]

Final Tone Initial	ia				uj				øj			
	55	51	13	22	55	51	13	22	55	51	13	22
p	x				杯			背				
p'		○	○		坯	培	倍	配				
m	○	○	○		妹	梅	每	妹				
f			○									
t	爹		○		堆			對	○			
t'					推	顏	眼	退				
n					○		餚					
l			○		○	雷	屨				累	淚
ts	遮		姐	借				罪	追		嘴	醉
ts'	車	斜	且	斜	催			碎	吹	隨	髓	翠
s	些	蛇	寫	射					雖	垂	水	瑞
k				○	○			創				
k'	○	騎										
ng												
h					灰	回	賄	晦				
ø					煨	○		會				
kw												
k'w												
w												
j									薺	榮	銳	

[illegible]

Final Tone Initial	iw				ow				aw			
	55	51	13	22	55	51	13	22	55	51	13	22
p	標		表		○		保		褒	○		○
p'	飄	瓢			○	袍	抱		○		剖	○
m	貓	苗	秒	廟	○	毛	○	帽	○	謀	某	茂
f									坯	浮	否	埠
t	刁			釣	刀		倒	道	猷	○	斗	豆
t'	挑	條	窈	跳	叨	桃	討	○	偷	頭	○	耨
n	○		鳥	尿			腦				紐	漏
l	○	燎	了	料	撈	牢	老	○	簞	流	縷	
ts	焦		剿	趙	遭		早	造	州		走	奏
ts'	超	朝	悄	俏	操	曹	草	躁	秋	綯	丑	臭
s	燒	韶	小	笑	騷		嫂	掃	修	愁	隻	受
k	嬌		矯	叫	高		稿	告	溝	○	狗	救
k'	○	喬	○	竅					鬪	求	舅	扣
ng		饒	擾			熬		傲	勾	牛	藕	
h	囂	搖	曉	○	蒿	豪	好	號	○	候	口	後
ø	妖		大	要	○		悞	悞	歐		嘔	匯
kw												
k'w												
w												
j									休	由	有	又

<div style="writing-mode: vertical-rl; transform: rotate(45deg);">Final Tone Initial</div>	a:w				ia:w				im			
	55	51	13	22	55	51	13	22	55	51	13	22
p p' m f	包 <u>貓</u>	 飽 茅	飽 跑 卯	豹 泡 貌								
t t' n l					掉				漆 拈	甜 黏 廉	點 臻 斂	店 念 殛
ts ts' s	嘲 抄 梢	巢 ○	爪 炒 稍	罩 鈔 湫					尖 籤	潛 蟾	諂 陝	漸 塹
k k' ng h ø	交 敲 ○ 哮 幼	○ 肴 ○	狡 巧 ○ 考 拗	教 靠 ○ 孝 拗	x				兼	鉗 嚴 嫌 炎	檢 染 險 掩	儉 驗 欠 厭
kw k'w w												
j												

Final Tone Initial	om				am				a:m			
	55	51	13	22	55	51	13	22	55	51	13	22
p p' m f					x							
t t' n l					○	x	○	○	擔 貪	談 南 藍	膽 淡 ○ 覽	淡 探 ○ 濫
ts ts' s					針 侵 心	x 尋 岑	枕 瘦 沈	浸 識 滂 禁	簪 參 三	慚	斬 慘 ○	站 杉 三
k k' ng h ø	甘 堪 ○ 酣 庵		感 憾	淦 憾 暗	今 堪 ○	x 琴 吟 ○	錦 姪 ○ ○ 措		鹽 ○		減 坎	鹽 喊
kw k'w w												
j					音	壬	飲	任				○

[illegible]

Final Tone Initial	un				øn				on			
	55	51	13	22	55	51	13	22	55	51	13	22
p p' m f	搬 潘 捫	盤 門	本 伴 滿	半 胖 悶								
t t' n l					敦	角		沌				
ts ts' s					遵 春 詢	秦 唇	卵 準 蠢 瞬	○ ○ ○ 順				
k k' ng h ø	官 寬	管 款 桓	冠 碗	冠 玩 喚 換					干 看安	稗 寒 早	幹 岸 看按	
kw k'w w												
j												

Final Tone Initial	an				a:n				ing			
	55	51	13	22	55	51	13	22	55	51	13	22
p p' m f	賓 蚊 分	貧 文 墳	稟 品 閨 粉	笨 噴 問 份	班 扳 ○ 翻	蠻 凡	板 ○ 晚 反	扮 盼 慢 犯	冰 餅	平 明	丙 甥 暝	并 聘 命 ○
t t' n l	敦 各 論	○ ○ 鄰	蘆 ○ 撚	沌 ○ 論	單 灘 欄	彈 難 蘭	坦 ○ 懶	蛋 歎 難 爛	丁 聽 ○	亭 寧 陵	頂 ○ 領	訂 ○ 任 令
ts ts' s	真 親 新	陳 神	振 疹 筍	盡 親 信	餐 山	殘 潺	盞 產 散	贊 燦 散	精 青 升	晴 承	井 請 省	淨 緝 剩
k k' ng h ø	跟 ○	勤 銀 痕	緊 近 忍 很	近 ○ 報 恨	奸 ○ ○ 刊	顏 閒	簡 ○ 眼 罕	間 ○ 雁 限 按	京 輕 ○ 兄 應	× 鯨 凝 形 仍	景 頃 ○ 影	徑 磬 認 興 應
kw k'w w	君 均 溫	裙 勻	滾 綢 穩	郡 因 運	關 ○ 彎	還	挽	慣 ○ 幼			永	泳
j	恩	人	忍	印								

Final Tone Initial	ung				ong				ang			
	55	51	13	22	55	51	13	22	55	51	13	22
p p' m f	○	x 蓬 蒙	捧 捧 憎	碰 夢	幫 芒 方	旁 忙 房	榜 網 恍	謗 傍 望 放	崩 烹 ○	朋 萌 ○	猛	僇 孟
t t' n l	東 通 ○ 隆	○ 同 農 龍	懂 桶 隴	凍 痛 弄	當 湯	堂 囊 郎	黨 躺 曩 朗	當 燙 浪	登 ○	騰 能	等 等 冷	凳 ○
ts ts' s	中 聰 鬆	蟲 叢 叢	種 重 懲	仲 ○ 送	臧 倉 桑	牀	創 爽	葬 撞 喪	曾 ○ 生	曾	省	贈 ○
k k' ng h ø	公 空 風 ○	x 穹 紅	拱 孔 捧	貢 控 鳳 竈	岡 扛 康	狂 昂 航	講 慷 ○	鋼 抗 ○ 項	更 ○	x 恆	互 哽 肯 ○	更 ○ 杏
kw k'w w									車 轉	x		○
j	翁	戎	勇	用	汪 央	黃 羊	往 仰	旺 樣	泓	弘		暈

[illegible]

Final Tone Initial	ip		op		ap		a:p		ia:p		
	5	2	5	2	5	2	5	2	5	2	
p p' m f											
t t' n l	磔 帖 鐸 獵				○ ○ 粒 笠	○ ○ 立	答 揚 納 臘	○			
ts ts' s	接 輓 耳				汁 緝 濕	集 輯 十	雜 插 雲				
k k' ng h ø	x 劫 業 怯 葉		鴿 磔 合		急 級 ○ 合 ○	及 炭 廿	夾 ○ 挾 鴨	x			
kw k'w w											
j					邑 入		○				

<div style="writing-mode: vertical-rl; transform: rotate(45deg);">Final Tone Initial</div>	it	yt	ut	øt	ot	at
	5 2	5 2	5 2	5 2	5 2	5 2
p p' m f	○ 撇減		x 鉢 潑末			畢 弼 匹 蜜 ○ 佛 忽
t t' n l	○ 跌鐵 ○ 列	○ 奪 x 脫 持				○ 突 ○ ○ 栗 ○
ts ts' s	○ 節切屑	○ 掇撮雪		卒出戌 猝 朮		質七蟲 姪 實 ○
k k' ng h ø	○ 結揭熱歇噎 ○ 擊子	決子月血悅	x 括 闊活		割 喝	吉咳訖 迄瞎
kw k'w w						骨屈屈 窟 核 ○
j						一 日

Final Tone Initial	a:t		ia:t		ik		uk		ok		ak	
	5	2	5	2	5	2	5	2	5	2	5	2
p p' m f		八 抹 伐		x x	逼 僻 孽 免		卜 〇 〇	僕 撲 木	〇 剝 博 扑 莫 縛		叱 墨 墨	
t t' n l		達 撻 捺 棘		x	的 忒 匿 歷 敵 睡 力		篤 禿 〇 〇	獨 六	度 託 諾 落 〇		得 忒 〇 〇	特 〇 肋
ts ts' s		扎 擦 殺		x	織 赤 色 直 食		竹 速 宿 穀 曲	族 俗 局	提 作 戮 索		則 測 塞	澤 賊
k k' ng h ø		〇 乞 壓 壓			棘 x 憶 翼		哭 屋	斛	〇 各 摧 鄂 學 惡		革 刻 扼 赫 厄	逆 〇
kw k'w w		刮 挖			隙 疲							〇 〇
j							次 肉		苦			

Final Tone Initial	a:k		io:k		ia:k		(Syll.)			
	5	2	5	2	5	2			55	51 13 22
p p' m f	迫	百 拍 麥 ○			壁 劈				○	
t t' n l	x ○ ○		○ 琢		笛 踢					
ts ts' s		窄 策 ○	雀 勺 削		脊 刺 石					
k k' ng h ∅		格 額 客 鉅 黑	脚 却 x		屐 劇				吳 五 悟	
kw k'w w	○	捆 ○ 或								
j		吃								

2.2. Lexicon of Colloquial Terms Arranged According to Modern Zhong-shan Finals.

i

- pi⁵⁵ ○ /pi⁵⁵ pi⁵⁵/ = a whistle.
- p'i⁵⁵ ○ = worn.
- mi⁵⁵ 寐 = to sleep.
- mi⁵¹ 迷 = /fa:t² mi⁵¹ mung²²/ (發~夢) = to have a dream.
- ti⁵⁵ 的 = some (Chao). (More frequently: /naj⁵⁵/.)
- ti⁵¹ ○ /ti⁵¹ ti⁵¹ tam⁵¹ tam⁵¹/ = said of s.o. who is quick-footed or nimble.
- ni⁵⁵ 呢 = Q-PRT.
- li⁵⁵ ○ /li⁵⁵ tsaj¹³/ (~仔) = a small basket; a bamboo-type collander or sieve.
- li⁵⁵ ○ /la:w⁵¹ li⁵⁵/ (撈~) = a wired strainer with long handle.
- li⁵⁵ 哩 /ki⁵⁵ li⁵⁵ kwa:j⁵⁵ la:j⁵⁵/ (幾~乖拉) = depicts sound of speech that is unrelated and unconnected (Chao).
- li²² 利 = tongue.
- tsi⁵¹ ○ = to poke s.o. with finger (from 指 /tsi¹³/?).
- tsi⁵¹ ○ /sap⁵ tsi⁵¹ tsi⁵¹/ (濕~~) = very moist.
- tsi⁵¹ ○ /tsi⁵¹ tsi⁵¹ tsa⁵¹ tsa⁵¹/ = talkative, gossipy.
- tsi⁵¹ ○ /tsi⁵¹ tsi⁵¹ tsam⁵¹ tsam⁵¹/ = muffled sound of voices.
- ts'i⁵⁵ 糲 = to stick; /ts'i⁵⁵ saw¹³ ts'i⁵⁵ kiok²/ (~手~脚) = very sticky (lit., sticks to hands and feet).
- ts'i⁵¹ 池 = small pond. (Note: /t'ong⁵¹/ 塘 = larger pond; /ts'i⁵⁵ t'ong⁵¹/ (池塘) = pond (neutral).)
- si⁵¹ 時 /si⁵¹ man⁵¹/ (~閒) = talk; /si⁵¹ man⁵¹ to⁵⁵ ko²² fa:n²²/ (~閒多過飯) = more talk than rice--very talkative.
- 時 /t'in⁵⁵ si⁵¹/ (天~) = the weather.

- si¹³ 屎 /si¹³ fat⁵/ (~ 窟) = rectum.
- si²² 是 /si²² kwa:n⁵⁵/ (~ 關) = because.
- ki⁵⁵ 饑 /t'u¹³ ki⁵⁵/ (肚 ~) = hungry.
- ki⁵¹ ○ /ki⁵¹ li⁵¹ ka:w⁵¹ la:w⁵¹/ = noisy talking--as of a group.
- ki²² 記 /ki²² sam⁵⁵/ (~ 心) = memory (Also: /ki²² sing²²/ ~ 性).
- k'i⁵⁵ 欹 = to turn around (e.g., head) (Chao).
- ngi⁵⁵ ○ /tsa:ng⁵⁵ ngi⁵⁵ nga:j¹³/ (爭 ~ ○) = almost (i.e., lack just a little bit).
- hi¹³ 起 = to lift up.
- i⁵¹ 而 /i⁵¹ ka⁵⁵/ (~ 加) = especially, even more.

iw

- miw¹³ 𦏧 /miw¹³ tsøj¹³ miw¹³ sit²/ (~ 嘴 ~ 舌) = to sneer.
- t'iw⁵¹ 條 = CL for long, slender objects (e.g., necklace, thread, street, etc.); also used for trees.
- niw⁵⁵ 𦏧 = slender; /niw⁵⁵ pa:ng⁵⁵ pa:ng⁵⁵/ = very slender.
- /niw⁵⁵ nang⁵⁵/ = precariously; /k'i¹³ tak⁵ niw⁵⁵ nang⁵⁵/ (企得 ~ ○) = to be standing precariously (e.g., on a high ledge).
- liw⁵⁵ ○ = to poke finger in corners, small holes, etc.
- tsiw²² 𦏧 = to chew.
- ts'iw⁵⁵ ○ = to pry open; to dig (e.g., a ditch).
- k'iw⁵⁵ ○ = to cross the legs; to scoop out (e.g. with spoon).
- k'iw¹³ ○ = to cross the legs.
- = coincidental, extraordinary, unexpected.
- 𦏧 /k'iw¹³ t'aw⁵¹/ (~ 頭) = of the garlic family, used for pickling.
- hiw¹³ ○ = to understand.
- hiw²² ○ = to stick out (e.g., lid of an opened tin can). (Also: /hia:w²²/).

im

- tim²² 据 = straight; /tim²² pat⁵ lat⁵/ (~ 竿 ○²²) = very straight (Also: /tim²² pat⁵ pat⁵/, /tim²² plat⁵/).
- him⁵¹ 嫌 = to mind, to be fussy, to dislike.
- im²² 厭 /pa:k² im²²/ = peevish (referring to children only).

in

- p'in¹³ ○ = diaper. (Also: /niw²² p'in¹³/ (尿 ~), /si¹³ p'in¹³/ (屎 ~).
- min⁵⁵ 邊 = where. (Also: /min⁵⁵ naj⁵⁵/, /naj⁵⁵/, /min⁵⁵ /ts'y²²/ (~ 處). (Phonetic variant: /pin⁵⁵/).
- 明 /min⁵⁵ tsow¹³/ (~ 早) = tomorrow.
- t'in⁵⁵ 天 /how¹³ t'in⁵⁵/ (好 ~) = clear day.
- nin⁵⁵ ○ /ngaw⁵¹ nin⁵⁵/ (牛 ~) = cow's milk (Chao).
- tsin⁵⁵ 顫 /tsin⁵⁵ hon⁵¹ tsin⁵⁵ la:ng¹³/ (~ 寒 ~ 冷) = shivering cold, to have chills.
- sin⁵⁵ 先 /t'aw⁵¹ sin⁵⁵/ (頭 ~) or /tsia:ng²² sin⁵⁵/ (正 ~) = just a while ago, just a moment ago.
- sin²² 剗 /sin²² kaj⁵⁵/ (~ 鷄) = castrated chicken. (But: one who castrates chicken is called: /im⁵⁵ kaj⁵⁵ low¹³/ 腌鷄佬).
- hin¹³ ○ = to lift up (e.g., mat), to peel off.
- min⁵¹ 眠 /min⁵¹ ts'ong⁵¹/ (~ 牀) = bed.

ing

- fing²² ○ = to toss carelessly.
- /tiw²² tiw²² fing²²/ (掉掉 ~) = to be hanging loosely or precariously.
- ting¹³ ○ /ting¹³ taj²²/ = fussy (e.g., to describe the way someone eats).
- ning⁵⁵ 擰 = to hold; to bring.

king⁵¹ ○ /king⁵¹ ling⁵¹ kam⁵¹ lam⁵¹/ or /king⁵¹ ling⁵¹ kung⁵¹ lung⁵¹/ = of noise from stamping feet, moving furniture, etc. (Also: /kling⁵¹ klam⁵¹/ or /kling⁵¹ klung⁵¹/).

ip

sip² 閃 /t'in⁵⁵ sip²/ (天~) = lightning.

𢵿 = to wedge, to slide under a narrow opening.

kip⁵ 篋 /p'i⁵¹ kip⁵/ (皮~) = suitcase. (Hashimoto (p. 349) acknowledges McCoy's analysis that [ki:p⁵] for 'bag, suitcase' is a loan word from English 'grip'.)

ngip⁵ ○ = to blink; /ngip⁵ nga:n¹³/ (~眼) = to blink; in a wink of the eye (i.e., very quickly).

○ /ngip⁵ si¹³/ = stingy.

○ = to bite (e.g., of small insects).

ip² 醃 = to preserve in salt or vinegar; by extension, means: to treat cruelly a daughter-in-law or children of the husband's earlier marriage.

it

mit⁵ 搥 = to pinch; to tear up; to peel.

tit⁵ ○ /(jat⁵) tit⁵ si¹³ kam²² naj⁵⁵ tsaj¹³/ ((-))~○ (廿○仔) = a very tiny little bit, a very small amount.

○ /tit² tit⁵ tow¹³/ (跌~倒) = to fall down.

lit⁵ ○ = to be in a knot (as in wrestling); /k'it⁵ lit⁵/ = a knot. (Also: /k'lit⁵/).

tsit⁵ ○ = to tickle; to squeeze out.

ts'it² ○ = to dote on, to like (e.g., a child), /fa:n²² jan⁵¹ ts'it²/ (犯人~) = lovable (of a child). (But older generation use the phrase: /fa:n²² jan⁵¹ tsang⁵⁵/ (犯人憎), lit., 'detestable').

kit⁵ ○ = to jab, to pierce.

k'it⁵ ○ (See: /lit⁵/). (結).

ngit² 熱 /ngit² t'aw⁵¹/ (~頭) = sunshine.

ik

tik⁵ ○ /tik⁵ sik⁵/ = small, cute and elegant.

t'ik⁵ ○ = to make a check mark '✓'.

扌 = the 'hand' radical.

○ /t'iw⁵⁵ t'ik⁵/ = fussy, critical.

nik⁵ 擷 = to take s.t. along.

lik⁵ ○ /pik⁵ lik⁵ pa:k⁵ la:k⁵/ or /plik⁵ pla:k⁵/ = crackling sound--of fire, or string of firecrackers.

ts'ik⁵ ○ = to yank; to straighten up (e.g., clothes).

sik⁵ 識 /m⁵¹ sik⁵ sing²²/ (唔~性) = naive; to be misbehaving.

k'ik⁵ ○ = to clog, to jam.

○ /k'ik⁵ lik⁵ k'ap⁵ lap⁵/ or /k'lik⁵ k'lap⁵/ = odds and ends; clattering sound--as of dishes.

y

k'y⁵¹ 渠 = he, she, it; /k'y⁵¹ ti²²/ (~地) = they.

hy⁵¹ ○ = to keep warm by putting over low heat.

○ /hy⁵¹ tow¹³/ (~倒) = to worry (Chao).

y¹³ 雨 /to⁵⁵ y¹³ sɔj¹³/ (多~水) = a lot of rain.

yn

lyn⁵⁵ 孃 = crooked.

lyn¹³ ○ = to roll in s.t. (e.g. flour, dirt); to coat.

○ = to handle (esp. a lot or too much).

kyn⁵⁵ 捐 = to crawl through.

kyn¹³ 卷 = classifier for books (also pronounced /kun¹³/).
(Also use: /pun¹³/ 本 --a more modern term).

yt

- tyt⁵ ○ = to protrude; to pout.
- t'yt⁵ ○ /wa:t² t'yt⁵ t'yt⁵/ (滑~~) = very slippery.
- lyt² ○ /lyt² hi¹³ jat⁵ kaw⁵¹ law⁵¹/ (~~起一嘴○) = to form a clump.
- tsyt⁵ ○ = to give a kiss.
- tsyt² ○ = a dull, gnawing pain.
- kyt² 撇 = a piece that is one-half or less; /ta:j²² pun²² kyt²/ (大半~~) = a piece that is larger than half.
- = thick (of liquid). (Cantonese: [ki:t³].)
- ngyt² 月 /ngyt²/ or /ngyt² kung⁵⁵/ (~~宮) = the moon.

u

- pu¹³ 斧 /pu¹³/ or /pu¹³ ts'øj⁵¹/ (~~鎚) = an axe (But: /ts'øj⁵¹/ (鎚) = a hammer).
- p'u⁵⁵ 鋪 /p'u⁵⁵ koj²²/ (~~蓋) = luggage.
- p'u⁵¹ 浮 = to float; /la:w⁵¹ p'u⁵¹/ (撈~~) = to fish or scoop out; to lift up (e.g., table) by two or more people.
- mu⁵⁵ ○ /a²² mu⁵⁵/ (亞~~) = woman servant (Chao).
- mu¹³ 姆 /a²² mu¹³/ (亞~~) = mother (Also: /a²² ma¹³/.) (Chen's mother calls her mother /a²² tsia¹³/ 亞姐).
- /i⁵¹ mu¹³/ (姨~~) = mother's older sister (older term; a more modern one is: /i⁵¹ ma⁵⁵/ 姨媽).
- mu²² 霧 = fog; /mu²² sɔj¹³/ (~~水) = dew.
- tu⁵⁵ 都 = still, yet; also.
- nu⁵⁵ ○ = that; /nu⁵⁵ naj⁵⁵/ = those; there.
- lu⁵⁵ 嚕 /ku⁵⁵ ku⁵⁵ lu⁵⁵ lu⁵⁵/ (咕咕~~) = to talk in an indistinct manner (Chao).
- = inchoative, S-final marker. (Also: /lu²²/.)
- tsu²² ○ /Verb + tsu²² sin⁵⁵/ (Verb + ~先) = V-first.

- ts'u¹³ 儲 = to save, to collect.
- ku⁵⁵ ○ = this; /ku⁵⁵ tsan²²/ (~陣) = and then.
- k'u⁵¹ 糊 /tsi⁵⁵ ma⁵¹ k'u⁵¹/ (芝麻~) = sesame paste.
- /ts'ɔŋk'u⁵¹ tsaj¹³/ (春~仔) = young child's penis.
(Also: /tsaj⁵⁵ tsaj⁵⁵/.)
- hu⁵⁵ 夫 /hu⁵⁵ niong⁵¹/ (~娘) = a married woman;
/hu⁵⁵ niong⁵¹ tsaj¹³/ (~娘仔) = a girl.
- hu²² ○ = to throw off (e.g., blanket).
- u⁵¹ 糊 = to paste; /tsiong⁵⁵ u⁵¹/ (漿~) = paste.
- u⁵⁵ 淤 = dirty; /u⁵⁵ tsow⁵⁵ la:t² t'a:t²/ (~糟○○) = dirty.
- 烏 /u⁵⁵ ham⁵¹ ham⁵¹/ = very dark and murky;
/u⁵⁵ t'in⁵⁵ ha:k⁵ ti²²/ (~天黑地) = very dark--
as of pending storm.

uj

- puj²² 背 /haw²² puj²² taj¹³/ (後~底) = at the back, behind.
- muj⁵⁵ 妹 /muj⁵⁵ tsaj¹³/ (~仔) = a purchased maid.
- nuj⁵⁵ ○ = there, at that place.
- luj⁵⁵ ○ = a kind of clam (Chao).
- luj⁵¹ 雷 /luj⁵¹ kung⁵⁵/ (~公) = thunder; /ha:ng⁵¹ luj⁵¹/ (行~) or /hiong¹³ luj⁵¹/ (响~) = to thunder.
- kuj⁵⁵ ○ = here, at this place.
- uj⁵¹ ○ = Hey!

ung

- pung⁵¹ ○ = sound of hitting or hammering; sound of falling object hitting a surface.
- p'ung⁵⁵ ○ = a surge of fragrance or odour.
- /p'ung⁵⁵ p'aw²²/ = fluffy.

- tung⁵¹ ○ = to stick s.t. firmly onto the ground.
- t'ung⁵¹ ○ /t'ung⁵¹ p'o⁵¹/ (~ 婆) = shaman or medium (female);
 /t'ung⁵¹ kung⁵⁵ tsaj¹³/ (~ 公仔) = shaman or medium (male). (Most shamans are women. They are not found in every village, although both Ku-chong and Yuan-feng had one.)
- nung⁵⁵ ○ = burnt.
- tsung²² 重 = still, yet. (More frequently use: /wa:n⁵¹/ 還).
- ts'ung²² ○ /ts'ung²² ha²²/ (~ 下) = just below, the next one down.
- sung²² 餸 = food to be eaten with rice.
- kung⁵⁵ 公 /a²² kung⁵⁵/ (亞 ~) = paternal grandfather;
 /Surname + kung⁵⁵/ = maternal grandfather.
- ung¹³ 擁 = to push.
- jung⁵⁵ ○ = to fertilize (Chao--he also thinks that it may be a sound change from /ung⁵⁵/ 墾).

ut

- put⁵ ○ = sound of a horn; /put⁵ put⁵ ts'ia⁵⁵/ (~ ~ 車) = car (old term used by village children).
- p'ut² 撥 /p'ut² ta:j²² k'waj⁵¹ sin²²/ (~ 大葵扇) = to be a matchmaker (lit., to fan with a large palm-leaf fan).
- kut⁵ 噉 /kut⁵ kut⁵ sia:ng⁵⁵/ (~ ~ 聲) = sound of swallowing.

uk

- puk² ○ = dusty; /puk² ts'an⁵¹/ (~ 塵) = dust.
 撲 = to put one's head down on one's arms.
- p'uk⁵ 仆 = to topple; to be turned upside down.
- muk⁵ ○ = to predict, to guess; /muk⁵ tsung²²/ (~ 中) = to guess correctly.
- tuk⁵ ○ = to prick.

- nuk⁵ ○ = to move, unsteady; /ni⁵⁵ nuk⁵/ = unsteady, wobbly (e.g., of legs of a table).
- luk⁵ 撻 = to roll; a roll, a loaf.
○ /fa⁵⁵ li⁵⁵ luk⁵ luk⁵/ (花 ○ ~ ~) = very bright and colourful.
- luk² 漚 = to scald.
- ts'uk⁵ ○ /ts'uk⁵ hi¹³ ts'uk⁵ hi¹³/ (~起~起) = to be bunched up.
- suk⁵ ○ = rancid (e.g., of spoilt meat, rice, etc.).
叔 /a²² suk⁵/ (重~) = father's younger brother; a term of address for s.o. younger than one's father; father (used by some, e.g., Chen), when a male is "adopted" by his father's deceased older brother who is childless--in order that the latter may have posterity).
- juk⁵ 郁 = to move; /juk⁵ juk⁵ kung²²/ = to wriggle about (i.e., can't sit still).

ø

- tø⁵⁵ ○ = to scold.
- lø⁵⁵ 鏟 = to remove food from inside mouth with tongue.
- lø⁵¹ 螺 /t'in⁵¹ lø⁵¹/ (田~) = fresh-water snails.
- tsø¹³ ○ = to eat up.
- sø⁵¹ ○ /sø⁵¹ sø⁵¹ sia:ng⁵⁵/ (~~聲) = sound of running water.
○ /si⁵¹ si⁵¹ sø⁵¹ sø⁵¹/ = depicts (rude) manner of guzzling down food.
- kø⁵⁵ ○ = to roll up.
- kø¹³ ○ = to roll up (e.g., cigarette, scroll, mat, etc.).
- kø²² 鋸 = to saw (s.t. small).
- k'ø⁵¹ 茄 = eggplant; /fa:n⁵⁵ k'ø⁵¹/ (番~) = tomato.
- ø⁵¹ ○ = S-final particle of assertion.

øj

- tøj⁵⁵ ○ /tam²² tøj⁵⁵/ (象~) = shabby.
 ts'øj⁵⁵ 炊 = to steam-cook; of smoke going up the chimney.
 吹 /ts'øj⁵⁵ haw¹³ sa:w²²/ (~口哨) = to sing (But in modern usage, it mean to whistle, esp. at girls).

øn

- løn²² ○ /løn²² tsøn²²/ = clumsy, troublesome, nuisance.
 tsøn⁵⁵ 津 /tsøn⁵⁵ si⁵⁵/ (~絲) = vermicelli.
 tsøn²² ○ (See: /løn²²/)
 ts'øn²² ○ /tin⁵⁵ tin⁵⁵ ts'øn²² ts'øn²²/ (癲癲~~) = insane, crazy.

øt

- ts'øt² 摔 = to slide down.
 ngøt² ○ = sound of snoring.

o

- p'o⁵⁵ 舍 = CL for trees.
 菠 /p'o⁵⁵ ts'oj²²/ (~菜) = spinach.
 p'o⁵¹ 婆 /a²² p'o⁵¹/ (亞~) = paternal grandmother;
 /Surname + p'o⁵¹/ = maternal grandmother;
 /ka⁵⁵ p'o⁵¹/ (家~) = mother-in-law.
 mo⁵⁵ ○ /mo⁵⁵ si⁵⁵ t'o⁵¹/ = slow, to be a slow-poke.
 摸 = to touch; /mo⁵⁵ ha:m⁵¹ ngy⁵¹ su¹³ maj¹³ t'a:p²/ (~鹹魚數米○) = touch salted fish, count rice bin--constantly counting what one has, how much money one is making, etc.
 to⁵⁵ 多 /to⁵⁵ fa:n⁵¹/ (~煩) or /to⁵⁵ fa:n⁵¹ sa:j²²/ (~煩咗) = thank you (normally said by recipient of a favour).

- t'o⁵⁵ 拖 /t'o⁵⁵ ha:j⁵¹/ (~鞋) = slippers.
- t'o⁵¹ O /t'o⁵¹ laj²²/ = to involve, to implicate.
- no⁵¹ 揉 = to rub with the fingers.
- lo⁵⁵ 囉 /lo⁵⁵ so⁵⁵/ (~唆) = wordy.
- O /lo⁵⁵ jaw⁵¹/ = derrière.
- lo²² O /ta¹³ ha:m²² lo²²/ (打O~) = to yawn.
- O /lo²² haw⁵¹/ (~喉) = denotes feeling in throat after eating oily, fried food.
- tso⁵¹ 鋤 = to axe.
- ts'o⁵¹ 鋤 = an axe.
- ko⁵⁵ 個 = this (Chao, variant form: /ko²²/).
- ko²² 個 = possessive suffix; CL (general); this (Chao and Ball).
- O = to rinse.
- o⁵⁵ O = to eliminate (vulgar term).
- 哦 = Q-PRT (phonetic variant: /a⁵⁵/啊).
- o⁵¹ 哦 = Oh! Ah!
- o²² 哦 = nodding particle.

oj

- p'oj⁵¹ O = an exclamation of disgust or exasperation.
- t'oj⁵⁵ 胎 /t'aw⁵¹ t'oj⁵⁵/ (投~) or /t'aw⁵¹ tsy⁵⁵ t'oj⁵⁵/ (投猪~) = Drop dead!
- noj²² 耐 = a long time.
- loj⁵¹ 來 = to come. (Cantonese: [lɛj²¹])
- ts'oj⁵⁵ 唉 /ts'oj⁵⁵ ko²² ni¹³/ (~O你) = Fie on you!
- ts'oj⁵¹ O = to leave it up to s.o.
- ngo²² O /ngo²² soj²²/ = irritating (e.g., as of a canker sore).
- oj⁵⁵ O = to carry an infant on the back. (Cant.: [mɛɪ⁵³]).

oj²² 愛 = to love; to want; to need; /oj²² si⁵¹/ (~時) = sometimes.

ow

pow⁵⁵ 煲 = to cook (in water); a cooking pot.
 p'ow⁵⁵ 〇 = perfective suffix (Variant forms: /how⁵⁵/, /ow⁵⁵/).
 p'ow¹³ 泡 = suds.
 mow⁵⁵ 〇 /fa:t² mow⁵⁵/ (發~) (Chen suggests it came from English 'mold') 'to become moldy'.
 mow¹³ 冇 = not have.
 t'ow²² 套 = a case, envelope; a suit (of clothing).
 low⁵⁵ 撈 = to mix.
 low⁵¹ 勞 /low⁵¹ low⁵¹ luk⁵ luk⁵/ = hard-working (of one who toils).
 low²² 〇 = to pour in and out; to pour through a funnel; a funnel.
 tsow²² 灶 /tsow²² fat⁵/ = a cooking stove--has an opening in the front for putting in fuel, and openings on top of the stove for a wok, kettle, etc. The ones used in Ku-chong and some houses in Shi-qi had a large hole towards the front of the stove for the wok, and two smaller holes in the back for kettles, pans, etc. (fat⁵ is 窩?).
 ngow⁵¹ 擎 = to shake; /ngow⁵¹ ngow⁵¹ nap²/ = wobbly, shaky.
 how¹³ 好 /m⁵¹ how¹³/ (唔~) or /mow¹³/ (from:唔好) = don't₂ (negative imperative). (Zhong-shan also use /mok²/ 莫).
 ow⁵⁵ 〇 (See /p'ow⁵⁵/)

om

hom¹³ 〇 = CL for leafy vegetables (e.g., spinach), clumps of grass, bushes, etc.

on

- kon¹³ 秆 = straw. (Also used for fuel in the cooking stove.);
 /sow²² kon¹³/ (掃~) = (straw) broom.
- on⁵⁵ 安 = to put, to place; /on⁵⁵ jan⁵¹/ = (~人) = mother-in law.

ong

- t'ong⁵¹ 糖 /ma⁵¹ t'ong⁵¹/ (麻~) = candy.
- ngong²² 癡 = crazy.
- hong¹³ 〇 = stale.
- jong¹³ 挾 = to shake out.

op

- kop² 合 = compatible.

ot

- hot² 〇 = to scold, to reprimand.

ok

- pok⁵ 卜 = to hit hard on the head.
- p'ok² 〇 = to chop (e.g., wood).
- mok⁵ 剥 = to peel (e.g., shell); /mok⁵ fa⁵⁵ sang⁵⁵/ (~花生) = to shell peanuts; to be the third party (sl.).
- mok² 莫 = don't (negative imperative); /mok² fi⁵⁵/ (~非) = could it be possible that ... (Approximately similar to the Cantonese use of [m²¹ t'ʊŋ⁵³] 唔通).
- /jong²² mok²/ (約~) or /siong²² mok²/ (上~) = approximately.
- t'ok² 托 = to carry with head or shoulder.

- t'ok² ○ = to explore
- lok⁵ ○ = to extract teeth..
- ~~落~~ /kok² lok⁵ t'aw⁵¹/ or /klok⁵ t'aw⁵¹/ (角~頭) = corner.
- lok² 咯 = inchoative S-final marker (variant: /ok²/).
- ts'ok² ○ = to support s.o. physically.
- = to quiz orally.
- k'ok⁵ ○ = to knock on the head.
- ngok² 号 = to raise the head, or tilt it up.
- a
- pa⁵¹ ○ /ham⁵¹ pa⁵¹ la:ng⁵¹/ or /ham⁵¹ pla:ng⁵¹/ = all (凡).
- p'a⁵¹ ○ = to paddle (e.g., canoe).
- ma⁵⁵ 孖 = twin.
- = /ma⁵⁵ ku⁵⁵ in⁵⁵/ (~○煙) = cigar;
- /ma⁵⁵ ku⁵⁵ in⁵⁵ taj²²/ (~○煙蒂) = cigarette butt;
- (/ma⁵⁵ ku⁵⁵/ is borrowed from the last two syllables of Portuguese 'tobaco'--term used in Shi-qi. Observe that the Portuguese word was recorded in the Sino-Portuguese glossary using the Chinese words 大孖吉, pronounced in Zhong-shan today as /ta:j²² ma⁵⁵ ku⁵⁵/).
- ma²² ○ = a pause-PRT at the end of a clause.
- ta⁵⁵ 打 = dozen (from English 'dozen').
- ta⁵¹ ○ = still, yet (Also: /wa:n⁵¹/還).
- ta¹³ 打 /ta¹³ li¹³/ (~理) = to take care of a place (e.g., a room), to keep a place clean.
- na⁵⁵ 瘡 = a scar.
- = to stick; /ts'i⁵⁵ na⁵⁵/ (黏~) = sticky;
- /m⁵¹ na⁵⁵ ka:ng⁵⁵/ (唔~○) = don't connect (as of unrelated topics).

- na²² 哪 = an interjection--Here! (Chao).
- la⁵⁵ ○ /ka⁵⁵ la⁵⁵ ha²²/ (~ 〇下) or /kla⁵⁵ ha²²/ = armpit (胳).
- 啦 = S-PRT--exclamatory particle of affirmation (from /lok² a⁵⁵/ 咯啊).
- la⁵¹ ○ /la⁵¹ a:j⁵⁵/ (~ 埃) = dirty.
- 啦 = S-initial particle--There!
- la¹³ ○ = pungent, alkaline taste.
- la²² 鏗 = a crack (e.g., in the wall).
- t_{sa}⁵¹ ○ = /tsi⁵¹ tsi⁵¹ tsa⁵¹ tsa⁵¹/ = yakkety yak, talkative, gossip.
- t_{sa}²² ○ = yet (Informants claim it is from /mi²² a²²/ 末〇).
- ts'a⁵⁵ ○ = bad.
- sa²² ○ = to loosen (from /san²²/ 散?).
- ka⁵⁵ ○ /ka⁵⁵ ma¹³ si²²/ = an "X".
- 家 /ka⁵⁵/ or /ka⁵⁵ ha¹³/ (~ 下) (Chao has /ka⁵⁵ ha²²/) = now. (There is a saying that goes: 佛山講<家下>, 廣州講<而家>: Foshan uses 家下, Canton uses 而家 (i.e., [ji:²¹ ka:⁵³]).
- 家 = elder sister; e.g., /ta:j²² ka⁵⁵/ (大~) = eldest sister; /ngi²² ka⁵⁵/ (二~) = second eldest sister, etc. (Also used: /tsi¹³/ 姊 in the same environment for 'eldest sister', but /ngi²² tsi¹³/ (二姊) is only used in salutations in letters).
- ka⁵¹ ○ = standing position with legs astride.
- k'a⁵⁵ ○ /k'a:w⁵⁵ k'a⁵⁵/ = to make an "X".
- /k'a⁵⁵ k'a⁵⁵ siw²²/ (~ 笑) = to laugh.
- k'a⁵¹ 蚱 /k'a⁵¹ tsa:t²/ (~ 甲) = cockroach.
- nga⁵⁵ 仔 /nga⁵⁵ tsaj¹³/ (~ 仔) = a baby;
- /ta:j²² nga⁵⁵/ (大~) = big baby--but used for the eldest of one's younger brothers;
- /ngi²² nga⁵⁵/ (二~) = next eldest of one's younger brothers, etc.

- nga²² ○ /nga²² tsa²²/ = awkward, bulky.
 ○ /nga²² tsa²²/ (～腫) = said of s.o. who hogs space, food, the road, etc.
- a⁵⁵ 啊 = Q-PRT (phonetic variant: /o⁵⁵/ 哦) (Chao).
 啊 = Q-PRT to elicit repetition of information (Chao).
 啊 = S-final PRT--affirmative exclamation (Chao).

aj

- maj⁵⁵ 咪 /maj⁵⁵ maj⁵⁵ siw²²/ (～笑) = to grin.
 咪 = to cram; /maj⁵⁵ sy⁵⁵/ (～書) = bookish; to cram.
- maj²² ○ = then (e.g., in conditional sentences).
 ○ = precisely, exactly.
- faj¹³ ○ = rotted (e.g., wood); useless (e.g., people)-- from /faj²²/ 廢 ?) (Chao).
- taj²² ○ = to hand s.t. up to s.o.
- t'aj¹³ 弟 /a²² t'aj¹³/ (～) = term of address used by the older generation to a boy (more formal).
- naj⁵⁵ ○ = some (Cantonese: [ti:⁵³] 的).
 ○ /naj⁵⁵ tsaj¹³/ (～仔) = small amount;
 /jat⁵ naj⁵⁵/ (～) = a small amount (post-verbal);
 /jat⁵ naj^{55*}/ (～*) = all (pre-verbal).
 ○ = where
- naj²² ○ /naj²² ka:k²/ (～格) = adhering strictly to rules and regulations.
 膩 = fatty or greasy (of food).
- tsaj⁵⁵ 擠 = to place (Zhong-shan usually use: /on⁵⁵/ 安 , /fong²²/ 放 , or /tat⁵/ ○).
- tsaj¹³ 仔 = son, child; diminutive suffix.
- tsaj²² 滯 = said of food that is hard on the digestion.
- saj⁵⁵ ○ /saj⁵⁵ tsik⁵/ = a side glance.

saj ¹³	使 /m ⁵¹ saj ¹³ / (唔~) = don't need to, don't have to.
kaj ¹³	○ /to ⁵⁵ kaj ¹³ / (多~) = cunning (from /to ⁵⁵ kaj ²² / 多計 'many schemes'?) (Chao).
	偈 /k'ing ⁵⁵ kaj ¹³ / (傾~) = to chat.
k'aj ⁵⁵	○ /long ⁵¹ k'aj ⁵⁵ / (狼~) = daring.
k'aj ¹³	○ = to take a very small bite.
k'aj ²²	○ = to bite using the top and bottom front teeth (e.g., to eat melon seeds).
haj ⁵⁵	屌 = vagina (Chao).
haj ¹³	○ /nga:n ¹³ haj ¹³ haj ¹³ / (眼~~) = expectantly, eagerly (Chao).
haj ²²	係 = to be; /jat ⁵ haj ²² / (一~) = or, or else.
aj ²²	○ /aj ²² na:w ²² / (~ 鬧) = noisy and bustling.
	○ /aj ²² faj ²² / = worried, unsettled feeling.
	○ /aj ²² tsaj ²² / = stuffy (e.g., of a room).
waj ¹³	會 = to be able.
ja:j ¹³	○ = bad, naughty.
ngaj ⁵⁵	𧸗 = to badger.

a:j

ma:j ⁵⁵	○ = mile (from English 'mile').
ma:j ⁵¹	埋 = to be close or near; with, along with, close to.
	埋 = aspect marker of completion (e.g. /ja:k ² ma:j ⁵¹ / 吃~ = to eat up the rest).
ta:j ¹³	𧸗 = remaining liquid and substance at the bottom of a bowl or cup.
t'a:j ¹³	○ = slow, pokey.
na:j ⁵⁵	奶 /siw ²² na:j ⁵⁵ / (少~) = wife of a young master.
na:j ⁵¹	奶 /na:j ⁵¹ na:j ¹³ / (~奶) = mother-in-law (used in rich families; otherwise /on ⁵⁵ jan ⁵¹ / 家人).
na:j ²²	○ = tired; /nga:n ¹³ na:j ²² / (眼~) = sleepy.

na:j ²²	○ = to be connected to.
la:j ⁵¹	○ /la:j ⁵¹ ta:j ⁵⁵ / = sloppy.
la:j ²²	落 = to pour liquid (e.g., sauce) over s.t.
ts'a:j ⁵⁵	搓 = to knead; to press on top of s.o.
ts'a:j ¹³	踹 = to step on, to tread on.
sa:j ⁵⁵	洗 = to waste.
ka:j ²²	銼 = to saw (something large).
k'a:j ¹³	械 = to take to s.o.
	械 = a section (e.g., of an orange).
nga:j ⁵⁵	捱 /nga:j ⁵⁵ tsi ¹³ / (~子) = very poor people who live near Shi-qi; e.g., such women are called: /nga:j ⁵⁵ tsi ¹³ p'o ⁵¹ / (~子婆).
nga:j ¹³	○ /tsa:ng ⁵⁵ ngi ⁵⁵ nga:j ¹³ / (爭○~) = almost (i.e., lack just a little bit).
ha:j ⁵⁵	○ = to brush against lightly, to touch lightly.
ha:j ⁵¹	○ = itchy.
k'wa:j ⁵¹	嘯 = bad, michievous, villanous; /k'wa:j ⁵¹ jan ⁵¹ / (~人) = villains.
k'wa:j ²²	筷 /k'wa:j ²² tsi ¹³ / (~子) = chopsticks.

aw

paw ⁵⁵	踞 = to squat.
paw ⁵¹	吓 = to stick out in a lump; a swelling.
paw ²²	○ /law ²² paw ²² / = clumsy.
p'aw ²²	吓 /p'aw ²² / or /p'ung ⁵⁵ p'aw ²² / = fluffy.
maw ⁵⁵	症 /ti ²² maw ⁵⁵ / (地~) = ruffians, bullies.
taw ⁵¹	○ /low ¹³ taw ⁵¹ / (老~) = father (sl.)
taw ²²	○ = to be near to; /taw ²² hi ¹³ k'an ¹³ / (~起近) or /taw ²² tsy ²² / (~住) = to be near.

- t'aw¹³ 敬 = to rest.
 ○ = to unwrap.
- naw⁵⁵ 男 = to be angry.
- law⁵⁵ ○ = to cluster around, to hover over.
 ○ = plant from which the Annamese use the leaves to roll betel-nuts to chew (Chao).
 裡 = overcoat.
 摟 = to cover over.
- ts'aw⁵⁵ 抽 = to pull up (e.g., pants); to lift up.
 抽 = CL for keys (i.e., a bunch) (Also: /nang²²/--Lo)
- ts'aw²² ○ = to do s.t. taking advantage of circumstances.
- kaw⁵¹ ○ = CL for stones, etc. (ie., a lump).
- kaw²² 舊 /kaw²² nin⁵¹/ (~年) = last year.
- haw⁵⁵ ○ = to watch closely.
- aw⁵⁵ ○ /aw⁵⁵ law⁵¹/ = dirty.

a:w

- na:w²² 鬧 /na:w²² k'a:w⁵⁵/ (~敲) = to argue, to quarrel.
- ts'a:w⁵¹ 綳 = wrinkled.
- sa:w⁵⁵ ○ /sa:w⁵⁵ kon⁵⁵/ (~乾) = to air-dry (i.e., as opposed to drying in the sun).
- sa:w⁵¹ ○ = to grab.
- ka:w⁵¹ ○ /la:w⁵¹ ka:w⁵¹/ = hectic, in a hurry;
 /ki⁵¹ li⁵¹ ka:w⁵¹ la:w⁵¹/ or /kli⁵¹ kla:w⁵¹/ = noisy talking--as of a group of people.
- k'a:w⁵⁵ ○ /k'a:w⁵⁵ k'a⁵⁵/ = to make an "X".
- nga:w⁵⁵ 搔 = to scratch; /nga:w⁵⁵ ha:j⁵¹/ = to scratch an itch.
 撥 = to rake (e.g., leaves, grass)
- nga:w¹³ 咬 = to bite.

- nga:w²² ○ = to enjoy (e.g., talking) (Also: /how²²/好).
- ha:w⁵¹ ○ /ha:w⁵¹ p'o⁵¹/ (~婆) = a loose woman;
/ha:w⁵¹ t'an⁵¹ t'an⁵¹/ = said of a loose woman in
reference to her mannerism, behaviour, etc.
- a:w²² ○ = joint; /saw¹³ a:w²²/ (手~) = wrist; /kiok² a:w²²/ (脚~) = ankle.

am

- pam⁵⁵ 泵 = pump.
- tam⁵⁵ 泵 = to pump; /tam⁵⁵ sɔj¹³/ (~水) = to pump up water.
- tam⁵¹ ○ /ti⁵¹ ti⁵¹ tam⁵¹ tam⁵¹/ = said of s.o. who is quick-footed or nimble.
- tam¹³ 掙 = to throw, to throw away; /tam^{13,35}/ = to excel.
- tam²² 泵 = to hang down; /tam²² tɔj⁵⁵/ = shabby.
- 留 = to trample; /tam²² saw¹³ tam²² kiok²/ (~手~脚)
= to stamp the feet up and down (as in a tantrum).
- t'am⁵¹ 池 = a pool of water.
- 留 /t'am⁵¹ t'am⁵¹ tsyn²²/ (~轉) = to circle about.
- t'am²² 噤 = to lure.
- nam⁵⁵ ○ /taj¹³ tak⁵ nam⁵⁵/ (抵得~) = to be able to endure or withstand;
/nam⁵⁵ tsaj¹³/ (~仔) = s.o. who is willing to do favours, etc. for people.
- nam⁵¹ ○ = soft.
- nam¹³ 念 = to think.
- nam²² ○ = soaked.
- lam⁵⁵ ○ = to shade over; /lam⁵⁵ p'ung⁵¹ t'aw⁵¹/ (蓬頭)
= term for the radical mian "宀" 'a roof'.
- lam²² ○ = to collapse
- 淋 = to pile up.
- tsam⁵¹ ○ /tsi⁵¹ tsi⁵¹ tsam⁵¹ tsam⁵¹/ = muffled sound of voices.

- tsam¹³ ○ = a callous.
- sam¹³ ○ = to sprinkle (e.g., seasoning, flour).
- kam⁵⁵ 今, 咁 /kam⁵⁵ tsi¹³/ (~子) or /kam⁵⁵ jong²²/ (~樣) = thus, in this way.
- kam⁵¹ ○ /ki⁵¹ li⁵¹ kam⁵¹ lam⁵¹/ or /kli⁵¹ klam⁵¹/ = denotes noisy state of affairs.
- /king⁵¹ ling⁵¹ kam⁵¹ lam⁵¹/ or /kling⁵¹ klam⁵¹/ = noise from stamping feet, moving furniture, dropped objects, etc.
- kam²² 咁 /kam²² to⁵⁵/ (~多) = this much, that much.
- k'am⁵¹ 虫离 /k'am⁵¹ lo⁵¹/ (~虫离) = spider.
- = to lean with forearms resting on a surface (e.g., a railing).
- /k'am⁵¹ k'am⁵¹ ts'ia:ng⁵⁵/ = denotes doing s.t. in a big hurry or frantically.
- k'am¹³ 盖 = a lid, a cover; to put a cover or lid over s.t.
- = to slap in the face.
- ngam⁵⁵ ○ = toothless.
- ngam⁵¹ 吟 = to whisper; to grumble; /ngam⁵¹ ngam⁵¹ ts'am⁵¹ ts'am⁵¹/ = grumbling sound.
- ham⁵¹ ○ /ham⁵¹ pa⁵¹ la:ng⁵¹/ or /ham⁵¹ pla:ng⁵¹/ = all (凡).
- ham¹³ ○ = to bump against.
- am²² ○ = to press down on.
- jam⁵¹ ○ = to fish s.t. out of one's pockets.

a:m

- na:m¹³ 腩 = tender beef; /ng¹³ fa⁵⁵ na:m¹³/ (五花~) = side pork.
- la:m¹³ 攬 = to hold close to the body (e.g., as of s.t. very dear or precious); to hold s.t. large and bulky (e.g., a pile of clothes).
- la:m²² 踏 = to step over.
- ts'a:m¹³ 檻 /mun⁵¹ ts'a:m¹³/ (門~) = door-step, threshold.

- ts'a:m¹³ 𦵏 /la:p² sa:p² ts'a:m¹³/ (垃圾~) or /fan²² ki⁵⁵ ts'a:m¹³/ (箕箕~) = dustpan. (See also: /fan²²/ 箕).
- sa:m¹³ ○ = bran for feeding pigs.
- nga:m⁵⁵ 𦵏 = just, correct; /nga:m⁵⁵ nga:m⁵⁵ sin²²/ (~~線) = just right, exactly.
- nga:m¹³ ○ /p'uk⁵ nga:m¹³ ts'y⁵⁵/ or /p'uk⁵ ka:j⁵⁵ ts'y⁵⁵/ = to be in a rush. (Note: not an abusive term as in Cantonese [p'uk⁵ ka:j⁵³] 'Drop dead!').
- ha:m²² 喊 /ha:m²² sin²²/ (~~泉) = telephone.
- ja:m²² ○ = to move up and down (i.e., standing and squatting in succession).

an

- pan²² 鼻 /ta:j²² pan²² tsiong²²/ (大~象) = elephant.
○ /pan²² ts'ot²/ = stubborn; sucker (sl.).
- fan²² 𦵏 = to sleep (Chao)--usually /mi⁵⁵/ (寐) in Zhongshan.
糞 = ash used to bury human waste, which is later used as fertilizer;
/fan²² ki⁵⁵/ (~~箕) = a shallow bamboo pan;
/fan²² ki⁵⁵ ts'a:m¹³/ (~~箕箕) = dustpan.
- tan⁵¹ ○ = to put s.t. down very roughly; to sit down hard and abruptly.
- t'an⁵¹ ○ = to pace; /t'an⁵¹ siong³¹ t'an⁵¹ lok²/ (~~上~落) = to pace up and down.
○ /t'an⁵¹ t'an⁵¹ tsan²²/ (~~震) = shivering, shaking;
/la:ng¹³ t'an⁵¹ t'an⁵¹/ (冷~~) = shivering cold.
- t'an²² ○ /t'an²² haw²²/ (~~後) = to move backwards.
- nan¹³ 𦵏 = to exasperate.
- lan⁵⁵ 論 /lan⁵⁵ siong²² lan⁵⁵ lok²/ (~~上~落) = to chatter incessantly (Chao).
- ts'an⁵¹ 鹿 /ts'an⁵¹/, /in⁵⁵ ts'an⁵¹/ (烟~) or /puk² ts'an⁵¹/ = dust.

- ts'an¹³ ○ = to shuffle the feet (as of old people).
- ngan⁵⁵ 夭 /ngan⁵⁵/ or /ngan⁵⁵ tsan⁵⁵/ = small, stunted in growth.
- ngan²² 晃 = to jiggle the feet while sitting down;
/ngan²² kiok² fa⁵⁵/ (～脚花) = the jiggling of the feet up and down while seated (considered impolite).

a:n

- p'a:n¹³ ○ = to brush or wave away; to dust.
- ma:n⁵⁵ ○ = to pull down.
○ = to climb, to hold to, to hang on (Chao wonders if it is an initial change from 攀 /p'a:n⁵⁵/, with the same meaning).
- ma:n⁵¹ 焦 /ja¹³ ma:n⁵¹/ (野～) = peevish (referring to children only);
/tiw⁵⁵ ma:n⁵¹/ (刁～) = unreasonable, spoilt, peevish.
- ta:n⁵⁵ 單 /ta:n⁵⁵ ta:n⁵⁵/ (～單) = only.
- la:n⁵⁵ 欄 = a stand, a stall (e.g., for fruits, fish, etc.) (Chao).
- la:n²² 踉 = to crawl, to creep; /la:n⁵⁵ si⁵⁵ kat²/ = Get out!
○ /la:n²² li⁵⁵ la:n²² tsaw⁵⁵/ = raggedy.
○ /la:n²² t'aw⁵¹ t'ia:ng¹³/ = s.o. who tries to prevent trouble--extended to mean s.o. who wants to be the first to do s.t.
- t'a:n¹³ ○ = quaint (of people).
- k'a:n⁵⁵ ○ /k'a:n⁵⁵ k'a:n⁵⁵ pow⁵⁵ pow⁵⁵/ (～煲煲) = pots and pans.
- nga:n⁵⁵ ○ /ki¹³ sap² nga:n⁵⁵/ (幾十～) = said of someone who is very, very old.
- nga:n⁵¹ 碾 = to crush by rolling.
- kwa:n⁵⁵ ○ /kwa:n⁵⁵ la:n⁵⁵ taw¹³/ (～○斗) or /kla:n⁵⁵ taw¹³/ = a somersault (from Lo; Yang gave:
/fa:n⁵⁵ kam⁵⁵ taw¹³/ 翻○斗).

ang

- pang²² 凭 = to lean against; /aj⁵⁵ aj⁵⁵ pang²² pang²² /
(挨挨~~) = describes s.o. who always leans against s.t.
- mang⁵⁵ 搥 = to pull, to yank.
○ /mang⁵⁵ k'ang⁵⁵ siong²² / (~ 〇 相) = a sour, puckered expression.
- mang¹³ 猛 = bold, fierce.
- fang⁵¹ 〇 = to punch.
- tang²² 〇 = to take care of (e.g., children); to take s.o. some place.
- nang⁵⁵ 〇 = to knock s.o. on the head.
〇 = a knob.
〇 /niw⁵⁵ nang⁵⁵ / = precarious; /k'i¹³ tak⁵ niw⁵⁵ nang⁵⁵ /
(企得木~) = to be standing precariously (e.g., on a high ledge).
〇 = a knot, a joint; /ts'a:j⁵¹ nang⁵⁵ / (柴~) = a knot in a piece of wood.
- nang²² 〇 = said of thread hanging out.
〇 /nang²² kow⁵⁵ / (~ 高) = to be on tip-toes.
- ts'ang⁵⁵ 〇 = to moan and groan continuously; to complain.
- sang²² 擤 = to blow the nose; /sang²² pi²² ko⁵⁵ / (~ 鼻哥) = to sneer.
- k'ang⁵⁵ 〇 = to lightly snap against s.t. (e.g., chinaware or glassware to find out if it is of good or poor quality).
〇 = to knock (e.g., door).
- k'ang²² 〇 = powerful.
- ngang⁵¹ 〇 /ngang⁵¹ ngang⁵¹ sia:ng⁵⁵ / (~ 聲) = moaning sound.
- hang⁵⁵ 〇 = to grumble or complain continuously.
- hang⁵¹ 〇 = taut.
- ang¹³ 〇 = to press against; /ang¹³ kiok² / (~ 脚) = to press against the foot (e.g., as with a piece of

- (ang¹³) pebble in the shoe); /ang¹³ sam⁵⁵/ (心) = (s.t.) pressing the heart--worried.
- kwang⁵¹ ○ = to slam (e.g., door).
- kwang²² ○ = to carry a heavy load of things.
- t'ang¹³ 等 = to wait; to let (Also: /tang¹³/ 等).

a:ng

- pa:ng⁵⁵ ○ /niw⁵⁵ pa:ng⁵⁵ pa:ng⁵⁵/ (木~~) = very slender.
- pa:ng⁵¹ ○ = Bang!--sound of gunfire, firecracker, slamming of the door, etc.; to slam (the door).
- p'a:ng⁵⁵ ○ /p'a:ng⁵⁵ hoj⁵⁵/ (開) = to divide up.
- ma:ng⁵⁵ ○ = to stretch s.t. across or over s.t. else.
- ma:ng⁵⁵ ○ /ma:ng⁵⁵ kiok²/ (脚) = leggings (Chao).
- ma:ng¹³ 猛 = powerful; /ma:ng¹³ kwaj¹³/ (鬼) = a lively ghost.
- na:ng⁵¹ ○ = to kick off (e.g., blanket).
- la:ng⁵⁵ ○ = wool, yarn (from French 'laine'?).
- la:ng⁵⁵ ○ /la:ng⁵⁵ tsung⁵⁵/ (鐘) = alarm clock.
- la:ng⁵¹ ○ /la:ng⁵¹ la:ng⁵¹ sia:ng⁵⁵/ (聲) = denotes doing s.t. very quickly and efficiently.
- tsa:ng²² ○ = to stuff.
- sa:ng⁵⁵ 生 = to give birth (Cantonese: [sow⁵³]);
- sa:ng⁵⁵ /haw²² sa:ng⁵⁵/ (後) = the young people.
- sa:ng¹³ 揩 = to scour.
- ka:ng⁵¹ ○ = to get in the way; /ka:ng⁵¹ saw¹³ ka:ng⁵¹ kiok²/ (手脚) = to get underfoot, to get in the way.
- ka:ng²² ○ /ta¹³ ka:ng²²/ (打) = a hold-up, a highway robbery.
- = hillside, mountainside (Chao; he thinks that perhaps it is a sound change from 岡 /kong⁵⁵/ 'mountain ridge').
- a:ng⁵⁵ 煲 = a cooking pot.

- kwa:ng⁵⁵ ○ = to lock up, to imprison.
- kwa:ng⁵¹ ○ = to slam (e.g., door).
- kwa:ng¹³ ○ = stem (e.g., of a fruit) (Also: /taj²²/蒂).
- k'wa:ng⁵⁵ 框 = a frame, a framework.
- = a hoop.
- k'wa:ng⁵¹ ○ = to encircle; a circle (as to walk in a circle).
- k'wa:ng²² 撞 = to bump against; to tear one's outfit by catching it on s.t.
- = sound of metal.
- wa:ng⁵¹ ○ /wa:ng⁵¹ man⁵¹/ = peevish (of a child); cranky.
- 橫 /wa:ng⁵¹/, /ka²² la²² wa:ng⁵¹/ or /kla²² la²² wa:ng⁵¹/ = crosswise.
- wa:ng²² 橫 /ka:w⁵⁵ i¹³ wa:ng²²/ (交椅~) = the horizontal bars connecting the legs of a chair.

ap

- tap⁵ ○ = a small earthen jar or jug (Chao).
- 搭 /tap⁵ taj⁵⁵ t'aw⁵¹/ (~低頭) = to lower the head.
- tap² 搭 = to strike or hit lightly (as of raindrops, or light hammering).
- t'ap⁵ ○ = to cave in, to collapse; lowered, collapsed.
- nap⁵ 凹 = dented; /nap⁵ nap⁵ kung¹³ kung¹³/ (~~皸皸) = rough or bumpy surface, warped.
- nap² 滑 = sticky, moist (e.g., of fingers, body);
- /ni²² ni²² nap² nap²/ (膩膩~~) = sticky and moist (of body or body parts).
- lap⁵ ○ = to step into (e.g., water).
- tsap⁵ 執 = a small amount that can be picked up with the fingers (e.g., of sand, rice, etc.), a pinch of.
- sap⁵ 啲 /sap⁵ suj²²/ (~碎) = miscellaneous; /sap⁵ tsaj¹³/ (~仔) = a grocery store.
- kap⁵ ○ /kap⁵ tsaj¹³/ (~仔) = a frog.

- k'ap² ○ = to slow-boil or steam-cook--from sound of slow boiling water raising and lowering the lid of the pot.
- /k'ap² k'ap² tsan²²/ (~~陣) = to shiver.
- ngap⁵ 吸 = to chatter indiscreetly; /ngap⁵ sa:m⁵⁵ ngap⁵ si²²/ (~~三~~四) = to make thoughtless comments.
- ngap² 咁 = to nod the head.
- hap⁵ 翕 = to close the eyes; to doze.
- ap⁵ 洽 = to cover (e.g., with a medical or herb patch).

a:p

- ta:p² ○ = to request s.o. to do one a favour (Also: /t'ok²/託).
- t'a:p² ○ = a container; /maj¹³ t'a:p²/ (米~) = rice bin.
- na:p² ○ = to catch on s.t.
- la:p² 拮 = to collect; /la:p² na:j¹³/ (~~奶) = a hoarder.
- = to push up (e.g., sleeves).
- t'sa:p² 极 /t'sa:p² /tsik⁵/ (~~側) = to lean sideways.
- sa:p² 煤 = to cook by boiling.
- = to sprain (e.g., ankle).
- nga:p² 挟 = to fold up or roll up (e.g., sleeves).
- ha:p² ○ /ha:p² p'a⁵¹/ (~~爬) = chin.
- a:p² 壓 = to pressure or force s.o. to do s.t.
- ja:p² 掙 = to wave the hand.

at

- mat⁵ 乜 /mat⁵/ or /mat⁵ ja¹³/ (~~野) = what (Chao suggests perhaps sound change from 物 /mat²/);
- /mat⁵ ka:j¹³/ (~~解) = why.
- fat⁵ ○ = to sweep up (e.g., onto the dustpan).

- tat⁵ ○ = a pile (e.g., clothes).
 ○ = to place, to put.
- tat² ○ = to glare at s.o.
- t'at² ○ = to slip down.
- nat⁵ ○ = to dip into sauce.
- nat² ○ = anxious, uneasy.
- lat⁵ 甩 = to come off.
 ○ /wa:t² lat⁵ lat⁵/ (滑~~) = very smooth.
- tsat⁵ ○ = to erase or blot out (e.g., wrong characters).
 ○ /m⁵¹ juk⁵ tsat⁵/ (唔郁~) = not move at all (to denote something that is difficult to move).
 塞 = a cork; to cork.
- tsat² ○ /haw¹³ tsat² tsat²/ (口~~) = to stammer.
 ○ = to hesitate; nervous; a jolt.
- kat⁵ 刮 = to pierce.
- kat² ○ = to put the hair up; to get up (vulgar term); to lean over with derrière up.
- ngat⁵ 杌 = to slide over sideways in a seated position;
 /si¹³ fat⁵ ngat⁵ ngat⁵/ (屎窟~~) = derrière always moving--can't sit still.
 ○ /ngat⁵ ngat⁵ tsat⁵/ = not open-minded.
- k'wat² 掘 = blunt, dull-edged.
 ○ /k'wat² t'aw⁵¹ lu²²/ (~頭路) = a dead-end street.
- wat² 核 = kernel, pit (of a fruit);
 /nga:n¹³ wat²/ (眼~) = eye, eyeball;
 /nga:n¹³ wat² ting²² ting²²/ (眼~定定) = staring intently, deep in thought (Also: /ting²² hi¹³ jat p'un⁵¹ siong²²/ 定起一〇相).
 /nga:n¹³ wat² tat² tat²/ (眼~〇〇) = to glare at s.o.
- jat² 日 = the sun.

a:t

- p'a:t² ○ = a small amount of liquid.
 ○ /p'i⁵¹ li⁵¹ p'a:t² la:t²/ or /p'li⁵¹ p'la:t²/ = sound of water being splashed (as by young children).
- ta:t² ○ = to fall (from a great height).
 撙 = to toss carelessly.
 筴 = CL for locations.
- t'a:t² ○ /t'a:t² ha¹³ t'a:t² sia:ng⁵⁵/ (～下～聲) = sound of slippers.
- na:t² 釧 = to have a light burn (e.g., on the hand from cooking, or by a lit cigarette).
- la:t² ○ /la:t² t'a:t²/ = dirty.
 ○ = to visit s.o.
- sa:t² ○ = to keep badgering s.o. for s.t. (as of a child).
- nga:t² 嚙 = stench of urine.
 ○ = to slide back and forth in the seat.
- ha:t⁵ ○ /ha:t⁵ ts'i⁵¹/ (～嚏) = a sneeze.
- a:t⁵ 壓 = to press.
- a:t² 壓 = to be pressed; /a:t² lik²/ (～力) = pressure.

ak

- mak⁵ 嚙 /mak⁵ t'aw⁵¹/ (～頭) = trade-mark (from English 'mark'); good-looking (Chao).
- tak² ○ = to nail.
- nak⁵ ○ /ni⁵⁵ ni⁵⁵ nak⁵ nak⁵/ = describes walking on tip-toes, as on high heels.
 ○ = great, great grandchild.
- nak² ○ = to tread on, to step on.
 ○ /ni²² nak²/ = sticky.
- lak⁵ 肋 /lak⁵ k'ak⁵/ = jerky (of speech); rough (of surface).

- sak⁵ 塞 /sak⁵ ak⁵/ = a hiccup.
 塞 = great grandchild.
 ngak⁵ 呃 = to cheat.
 ak² 呃 = S-final PRT (Chao).
 k'wak² ○ /nga:ng²² k'wak² k'wak²/ = denotes s.t. very hard and stiff (e.g., of a piece of stale bread).
 wak² ○ = to swing one's arms (while walking).

a:k

- ma:k² ○ = to open (e.g., mouth, eyes).
 fa:k² ○ = to whisk, to beat (e.g., eggs); to swing one's arms back and forth.
 ta:k⁵ ○ /tik⁵ tik⁵ ta:k⁵ ta:k⁵/ = clicking sound of high heel shoes.
 t'a:k⁵ ○ /ma:n¹³ t'a:k⁵ ha:k⁵/ (晚~黑) = night-time (Also: /ja²² ma:n¹³/ 夜晚).
 la:k⁵ ○ /pik⁵ lik⁵ pa:k⁵ la:k⁵/ or /plik⁵ pla:k⁵/ = crackling sound--of fire, or string of firecrackers.
 la:k² 肋 /mok² ts'a:k² la:k²/ (剃○~) = bare (to waist).
 ○ /li⁵¹ li⁵¹ la:k² la:k²/ = low rustling sound of paper or similar sheets of material.
 sa:k² ○ = to chop (something large).
 ○ = a piece (e.g., field).
 ka:k² ○ = to sieve.
 格 = abnormal or strange (of person).
 a:k² 钁 = a bracelet.
 k'wa:k² 噤 = to make a loop (e.g., in sewing); to wrap around and tie with string or cloth; to latch.
 ja:k² 吃 = to eat; /ja:k² in⁵⁵/ (~煙) = to smoke (cigarettes, etc.)

iong

tiong⁵⁵ 𠵹 = to peck; to hit against a surface with a small, sharp object (e.g., a small chip of glass).

iok

tiok⁵ ○ = to chop--a singular action, as to chop s.t. in half.

tiok² ○ = to chop repeatedly to small pieces, as to make minced meat.

tsiok² 昨 /tsiok² jat^{2,5}/ (~ 日) = yesterday.

ia

pia⁵⁵ 啤 = beer (from English word). (Also: /pia⁵⁵ tsaw¹³/ ~ 酒).

p'ia⁵¹ ○ /sa:n⁵⁵ p'ia⁵¹/ (山~) = hillside.

mia⁵⁵ ○ = to carry s.t. that hangs from the arm (e.g., a purse) (Cantonese: [wa:n²⁴] 挽).

mia⁵¹ ○ = what (from /mat⁵ ja¹³/ 乜野).

mia¹³ ○ = slanted; /wa:j⁵⁵ wa:j⁵⁵ mia¹³ mia¹³/ (歪歪~~) = to denote s.t. that is askew or slanted.

fia¹³ ○ /lia¹³ fia¹³/ = sloppy, dirty.

tia¹³ 𠵹 /tia¹³/ or /tia¹³ tiw²²/ = to be spoilt or pampered.

lia¹³ ○ (See: /fia¹³/)

kia²² 𠵹 = subordinative suffix (Chao) (Zhong-shan usually uses /ko²²/.)

k'ia⁵⁵ ○ = a part of a tree, e.g., a branch.

○ = stool (vulgar term).

p'ia¹³ ○ = to stagger.

ia:w

tia:w²² 掉 = to toss away.

lia:w⁵⁵ ○ /lia:w⁵⁵ sung⁵⁵ low¹³/ (~ 佬) = term for northern Chinese people--actually from lao xiong (老兄) 'elder brother', a polite term of address.

kia:w⁵¹ ○ = to grab.
 ○ /kia:w⁵¹ kia:w⁵¹ sia:ng⁵⁵/ (~ 聲) = denotes noisy rowdiness.

hia:w²² ○ = to stick out (e.g., lid of an opened tin can).
 (Also: /hiw²²/).

ia:m

k'ia:m⁵¹ ○ = a slight cough, or the sound of a light cough.

ia:ng

pia:ng¹³ ○ /pia:ng¹³ fa:n/ (~ 返) = to give back.

p'ia:ng⁵⁵ ○ = to throw s.t. at s.o.

 ○ = the back (of a chair).

p'ia:ng⁵¹ 瓶 /jaw⁵¹ p'ia:ng⁵¹ tsaj¹³/ (油~仔) = a child brought to a second or subsequent marriage by a woman;
 /t'o⁵⁵ jaw⁵¹ p'ia:ng⁵¹/ (拖油~) = to bring such a child to a subsequent marriage. (Uncomplimentary terms).

p'ia:ng²² ○ = a piece or a sheet (e.g., paper, land).

 ○ = sound (e.g., of a drum).

tia:ng²² ○ /tia:ng²²/ or /tia:ng²² fong⁵⁵/ (~ 方) = a place.

 ○ /Verb + tia:ng²² ti²²/ (Verb + ~ 地) = to have just V'd.

t'ia:ng⁵¹ 亭 = an open space, an area of level ground;

 /wo⁵¹ t'ia:ng⁵¹/ (禾~) = area for threshing grain (Chao).

 /ti²² t'ia:ng⁵¹/ (地~) = area in front of the house for drying grains, etc. in the village.

nia:ng⁵⁵ ○ = to hide.

lia:ng²² 靚 = pretty.

- kia:ng²² 敬 /kia:ng²²/ or /kia:ng²² sia:k²/ (~惜) = to be very careful with, to handle with great care and gentleness.
- k'ia:ng⁵¹ ○ /k'ia:ng⁵¹/ or /lia:ng⁵¹ k'ia:ng⁵¹/ (靈 ~) = auspicious.
- t'ia:ng¹³ ○ /la:n²² t'aw⁵¹ t'ia:ng¹³/ = s.o. who does s.t. for another person which he finds embarrassing or disagreeable to do.

ia:p

- tia:p⁵ ○ = to taste a little (as to try it).
- kia:p⁵ ○ /ngo²² tow²² kia:p⁵ kia:p⁵ sia:ng⁵⁵/ (餓到 ~ ~ 聲) = hungry to the extent that the stomach is protesting, i.e., very hungry.

ia:t

- pia:t² ○ /la:n²² pia:t² pia:t²/ (爛 ~ ~) = soft and mushy.
- p'ia:t⁵ ○ /p'ia:t⁵ p'ia:t⁵/ = derrière (speaking to a young child).
- p'ia:t² ○ = a mass of soft, mushy substance;
 /la:n²² p'ia:t² p'ia:t²/ (爛 ~ ~) = soft and mushy;
 /p'ia:t² si¹³/ (~屎) = said of s.o. who sits there and does not feel like moving. (Very uncomplimentary term).
- tia:t² ○ /la:n²² tia:t² tia:t²/ (爛 ~ ~) = soft and mushy.

ia:k

- p'ia:k² ○ = to throw around carelessly (e.g., one's clothes).
- tia:k² ○ = to chase s.o. away.
- lia:k² 厝 /ta:j²² lia:k²/ (大 ~) and /saj²² lia:k²/ (細 ~) = names of villages (Chao).
- lia:k⁵ ○ = smart, clever; /la:n¹³ lia:k⁵/ = smart alecky.
- ts'ia:k² = painful; /t'aw⁵¹ ts'ia:k²/ (頭 ~) = to have a

(ts'ia:k²) headache.

刺 = upset, hurt; to be mad at; /nga:n¹³ ts'ia:k²/ (眼~) = to be envious.

sia:k² 惜 = to love (e.g., a child) (Can also be used to abuse s.o. by intending the opposite; i.e., by the use of sarcasm.)

(Syllabic)

m⁵¹ 唔 = not; /m⁵¹ koj⁵⁵/ (~該) = please; thank you (after s.o. does a polite deed, such as handing one a cup of tea, a bowl of rice, etc.)

ng¹³ 杵 /ng¹³ tsok² low¹³/ (~作佬) = undertaker. (Also: /kun⁵⁵ ts'oj⁵¹ low¹³/ 棺材佬).

[e]

[le⁵⁵] O S- or clause-final PRT. (Chao).

[ej]

[ej⁵¹] 欸 = exclamation of affirmation (Chao).

[ɛ]

[lɛ⁵⁵] O = S-final PRT. (Chao).

[lɛ²²] O = S-final PRT. (Chao).

[ə]

[mæ⁵⁵] 咩 = Q-PRT for yes-no Q's and negative Q's. (Chao).

Addendum:

a

k'wa⁵¹ O /mung⁵¹ k'wa⁵¹ k'wa⁵¹/ (朦~~) = very blurry.

ja⁵⁵

爺 /pa:k² ja⁵⁵/ (伯 ~) = father (term of address).

y

ty¹³

○ = to poke with a long object (e.g., a closed umbrella)

PART II. DIACHRONIC STUDY

CHAPTER 3. ANALYSIS OF MODERN REFLEXES TO HISTORICAL CATEGORIES

Bernhard Karlgren, a pioneer in applying Western linguistic methods to the study of the historical Chinese sound system, established two stages in the language: "Ancient Chinese" and "Archaic Chinese". As outlined in his Compendium (1954:212), Karlgren designates "Ancient Chinese" to be the language of circa 600 A.D., as codified in the Qie-yun 切韻 rhyme dictionary, which he identifies as the dialect spoken in Chang-an, Shen-si. "Archaic Chinese", on the other hand, refers to the language spoken in the He-nan region during the first Zhou centuries (from 1028 B.C.), based partly on the rhymes in the Shi-jing ('Book of Odes') and other early manuscripts, and partly on xie-sheng characters (compounds containing a "radical" (or "signific") and a "phonetic").

Following Karlgren, most Chinese phonologists continue to reconstruct Ancient Chinese as a single stage in the language based on the Qie-yun. Pulleyblank, who prefers the terms "Middle" and "Old" Chinese to Karlgren's "Ancient" and "Archaic" Chinese, further subdivides Middle Chinese into "Early Middle Chinese" (EMC), and "Late Middle Chinese" (LMC). Pulleyblank (1977:12) emphasizes that the shift from EMC to LMC is not simply a case of historical evolution of the language, but represents a major shift in dialect base. Pulleyblank (1970:204, 1977:4) considers "Early Middle Chinese" to be the language of the Qie-yun, which he identifies as the standard Mandarin of the Northern and Southern Dynasties in the sixth century in the courts of Lo-yang¹ and

Nan-jing, and "Late Middle Chinese" the language of the rhyme tables, representing the speech in Chang-an during the middle and latter part of the Tang dynasty (618-907 A.D.).

Although historically the two languages do not constitute a continuum in the evolution of Chinese, in formulating derivational rules, Pulleyblank (1970-71:204, 1977:12) nevertheless treats Late Middle Chinese as though it has developed from Early Middle Chinese. He justifies this treatment on the following grounds: since the two languages are closely related and their phonological categories are on the whole quite congruent, Late Middle Chinese must have descended from a language the phonological system of which was very similar to that of Early Middle Chinese. Hence, it makes sense to establish rules to derive the former from the latter even though this does not quite exactly reflect historical reality.

According to Pulleyblank, it is Late Middle Chinese which formed the basis for both Sino-Japanese (Kan-on) and Sino-Korean. Moreover, with the exception of Min, all the modern Chinese dialects can be traced back to Late Middle Chinese; that is, the phonological system of the modern dialects--including both literary and colloquial layers--can be explained on the basis of the phonological categories of Late Middle Chinese.²

The primary source for the reconstruction of Late Middle Chinese is the rhyme tables, which have evolved from earlier rhyme dictionaries which, in turn, are expansion and revisions of the Qie-yun of Fa-yen Lu, completed in 601 A.D. The rhyme tables have essentially extracted the information contained in the rhyme dictionaries on the pronunciation of the language, and have

systematically arranged the information in the form of a grid. Thus, tones and finals, for example, are placed along the vertical axis, while initials are arranged along the horizontal one. Although these rhyme tables do not contain phonetic descriptions of the sounds in the language, they do contain descriptive terms for the place and manner of articulation of the phonological categories, of which some have to be interpreted. Kai-kou versus he-kou, for instance, has been understood to be a distinction of the absence of labialization versus its presence in the finals. Other terms include ya-yin 牙音 'back-tooth sound' for velars and cun-yin 唇音 'lip sound' for labials. The term qing 青 'clear' is used for initials reconstructed as plain, unvoiced segments, and ci-qing 次清 'second clear' for the aspirated series. Zhuo 濁 or 'muddy' initials are usually assumed to be voiced initials, although Pulleyblank (1970-71:210-211) reconstructs such initials as plain consonants accompanied by voiced aspiration in Late Middle Chinese which have evolved from earlier voiced initials (e.g., the Ding 定 initial is reconstructed as LMC *tʰ- < EMC *d-).

In discussing the reconstructed values of historical Chinese phonological categories, Pulleyblank's reconstruction of Early and Late Middle Chinese will be adopted; the following section will therefore be a brief description of Pulleyblank's system. No attempt will be made to discuss theoretical issues and controversies connected with certain reconstructions. Following the introductory description of Middle Chinese phonology, we will proceed to analyze Zhong-shan reflexes of these Middle Chinese sounds according to the organization of the phonological categories found in the dialect survey list, the Fang-yan Diao-cha Zi-biao.

The aim of the chapter is to demonstrate the general pattern of correspondences of modern Zhong-shan to historical categories. As a result, rather than try to account for all the exceptions present in the data on modern Zhong-shan, there will be an effort to discuss only some of these irregular sound changes. Emphasis will be placed on the regular pattern of correspondences. As in the synchronic analysis, the subsections will focus on the main categories of initials, finals and tones. Splits and mergers of various phonological categories in Zhong-shan will be discussed, as well as some of the more interesting problems and exceptions observed. The compilation of Zhong-shan data for the present diachronic analysis is placed in Chapter 4.

3.1. Initials

3.1.1. Reconstructed Values of Middle Chinese Initials

In the rhyme tables representing Late Middle Chinese, there were originally thirty initials which were later increased to thirty-six. These initials are listed in Chart 4 on the following two pages. The later six initials are marked by asterisks (*). As we have already seen in Chapter 1, the characters representing the different initials serve as the names of these initials. The reconstructed values assigned by Pulleyblank (1977:64) are also given in the chart.

In the set of thirty-six initials, the light lip sounds (qing cun-yin), or dental labials, arose out of the corresponding labial series, or the heavy lip sounds (zhong cun-yin). The Feng 奉 (LMC *fɸ-) initial had split from the Bing 並 (EMC *pɸ-) initial, and the Wei 微 (LMC *v-) initial from the Ming 明

Chart 4. The 36 Initials of Late Middle Chinese.

		Qing 清 (clear)	Ci-qing 次清 (2nd-clear)	Zhuo 濁 (muddy)	Bu-qing-bu-zhuo 不清不濁 (not-clear-not-muddy)	Qing 清 (clear)	Zhuo 濁 (muddy)
CUN-YIN 唇音 (lip sound)	<u>LABIALS:</u>						
	a) Zhong 重 (heavy)	Bang 幫 p	Pang 滂 p'	Bing 並 p ^h	Ming 明 m		
	<u>LABIODENTALS:</u>						
	b) Qing 輕 (light)	Fei* 非 f(<p)	Fu* 敷 f(<p')	Feng* 奉 f(<b)	Wei* 微 v(<m)		
SHE-YIN 舌音 (tongue sound)	<u>DENTALS:</u>						
	a) She-tou 舌頭 (tongue head)	Duan 端 t	Tou 透 t'	Ding 定 t ^h	Ni 泥 n		
	<u>RETROFLEXES:</u>						
	b) She-shang 舌上 (tongue up)	Zhi 知 tr	Che 徹 tr'	Cheng 澄 tr ^h	Niang* 娘 nr		
CHI-YIN 齒音 (front- tooth sound)	<u>DENTAL SIBILANTS:</u>						
	a) Chi-tou 齒頭 (tooth head)	Jing 精 ts	Qing 清 ts'	Cong 從 ts ^h		Xin 心 s	Xie 邪 s ^h
	<u>RETROFLEX SIBILANTS:</u>						
	b) Zheng-chi 正齒 (true tooth)	Zhao 照 ts	Chuan 穿 ts'	Chuang* 床 (t) s ^h		Shen 審 s	Chan 禪 s ^h

(Chart 4. cont'd.)

Qing

Ci-qing

Zhuo

Bu-qing-bu-zhuo

Qing

Zhuo

BAN-SHE-YIN DENTAL:

半舌音
(half tongue
sound)

Lai
來 l

BAN-CHI-YIN RETROFLEX:

半齒音
(half tooth
sound)

Ri
日 r

YA-YIN VELARS:

牙音
(back tooth
sound)

Jian
見 k

Qi
溪 k'

Qun
群 kʰ

Yí
疑 ŋ

HOU-YIN GUTTURALS:

喉音
(throat
sound)

Ying
影 ?

Xiao
曉 x

Xia
匣 xʰ

Yu
喻 #

* Not included in the original 30 initials.

(EMC *_m-) initial. In the case of initials Fei 非 (LMC *f-) and Fu 敷 (LMC *f-), although they are distinguished in the series of thirty-six initials as having arisen from the Bang 幫 (EMC *p-) and Pang 滂 (EMC *p'-) initials respectively, Pulleyblank regards that distinction as almost certainly just a historical one based on fan-qie distinctions in the Qie-yun and reconstructs both Fei and Fu as LMC *f-. Pulleyblank (1970-71:217-218) argues that the distinction between Fei and Fu had in fact been theoretical from the start; they were kept distinct precisely because they had arisen from different Early Middle Chinese initials.

The Chuang 莊 initial (LMC *(t)ʂʂ-), according to Pulleyblank, was not phonemically distinct from initial Chan 禪 (*ʂʂ-). It is placed in the muddy affricate column in the Yun-jing, under the dental sibilant Cong (LMC *tʂʂ-) and corresponds in Grade II to EMC *dʒ- but in Grade III to EMC *ʒ-. The Chan initial, which is placed in the muddy fricative column, under Xie (LMC *ʂʂ-) is mainly confined to Grade III where it corresponds to EMC *dʒ. Since *dʒ and *ʒ had merged in LMC as the fricative *ʂʂ, the authors of the rhyme tables had only the fan-qie spellings to distinguish them and mistakenly assigned the original affricate to the fricative column and vice versa. Before high vowels (i.e., in Grade III and Grade II of the Zhi rhyme group), the pronunciation of both initials was mostly as a fricative, while before non-high vowels (i.e., in Grade II in other rhyme groups), the pronunciation was mostly as an affricate; but there is evidence of free variation in both cases (1970-71:223). A further small complication is that there is also a voiced retroflex fricative initial *ʒ in EMC occurring only in two words in the Zhi rhyme group. This would

have been pronounced *ʃh- in LMC. It was placed as Grade II of initial Chan in the Yun-jing.

The Yu 喻 (LMC *#-), or zero, initial Pulleyblank regards as probably a weak velar fricative ɣ (like the "zero" initial in Mandarin), which would perhaps produce less confusion if omitted altogether in transcribing reconstructed forms.

Although there is a phonemic distinction between initials Ying 影 and Yu 喻 during Late Middle Chinese, it had generally disappeared between late Tang and Yuan times. Vestiges of the distinction could nevertheless be discerned in the phonemic contrast between Yin- and Yang-ping tones. (Pulleyblank, 1970-71:227).

Since the dialect survey includes initials which Pulleyblank has reconstructed as part of the phonological system of Early Middle Chinese, it is also necessary to discuss this earlier layer of the language. Pulleyblank (1977:80) posits thirty-nine initials, which are shown in Chart 5 overleaf. He uses some of the same characters from the standard list of the thirty-six Late Middle Chinese initials where possible, and supplements these with additional characters to cover those distinctions which are not present in the later stage. Early Middle Chinese is reconstructed as a diasystem which accounts for both the northern and southern dialect areas. Where the values reconstructed for the two groups differ, it is the southern dialectal form which is enclosed in parentheses in the chart. Whereas Pulleyblank (1977:12) regards Late Middle Chinese as seemingly closer to the northern variety of Early Middle Chinese, it is the modern southern Chinese dialects which he suggests have closer correspondences to certain distinctions in the southern branch of Early Middle Chinese.

Chart 5. Early Middle Chinese Initials.

LABIALS:	Bang 幫 p	Pang 滂 p'	Bing 並 b	Ming 明 m	Yun 云 w(h)		
DENTALS:	Duan 端 t	Tou 透 t'	Ding 定 d	Ni 泥 n	Lai 來 l		
RETROFLEXES:	Zhi 知 tr (t)	Che 徹 tr' (t')	Cheng 澄 dr (d)	Niang 娘 nr (n)			
DENTAL SIBILANTS:	Jing 精 ts	Qing 清 ts'	Cong 從 dz(z)	Xin 心 s	Xie 邪 z		
PALATALS:	Zhao 照 tɕ	Chuan 穿 tɕ'	Chan 禪 dz (ʒ)	Ri 日 ʝ	Shěn 審 ɕ	Shén 神 ʒ	Yang (or Yǐ) 羊 (or 以) j
RETROFLEX SIBILANTS:	Zhuang 莊 tʂ	Chu 初 tʂ'	Chuang 欸 dz(z)	Shan 山 s	Si 俟 z		
VELARS:	Jian 見 k	Qi 溪 k'	Qun 群 g	Yí 疑 ŋ	Xiao 曉 x(h)	Xia 匣 (h)	
GUTTURALS:	Ying 影 ?						Yǐ 矣 # (h)

(): Southern dialectal form.

What eventually became the muddy initials in Late Middle Chinese were fully voiced consonants in Early Middle Chinese.

As one may observe from the reconstruction of a glottal stop for the Ying 影 initial in both Charts 4 and 5, this particular initial had remained stable during the two stages of Middle Chinese.

The reconstructed value of *x- for the Late Middle Chinese Xiao 曉 initial projects back to *x- for the northern dialect and *h- for the southern one, while that of *xh- for the Late Middle Chinese Xia 匣 initial goes back to *- for the northern form and *h- for the southern.

The Early Middle Chinese Yang 羊 (Yí 以 in the dialect survey) and Yun 云 initials are merged as the Late Middle Chinese Yu 喻 (*#-, or zero) initial. In the rhyme tables of Late Middle Chinese, what were Early Middle Chinese Yang and Yun initials are in complementary distribution in Late Middle Chinese: Yun occurs in Grade III and Yang in Grade IV.

Pulleyblank reconstructs Yí 矣 as the true zero initial for Early Middle Chinese, which consists of a closed class of two enclitic particles, yi 矣 and yan 焉. They are subsumed under the Yu 喻 initial in Late Middle Chinese.

As mentioned above, the Early Middle Chinese palatal sibilants became merged with their retroflex counterparts, yielding the Late Middle Chinese 'true front-tooth' initials. The two Early Middle Chinese series are in complementary distribution in Late Middle Chinese: the palatal series occurs in Grade III rhymes, while the retroflex series is found in Grade IV. It is proposed by Pulleyblank (1970-71:219) that the complementary distribution came about when medial *-i- was lost in words which bore an Early Middle Chinese retroflex sibilant initial.

It should be noted that the Ni 泥 and Niang 娘 initials in the two stages of Middle Chinese are combined in the survey list, probably as a result of accepting the proposal put forth by Y.R. Chao (1940:210) that these two initials were merely in

complementary distribution, and not actually phonemically distinct. Pulleyblank (1970-71:214-216), on the other hand, argues for a phonemic distinction between the two initials which, by the Mongol period (Yuan dynasty, 1279-1368) was on the verge of disappearing.

The Ri 日 initial is reconstructed by Pulleyblank as a palatal nasal *ɲ- in Early Middle Chinese which became, in Late Middle Chinese, a lax, voiced retroflex *r-, as in the modern Mandarin pronunciation of that initial. The shift of the Ri initial from palatal to retroflex is part of the more general shift in the language, as witness the merger of the palatal sibilants with those of the retroflex series in Late Middle Chinese.

The velar initials remained stable from Early to Late Middle Chinese.

It is important to realize that, on the whole, the dialect survey list maximizes certain distinctions found in the two stages of the language, and not others. The final result is a total of forty initials in the dialect survey. These initials are shown in Chart 6 on the next page. In the chart, Late Middle Chinese serves as the base. In some cases, however, it is necessary to make it clear that a certain series only occurs in one stage of the language. For the sake of clarity, the particular stage--LMC or EMC--is therefore specified at the same time that the classification of the series is given; for example, Labiodentals (LMC), Retroflex Sibilants (EMC), and Palatal Sibilants (EMC). The latter two sets of initials, EMC Retroflex ... and Palatal Sibilants, subsequently merged as LMC Retroflex Sibilants.

Since the diachronic study of Zhong-shan is based on the list of characters prepared in the Fang-yan Diao-cha Zi-biao, the

Chart 6. Middle Chinese Initials in the Fang-yan Diao-cha Zi-biao.

BILABIALS: (LMC)	Bang 幫 p	Pang 滂 p'	Bing 並 p ^h (<b)	Ming 明 m	
LABIODENTALS: (LMC)	Fei 非 f (<p)	Fu 敷 f (<p')	Feng 奉 f ^h (<b)	Wei 微 v (<m)	
DENTALS: (LMC)	Duan 端 t	Tou 透 t'	Ding 定 t ^h (<d)	Ni 泥 n	Lai 來 l
DENTAL SIBILANTS: (LMC)	Jing 精 ts	Qing 清 ts'	Cong 從 ts ^h (<dz)	Xin 心 s	Xie 邪 s ^h (<z)
RETROFLEXES: (LMC)	Zhi 知 tr	CHE 徹 tr'	Cheng 澄 tr ^h (<dr)	(Niang) 娘 nr	
RETROFLEX SIBILANTS: (EMC)	Zhuang 莊 ts (>LMC ts-II)	Chu 初 ts' (>LMC ts'-II)	Chuang 牀 dz (>LMC (t)s ^h -II)	Shan 山 s (>LMC s-II)	(Si 俟 z (>LMC (t)s ^h -II)
PALATALS: (EMC)	Zhao 照 tɕ (>LMC ts -III)	Chuan 穿 tɕ' (>LMC ts' -III)	Chan 禪 dz (>LMC s ^h -III)	Shěn 審 ɕ (>LMC s ^h -III)	Ri 日 ɲ (>LMC r)
VELARS: (LMC)	Jian 見 k	Qi 溪 k'	Qun 群 k ^h (<g)	Yí 疑 ŋ	Xiao 曉 x
GUTTURALS: (LMC)	Ying 影 ?				Yu 喻 # (III < EMC 云 w IV < EMC 以 j)

phonological categories set up in that survey will be the launching ground for the study of modern Zhong-shan reflexes to the historical system. Thus, Chart 6 shows the Middle Chinese initials found in the survey list, while Zhong-shan reflexes of these initials are summarized in Chart 7 on the following two pages.

Chart 7. Zhong-shan Correspondences to the Middle Chinese Initials in the Fang-yan Diao-cha Zi-biao.

<div>Style M.C. Tone</div>		ZHONG-SHAN INITIALS				
		COLLOQUIAL		LITERARY		
M.C. Initial		Ping, Shang	Qu, Ru	Ping	Oblique	
(LMC)	BILABIALS	Bang	p			
		Pang	p'			
		Bing	p'	p	p'	p
		Ming	m			
(LMC)	LABIODENTALS	Fei	p/p'		h~f	
		Fu	p'			
		Feng				
		Wei	m			
(LMC)	DENTALS	Duan	t			
		Tou	t'			
		Ding	t'	t	t'	t
		Ni/Niang	n			
		Lai	l			
(LMC)	DENTAL SIBILANTS	Jing	ts			
		Qing	ts'			
		Cong	ts'	ts	ts'	ts
		Xin	s			
		Xie	ts'	ts	ts'	ts
(LMC)	RETROFLEXES	Zhi	ts			
		Che	ts'			
		Cheng	ts'	ts	ts'	ts

(Chart 7. cont'd)

ZHONG-SHAN INITIALS						
Style M.C. Tone		COLLOQUIAL		LITERARY		
M.C. Initial		Ping, Shang	Qu, Ru	Ping	Oblique	
(EMC)	RET. SIBILANTS	Zhuang	ts			
		Chu	ts'			
		Chuang	ts'	ts	ts'	ts
		Shan	s			
		(Si)				
(EMC)	PALATALS	Zhao	ts			
		Chuan	ts'			
		Shen	s			
		Shen				
		Chan				
		Ri	ng~j			
(LMC)	VELARS	Jian	k			
		Qi	h		k'	
		Qun	k'	k	k'	k
		Yi	ng			

LITERARY AND COLLOQUIAL:

<div>Voice</div> <div>Grade</div>		Kai-Kou				He-Kou							
		I	II	III	IV	Tong				Other			
M.C. Initial						I	II	III	IV	I	II	III	IV
(LMC)	VELARS	Xiao	h				h~f						
		Xia					h~w						
(LMC)	GUTTURALS	Ying	∅	∅~j		∅	j			∅~w			
		Yu (III)		∅~j			j				∅~w		
		Yu (IV)			∅~j			j					∅~w

3.1.2. Zhong-shan Correspondences to Middle Chinese Initials

3.1.2.1. Bilabials (LMC)

The regular correspondent to the Bang 幫 (*p-) initial is /p/, e.g.,

(1)	8-19	把	/pa ¹³ /	'to take'
	15-23	補	/pu ¹³ /	'to mend'
	40-1	杯	/puj ⁵⁵ /	'a cup'
	77-1	表	/piw ¹³ /	'to display'
	186-1	北	/pak ⁵ /	'north'

There are nonetheless about a dozen words which are pronounced with an aspirated /p'/ initial. Most of these exceptions can be explained in terms of analogical readings of more common characters; that is, readings based on characters which appear graphically similar. In the case of the word po 跛 (4-18) 'lame', the colloquial reading of /paj⁵⁵/ has preserved the regular Bang correspondent while the literary form, /p'o¹³/, has acquired an aspirated initial.

The word bao 剝 (183-1) 'to strip off', also contains the aspirated /p'/ initial for the literary reading of the word, and is pronounced /p'ok²/. In the colloquial layer, however, it is pronounced /mok⁵/ or /mok²/, with an /m/ initial. One other word in the data containing an /m/ initial is bo 擘 (196-6) /ma:k²/ 'to break open with hands'. The alternative form has initial /p'/ and is read /p'ia:k²/.

Zhong-shan and Cantonese do not differ much with regard to the modern reflexes of the Bang initial. Generally, the same word in the two dialects would exhibit the same correspondent.

There are few differences. One such difference is in the word bao 豹 (73-16) 'leopard', which is phonetically [pʰa:w²²] in Zhong-shan, and [pʰa:w⁴⁴] in Cantonese. In this case, Zhong-shan has preserved the regular reflex of /p/.

The Pang 滂 (*pʰ-) initial is usually pronounced /pʰ/ in modern Zhong-shan, as it is in Cantonese. Examples are:

(2)	5-22	破	/pʰo ²² /	'broken'
	17-9	鋪	/pʰu ²² /	'a store'
	111-16	品	/pʰan ¹³ /	'personality'
	131-4	片	/pʰin ²² /	'a slice'
	194-5	拍	/pʰa:k ² /	'to clap'

It should be noted that although many of the Middle Chinese initials enter the same general correspondence patterns in Zhong-shan as in Cantonese, with regard to individual words the two dialects may show some differences, as already observed with the Bang initial. In this case, the word pin 品 in (2) can be cited. Zhong-shan has an aspirated /pʰ/ for the word, whereas it is unaspirated in Cantonese: [pən³⁵].

In addition to the regular reflex of /pʰ/, there is also a small handful of words which has /p/ as the correspondent to the Pang initial in Zhong-shan (e.g., bo 玻 (3-10) 'glass' /po⁵⁵/.

Hashimoto (p.630) cites the word pou 剖 (82-18) 'to split' as containing an [f] initial in modern Cantonese for which she could give no explanation. In Zhong-shan, the same word simply contains the regular /pʰ/ initial: /pʰaw¹³/.

Zhong-shan reflexes of the Bing 並 (*pʰ- < EMC *b-) initial fall into the following pattern according to historical

tonal categories: Ping-sheng words have the aspirated /p'/ initial, with no differentiation of colloquial or literary pronunciation. Qu- and Ru-sheng words, in both the colloquial and literary layers, contain the plain /p/ initial. Shang-sheng words, however, subdivide according to whether they are colloquial (C.) or literary (L.) forms--the former is aspirated while the latter is not. Examples from the various tones are presented in (3).

(3) a. Ping-sheng:

3-11 婆 /p'o⁵¹/ 'an old woman'

b. Qu-sheng:

35-3 敗 /pa:j²²/ 'to destroy'

c. Ru-sheng:

194-8 白 /pa:k²/ 'white'

d. Shang-sheng:

49-5 被 /p'i¹³/C. 'a quilt'

205-18 並 /ping²²/L. 'also'

There are several points which may be brought up at this time. First of all, in Zhong-shan a word with a muddy initial, such as the Bing initial, and containing Middle Chinese Ping-sheng has Yang-ping /51/ as the regular correspondent. In more general terms, the Yang register is a reflex of the muddy initials, while other initials occur with the Yin register, tone /55/ in Ping-sheng words in Zhong-shan.

Secondly, with regard to the historical Shang-sheng reflexes, not only do the initials differ in the modern form in Zhong-shan, but the tones as well. The colloquial form has tone /13/, whereas the tone of the literary form has merged with the

regular Zhong-shan reflex of the historical Qu-sheng, namely tone /22/.

Lastly, the general pattern of correspondence to words with initial Bing in Zhong-shan and Cantonese is essentially the same. However, whereas Cantonese has [f] as the only other correspondent to the Bing initial in a few isolated cases, Zhong-shan has /f/ as well as /h/ as irregular correspondences, as exemplified in (4).

- (4) 7-13 埠 /faw²²/ 'a port'
 119-13 𨋖 /fa:n²²/ 'a section'
 212-2 逢 /hung⁵¹/L. 'a sail' (/p'ung⁵¹/C.)

For the word bu 埠, which has an alternate pronunciation of fou in Mandarin, Pulleyblank informs the writer that it is a colloquial word not found in the Guang-yun, a rhyme dictionary which is an enlarged version of the Qie-yun (published in 1007 A.D. and is still extant). Tang dynasty sources use bu 步 for what is evidently this word, bu 埠, which is described as a dialect word of Wu 吳 or Chu 楚.

Peng 逢 in (4) above is pronounced [fuŋ²¹] or [p'uŋ²¹] in Cantonese. The form with the /p'/ initial in both Zhong-shan and Cantonese represents the colloquial reading. Cantonese [f] corresponds to Zhong-shan [h] before high back vowels ([u] and [u:]), which accounts for the laryngeal initial in the Zhong-shan form for peng 逢 as opposed to the labiodental initial found in Cantonese.³

The modern Zhong-shan reflex of the Ming 明 (*m-) initial is /m/. Examples are shown on the next page.

- | | | | | |
|-----|--------|---|-----------------------|-------------|
| (5) | 34-3 | 買 | /ma:j ¹³ / | 'to buy' |
| | 53-5 | 美 | /mi ¹³ / | 'beautiful' |
| | 129-7 | 眠 | /min ⁵¹ / | 'to sleep' |
| | 196-8 | 麥 | /ma:k ² / | 'wheat' |
| | 215-13 | 木 | /muk ² / | 'wood' |

While the Ming initial is usually pronounced with the bilabial nasal in Zhong-shan and Cantonese, in three cases in the data the Ming initial has /n/ as its modern reflex in the two Yue dialects. These three exceptions are listed in (6), showing the Zhong-shan pronunciation only.

- | | | | | |
|-----|-------|---|-----------------------|---------------------|
| (6) | 47-15 | 彌 | /ni ⁵¹ / | 'to fill' |
| | 49-8 | 弭 | /ni ²² / | 'the ends of a bow' |
| | 72-10 | 錨 | /na:w ⁵¹ / | 'an anchor' |

With regard to mí 彌 and mǐ 弭 above, Hashimoto (p.631) proposes that these two words are possible vestiges of the distinction of the so-called chong-niu 重紐 ('double knot') pairs of initials, or Grade III/IV doublet initials, since the two words belong to the Grade IV counterpart of these doublets for which some palatal feature has been suggested.

In the Zhong-shan data, mo 陌 (194-11) 'a field path' is pronounced /pa:k²/, with a /p/ initial. The expected initial is /m/, as in Cantonese. [mɛk³] is recorded for Cantonese in the Zhong-hua Xin Zi-dian ('Chinese new dictionary') (1977:606), which agrees with Chen's observation. Hashimoto (p.590) records the word as [mɛt³]. Ball (p.524) records /mák/ for mo 陌 (which would be /ma:k/ as the modern, corresponding form) for Zhong-shan, contrasting with his recording of /mak/ (i.e., [mɛk]) for Cantonese.

3.1.2.2. Labiodentals (LMC)

There are two regular correspondents to the Fei 非 (*f- <EMC *p-) initial in Zhong-shan: /h/ before the high back vowel /u/, and /f/ elsewhere, as exemplified in (7). The /h/ reflex before /u/ affects the Yu 遇, Liu 流 and Tong 通 rhyme groups. Recall that particularly in the environment before the high back vowel [u:], /h/ is distinctly a labialized fricative [h^w]. Names of the rhyme groups are included in round brackets in (7a).

(7) a. Before /u/:

23-1	夫	/hu ⁵⁵ /	'a sage'	(Yu)
89-7	富	/hu ²² /	'wealth'	(Liu)
218-4	風	/hung ⁵⁵ /	'wind'	(Tong)
220-4	福	/huk ⁵ /	'happiness'	(Tong)

b. Elsewhere:

46-8	廢	/faj ²² /	'to abrogate'	
65-10	飛	/fi ⁵⁵ /	'to fly'	
109-8	法	/fa:t ² /	'laws'	
164-11	粉	/fan ¹³ /	'powder'	
165-7	弗	/fat ² /	'not'	

Note, however, that the Liu rhyme group has both /u/ and /aw/ as modern Zhong-shan reflexes: /h/ occurs before the former, as in fu 富 /hu²²/ above, and /f/ before the latter, as in fou 否 (87-23) 'not' /faw¹³/.

In addition to initials /f/ and /h/ as regular correspondents of the Fei initial, there are three words, listed in (8), which are pronounced with a bilabial stop as a reflex. All three words in (8) come from the Yu rhyme group. Of these, two have the

aspirated /p'/ initial, and one the plain /p/ initial.

- | | | | | |
|-----|------|---|----------------------|--------------|
| (8) | 25-4 | 南 | /p'u ¹³ / | 'to begin' |
| | 25-5 | 脯 | /p'u ¹³ / | 'dried meat' |
| | 25-6 | 斧 | /pu ¹³ / | 'an axe' |

Recalling that the Fei initial had developed out of the EMC Bang (*p-) initial, the apparent exception can actually be analyzed as forms which have preserved the earlier initial. Hashimoto (p.36) observes that all the Yue dialects have labiodental fricatives corresponding to the LMC labiodentals, with one exception: the Chen-cun variety of Shun-de has [p'] as the regular reflex. In the case of the Min dialects, a bilabial stop is in fact a regular reflex of this same set of LMC initials. Fu 斧, for instance, has the colloquial reading of [pu⁵¹] and the literary counterpart of [hu⁵¹] in Xia-men. The same word is recorded as [pou⁵²] in Chao-zhou. In Fu-zhou, fu 斧 has a colloquial form of [p'uo³¹] and a literary one of [xu³¹]. (Zi-hui, p.77.) It is reconstructed as *p- in Proto-Min by Norman (1969:260).

In Cantonese, [f] (and only [f]) is the regular correspondent to the Fei initial. The singular exception in Hashimoto's data is fu 脯, which is pronounced [p'ow³⁵] (p.425).

The Fu 敷 (*f- < EMC *p'-) initial in Zhong-shan follows the same distributional pattern recorded for the Fei initial: /h/ before /u/, and /f/ elsewhere. There are no exceptions in the data. Cantonese likewise has [f] corresponding to the Fu initial, with no exceptions observed in Hashimoto's data.

Correspondence to the Feng 奉 (*fɰ- < EMC *b-) initial also does not deviate from the pattern occurring in the Fei

initial--in either Zhong-shan or Cantonese. Nevertheless, there are two exceptions present in the Zhong-shan data which have an alternation between /f/~/h/ and /p'/ corresponding to a literary-colloquial contrast. As already mentioned, the bilabial stop can be analyzed as traces of an earlier stage in the evolution of the initial.

- (9) 85-5 浮 /faw⁵¹/L., /p'u⁵¹/C. 'to float'
 87-24 婦 /hu²²/ 'a wife', but /p'u¹³/ in:
 新婦 /san⁵⁵ p'u¹³/ 'daughter-in-law'

Cantonese also shows a literary-colloquial distinction for the words in (9) above, reflected in a [f]~[p'] contrast (Hashimoto, pp.488,632). Another exception to [f] as the regular correspondent to the Feng initial in Cantonese cited by Hashimoto (pp.577,632) is the literary word fu 縛 (180-5) 'to bind' [pɔ:k⁴]. The word is /fok²/ in Zhong-shan, with the regular labiodental reflex. Note, however, that Ball (p.520), on the other hand, records /pok/ for Zhong-shan, and /fok/ for Cantonese. Chao's data agrees with the present Zhong-shan form.

The correspondent to the Wei 微 (*v- < EMC *m-) initial in Zhong-shan has merged with that of the Ming initial. The reflex of both historical initials is /m/. Again, recall that the Wei initial had in fact developed out of the Ming initial. It is therefore to be expected that the Min dialects, for example, would show [m] as a regular reflex of the Wei initial rather than [v] or [w], as is the case in the northern Chinese dialects. Examples of the Zhong-shan correspondent to the Wei initial are shown in (10).

- | | | | | |
|------|--------|---|-----------------------|-------------|
| (10) | 66-8 | 尾 | /mi ¹³ / | 'a tail' |
| | 85-7 | 謀 | /maw ⁵¹ / | 'to scheme' |
| | 146-8 | 襪 | /ma:t ² / | 'stockings' |
| | 178-18 | 忘 | /mong ⁵¹ / | 'to forget' |
| | 220-14 | 目 | /muk ² / | 'eyes' |

In the Zhong-shan data on Wei-initial words, the only exception appears to be the word wan 挽 (145-3) 'to draw back', which has a /w/ initial: /wa:n¹³/. Hashimoto (p.632) cites the same word as the only exception to [m] as the regular reflex of the Wei initial in Cantonese. The word wan 挽 also has the labial glide initial in Cantonese and is pronounced [wa:n²⁴].

3.1.2.3. Dentals (LMC)

The Zhong-shan (and Cantonese) correspondent to the Duan 端 (*t-) initial is /t/, with only a small handful of exceptions. Examples of the regular correspondence in Zhong-shan are shown in (11):

- | | | | | |
|------|-------|---|----------------------|--------------------------------|
| (11) | 1-1 | 多 | /to ⁵⁵ / | 'many' |
| | 37-4 | 低 | /taj ⁵⁵ / | 'to bow the head' |
| | 42-10 | 對 | /tuj ²² / | 'opposite to' |
| | 81-1 | 釣 | /tiw ²² / | 'to fish (with hook and line)' |
| | 186-4 | 得 | /tak ⁵ / | 'to obtain' |

Exceptions containing an aspirated dental stop are listed in (12):

- | | | | | |
|------|-------|---|-----------------------|------------------|
| (12) | 16-3 | 肚 | /t'u ¹³ / | 'animal stomach' |
| | 37-5 | 堤 | /t'aj ⁵¹ / | 'a dike' |
| | 67-16 | 叨 | /t'ow ⁵⁵ / | 'garrulous' |

69-5 禱 /t'ow¹³/ 'to pray'

79-8 雕 /tiw⁵⁵/ 'to engrave' (/t'iw⁵⁵/C.)

As in Cantonese (Hashimoto, p.632), the word dǔ 肚 (16-3) 'animal stomach' in Zhong-shan has merged with the word dù 肚 (16-7) for 'human stomach', which is written with the same character. In the word tí 堤 (37-5), observe that it has an aspirated initial in conjunction with Yang-ping tone /51/ in Zhong-shan. Pulleyblank (personal communication) states that many dialects have readings for this word which imply the muddy Ding 定 (*tʰ-) initial rather than the Duan initial. (See, for example, Zi-hui, p.56.) The Zhong-shan reading of aspirated /t'/ in dao 叨 is based on tao 叨 (67-19) 'to desire', which has the Tou 透 (*t'-) initial. The source of aspiration for dao 禱 (69-5) is not clear. Diao 雕 in (12) above has a variant form /t'iw⁵⁵/ which is strictly colloquial.

The same exceptions noted above for the Duan initial are also found in Cantonese (Hashimoto, pp.632-633).

The words duo 撮 (137-1) 'to gather up' and duo 撮 (137-2) 'to weigh a thing in the hand' are both /tsyt²/ in modern Zhong-shan, with an alternate reading of /tsøj²²/. An affricate initial is also found in modern Cantonese; for example, it is recorded in the Zhong-hua Xin Zi-dian as [tsy:t⁴]. Pulleyblank advises that there is an alternate reading in the Guang-yun that can be reconstructed as LMC *tryat (< EMC *trwiat). The regular reflex of LMC *tryat, with the Zhi 知 (*tr-) initial, is /tsyt/ in Zhong-shan. Hence, the Zhong-shan form of /tsyt²/ for duo 撮 is derived from an alternate reading and is not an exception to the Duan initial.

The /n/ correspondent to the Duan initial in the word

niao 鳥 (80-6) 'a bird' in Zhong-shan (and Cantonese) is an exception widespread among the Mandarin dialects. The anomalous initial in the modern dialects can be explained in terms of an avoidance of homonymy with a taboo word.

The regular correspondent to the Tou 透 (*t'-) initial is /t'/ in Zhong-shan, as in Cantonese. Zhong-shan examples are given in (13).

- | | | | | |
|------|--------|---|------------------------|-----------------|
| (13) | 1-2 | 拖 | /t'o ⁵⁵ / | 'to drag along' |
| | 37-6 | 梯 | /t'aj ⁵⁵ / | 'a ladder' |
| | 67-19 | 叨 | /t'ow ⁵⁵ / | 'to deserve' |
| | 108-3 | 帖 | /t'ip ² / | 'a card' |
| | 207-17 | 踢 | /t'ia:k ² / | 'to kick' |

There are several exceptions containing the unaspirated dental stop corresponding to the Tou initial. These are listed in (14) below.

- | | | | | |
|------|--------|---|-----------------------|----------------------|
| (14) | 94-5 | 踏 | /ta:p ² / | 'to tread' |
| | 130-10 | 腴 | /tin ¹³ / | 'protruding (belly)' |
| | 204-22 | 汀 | /ting ⁵⁵ / | 'a (sand) bank' |

Hashimoto (p.633) suggests that the literary word ta 踏 (94-5), [ta:p³] in Cantonese, is due to the analogical reading of the word ta 沓 (94-7) 'a stack (classifier for paper)', which belongs to the Ding initial. A similar proposal cannot be put forth for Zhong-shan since the initial for ta 沓 is aspirated in modern Zhong-shan: /t'a:p²/. The Zhong-shan pronunciation of plain /t/ in ta 踏 may be due to Cantonese influence. The lack of aspiration in both tian 腴 and ting 汀 above is probably the result of

analogical readings--tian 腴 to dian 典 (130-9) 'a statute' (found in common words such as zi-dian 字典 'dictionary'), and ting 汀 to ding 丁 (204-15) 'an individual' or ding 釘 (204-16) 'a nail'.

The pattern of correspondence of the Ding 定 (*tʰ- < EMC *d-) initial parallels that of the Bing initial in Zhong-shan (and Cantonese). Middle Chinese Ping-sheng words have the /t'/ initial in the modern Zhong-shan dialect, with no literary-colloquial distinction. In contrast, the historical Qu- and Ru-sheng words are unaspirated in the modern form. With regard to the Middle Chinese Shang-sheng words, there is a distinction of literary versus colloquial layer: the initial in the literary reading is unaspirated and the tone is merged with the Zhong-shan reflex of the historical Qu-sheng; the initial of the colloquial form is aspirated and the tone is /13/. An example of each is given in (15). Dan 淡 (95-18) in (15d) has a colloquial versus a literary reading in Zhong-shan. (The same stylistic distinction for the word is also found in Cantonese.)

(15) a. Ping-sheng:

81-17 頭 /t'aw⁵¹/ 'head'

b. Qu-sheng:

54-12 地 /ti²²/ 'the earth'

c. Ru-sheng:

132-10 跌 /tit²/ 'to fall down'

d. Shang-sheng:

95-18 淡 /t'a:m¹³/C. 'insipid'

95-18 淡 /ta:m²²/L. 'insipid'

Aside from exceptions resulting from the unpredicted presence or absence of aspiration on the initial (e.g., the Ru-sheng word ta 沓 (94-7) /t'a:p²/ 'a stack' has initial /t'/ instead of /t/), there are also a couple of words which show an affricate as a reflex of the Ding initial:

- (16) 215-19 犢 /tsuk²/ 'a calf'
 215-20 瀆 /tsuk²/ 'a ditch'

The regular Zhong-shan correspondent to the Ni 泥 (*n-) initial in the dialect survey is /n/. Recall that Ni and Niang 娘 (*nr-) initials are combined under the Ni initial in the survey list with no indication of which word in fact belongs to the Ni and which to the Niang initial in the rhyme tables which distinguish thirty-six initials. The merging of the two Middle Chinese initials does not present a problem in analyzing the Zhong-shan data since the modern reflex of both historical initials is /n/, as shown in (17).

(17) a. Ni initial:

- 14-16 奴 /nu⁵¹/ 'a slave'
 94-8 納 /na:p²/ 'to give'
 184-13 能 /nang⁵¹/ 'can, may'

b. Niang initial:

- 20-6 女 /ny¹³/ 'a woman'
 88-1 紐 /naw¹³/ 'a knot'
 104-10 躡 /nip²/ 'to tread' (also /sip²/)

All the exceptions to the regular correspondence arise from words with the Niang initial. In the case of the word

nian 黏 (101-9) 'sticky' /nim⁵⁵/, although it does have /n/ as the regular reflex of the Niang initial, when it enters into the combination nian-mi 黏米 'glutinous rice', the term is /tsim⁵⁵ maj¹³/ in Zhong-shan, with /ts/ as the correspondent to the Niang initial. (The same alternation of initials occurs in Cantonese vis-à-vis this word.)

Another Niang-initial word which has /ts/ as the reflex in Zhong-shan is nian 碾 (124-9, 125-8) '(a stone roller for husking grain)'. The affricate initial for the word, which is /tsin¹³/ in Zhong-shan, is probably due to the analogical reading of the character zhan 展 (124-16) 'to open', which occurs in a number of common polysyllabic words in the language.

The word nie 聶 (104-10) has two variant forms in Zhong-shan: /nip²/ and /sip²/, while nie 聶 (104-8) '(a surname)' has only the form of /sip²/ . In discussing a similar phenomenon of [s] corresponding to the Niang initial in Cantonese, Hashimoto (p.637) suggests that the reading of a sibilant initial may be based on the analogical reading of the more common word she 攝 (105-3) (phonetically [si:p⁴] in Cantonese and [si:p²] in Zhong-shan), which contains the EMC Shěn 審 (*ɕ- < LMC *ʃ-) initial. It may be noted that Ball (p.525) records nie 聶 as /níp/ for both Zhong-shan and Cantonese.

The word nong 濃 (222-8) 'thick (of liquids), dark (of tints)' is /nung⁵¹/, except in reference to strong teas, soup and other liquids, in which case the word is colloquially pronounced /jung⁵¹/ . (A similar alternation of nasal and palatal initial exists in Cantonese with regard to this word.)

The three words in (18) on the next page exhibit only a

palatal /j/ corresponding to the Niang initial. The first and third word in (18) likewise have a palatal glide in Hashimoto's data for Cantonese.

- (18) 112-11 賃 /jam²²/ 'to rent'
 170-19 孃 /jong²²/ 'troubled'
 174-17 釀 /jong²²/ 'to brew'

In the case of rèn (or lìn) 賃, Peking lìn for 賃 is also irregular. The alternate pronunciation of rèn for the word in Mandarin found in some sources (e.g., Mathews' Chinese-English Dictionary) would correspond to the palatal initial in the Zhong-shan and Cantonese forms for ren 賃. The /j/ reflex may be based on the analogical reading of ren 任 (113-2) 'duty' /jam²²/.

An alternate reading for niang 孃 in (18) above can be found under initial Ri 日 (EMC *_n- > LMC *_r-). Since /j/ is one of the regular reflexes of the Ri initial in Zhong-shan, the reading of niang 孃 with the palatal initial in Zhong-shan may be based on the Ri-initial reading. It is possible, however, that the palatal glide in isolated occurrences of Niang-initial words is a vestige of the original distinction between the Ni (*_n-) and Niang (*_{nr}-) initials, as Pulleyblank suspects. Probably significant is the observation that all exceptions in the Zhong-shan data pertaining to the two initials arise with respect to the Niang initial, with the cases of the palatal glide as a reflex of the Niang initial being particularly noteworthy.

Pulleyblank (1970:214-216) provides evidence from the Tibetan hP'ags-pa spelling to propose that *_{nr}- became *_{nj}- (i.e., *_n-) in front of -i, and that the distinction between *_{ni}- and *_{ni}-

survived until early Yuan (1279-1368) even in Mandarin. Given the case of the Ri (EMC *ɲ-) initial, in which *ɲ- yielded /j/ as one of its correspondents in Zhong-shan, one would expect /j/ to be a regular reflex of the palatal nasal *ɲ- arising from the Niang initial. Thus, it may be the case that some words with initial /j/ descending from the Niang initial are traces of the original distinction between the Ni and Niang initial.

The Lai 來 (*l-) initial has /l/ as the regular reflex in Zhong-shan. Examples are given in (19).

- | | | | | |
|------|--------|---|----------------------|------------|
| (19) | 3-17 | 騾 | /lɤ ⁵¹ / | 'a mule' |
| | 18-25 | 驢 | /lu ⁵¹ / | 'a donkey' |
| | 69-15 | 老 | /low ¹³ / | 'old' |
| | 129-15 | 憐 | /lin ⁵¹ / | 'to pity' |
| | 189-6 | 力 | /lik ² / | 'strength' |

There are five exceptions in the data:

- | | | | | |
|------|--------|---|---|-------------------------|
| (20) | 3-19 | 綽 | /wo ⁵⁵ / | 'lines on the finger' |
| | 39-10 | 隸 | /taj ²² / | 'to belong to' |
| | 113-13 | 粒 | /nap ⁵ / | 'a grain; (classifier)' |
| | 173-12 | 兩 | /niong ¹³ / | 'two' |
| | 201-7 | 領 | /nia:ng ¹³ /C.'collar' (/ling ¹³ /L.) | |

The pronunciation of the word luo 綽 with a /w/ initial in Zhong-shan may be based on the analogical reading of the common word wo 窩 (4-17) 'a nest', which is a He-kou word, reconstructed in LMC as *ʔwa, with the Ying 影 (*ʔ-) initial. The writer has no explanation to offer for initial /t/ in the word li 隸 aside from observing that 來 does occur as a phonetic in a few words

historically containing a dental stop initial. Di 楝 '(a mountain tree like the cherry)', for example, is historically homophonous with di 弟 (38-6) 'younger brother' /taj²²/. One could, at this point, make a couple of suggestions, including possible analogical readings. The writer will, nevertheless, leave further speculations for the present. Li 隸 is also recorded by Chao as /taj²²/. Cantonese likewise demonstrates an irregular dental stop initial for the word ([tɛj³³]).

The last three exceptions in (20), with initial /n/, have already been discussed in Chapter 1.1 in which dialectal borrowings was postulated for the rare occurrence of /n/ as a reflex of the Lai initial in Zhong-shan.

3.1.2.4. Dental Sibilants (LMC)

Zhong-shan, like Cantonese, has /ts/ as the correspondent to the Jing 精 (*ts-) initial. Examples are:

- | | | | | |
|------|--------|---|-------------------------|------------------------|
| (21) | 14-23 | 租 | /tsu ⁵⁵ / | 'to rent' |
| | 38-8 | 擠 | /tsaj ⁵⁵ / | 'to crowd' |
| | 124-11 | 剪 | /tsin ¹³ / | 'to cut with scissors' |
| | 175-2 | 將 | /tsiong ²² / | 'a general' |
| | 207-22 | 績 | /tsik ⁵ / | 'to spin' |

There are four words in the data, listed in (22), which have /ts'/ corresponding to the Jing initial.

- | | | | | |
|------|--------|---|------------------------|-------------------|
| (22) | 6-5 | 挫 | /ts'o ²² / | 'to push down' |
| | 69-19 | 澡 | /ts'ow ²² / | 'to bathe' |
| | 71-3 | 躁 | /ts'ow ²² / | 'easily provoked' |
| | 101-15 | 殲 | /ts'im ⁵⁵ / | 'to destroy' |

The irregular correspondence of an aspirated affricate to the Jing initials in the four words in (22) (also aspirated in Cantonese) is explained for Cantonese by Hashimoto (p.634) in terms of analogical readings--an explanation which may equally be applied to Zhong-shan. Hashimoto suggests that cuo 挫 may be based on the analogical reading of the more common word cuo 銼 (6-6) 'a file', zǎo 澡 and zào 躁 on cao 操 (71-6) 'to grasp', and jian 礮 on qian 籤 (101-16) 'a slip of bamboo'.

The regular Zhong-shan (and Cantonese) correspondent to the Qing 清 (*ts'-) initial is /ts'/, as in (23).

(23)	25-18	取	/ts'y ¹³ /	'to marry, to take a wife'
	77-11	悄	/ts'iw ¹³ /	'quiet'
	101-16	籤	/ts'im ⁵⁵ /	'a slip of bamboo'
	132-13	切	/ts'it ² /	'to slice'
	173-17	搶	/ts'iong ¹³ /	'to snatch'

There are a number of exceptions. In the case of both qu 蛆 (19-1) 'maggots' /tsy⁵⁵/ (alternate pronunciation given is /tsu¹³/) and qu 燠 (162-13) 'to burn' /tsan²²/, however, the unexpected /ts/ initial is based on the reading with the Jing initial. Observe nonetheless that Ball (p.530) records /ch'ü/ for qu 蛆. The aspirated initial recorded by Ball would correspond to the Qing initial.

The unexpected /t'/ as a reflex of the Qing initial in the word cong 囱 (213-6) 'a chimney' /t'ung⁵⁵/ ([t'vŋ⁵³] in Cantonese) may reflect the use of cong 囱 for what is actually a colloquial, characterless term in Yue. Hashimoto (p.634) merely mentions the exception in Cantonese and does not attempt to suggest a possible

source for the anomaly.

The Cong 從 (*tsʰ- < EMC *dz-) initial exhibits the same pattern of correspondence as the previous muddy initials, Bing and Ding, as exemplified by (24):

(24) a. Ping-sheng:

140-5 全 /ts'yn⁵¹/ 'entire'

b. Qu-sheng:

58-20 字 /tsi²²/ 'a (written) character'

c. Ru-sheng:

170-4 昨 /tsok²/ 'yesterday'

d. Shang-sheng:

29-12 在 /ts'oj¹³/C. 'to be at'

29-12 在 /tsoj²²/L. 'to be at'

The same pattern of correspondence is found in Cantonese.

Hashimoto (p.635) points out two Ru-sheng words in her data containing the aspirated [ts'] corresponding to the Cong initial instead of [ts]. The two words are ji 輯 (113-16) 'to compile' [ts'ɛp⁵], and zei 賊 (186-11) 'a thief' [ts'ɛk³]. They are also aspirated in Zhong-shan, pronounced /ts'ap⁵/ and /ts'ak²/ respectively. Hashimoto suggests that the first word is based on the analogical reading of the Qing-initial word, qi 緝 (113-14) 'to fell a seam', which has the aspirated initial (in both Cantonese and Zhong-shan). For the second word, zei 賊, Hashimoto suggests that the aspiration of the initial may have been borrowed from neighbouring Hakka dialects. It should be noted that an aspirated, affricate initial is also found in the Min dialects of Xia-men and Chao-zhou (Zi-hui, p.117). Fu-zhou likewise has a

/ts'/ initial for the word: /ts'eik/ (Norman, personal communication).

There are two words in the data with initial /s/ ^{tsʰ}. One is cui 悴 (64-12) 'sad' /søj²²/, which likewise has the [s] initial in Cantonese. Hashimoto (p.635) explains the [s] as having resulted from the reading of cui 粹 based on cui 粹 (64-13) 'pure grain', the latter of which contains the Xin (*s-) initial. The second word has a regular correspondence in Cantonese but is irregular in Zhong-shan: cong 叢 (213-8) 'a clump of trees' /sung⁵¹/. (Cong 叢 often occurs in such combinations as cong-shu 叢書 'a collection of reprinted works'.) The only other word in the Zhong-shan data with the pronunciation of /sung⁵¹/ is chong 崇 (219-1) 'lofty', which contains the Early Middle Chinese muddy initial, Chuang 牀 (*dz-> LMC *(t)ʂ- in Grade II). In Zhong-shan, as in Cantonese, the Early Middle Chinese retroflex sibilants have generally merged with the dental sibilants. In both series, the reflex of /s/ for the muddy initial can be regarded as an irregular sound change. One would suspect that an initial /s/ from these two series is probably traceable to the same source.

The other exception in Hashimoto's data for the Cong initial is the literary word cun (also dun) 蹲 (157-6) 'to squat', which has a [t'] initial: [t'y:n²¹]. The Zhong-hua Xin Zi-dian, however, records two Cantonese pronunciations for the character: [tøn⁵³] and [ts'y:n²¹], neither of which contains an aspirated stop. It is likewise recorded with initials [t] and [ts'] in Wong (1954); however, [tøn⁵³] is regarded as a colloquial reading. As initially suggested by Pulleyblank, given the irregular reflex

of Mandarin dūn and Cantonese [tɒn⁵³], it is possible that both dūn and [tɒn⁵³] are words which have become associated with the character cun 蹲, but had in fact different origins. In Zhongshan, cun 蹲 is pronounced /ts'yn¹³/. The dialect survey list records cun 蹲 as a Ping-sheng word. An alternate reading occurs in Shang-sheng, which is what the Zhong-shan reflex is apparently based on. The Shang-sheng reading is added in the Ji-yun rhyme dictionary as a Qing-initial word in the Zhun 諄 rhyme. In colloquial speech, 'to squat' is [mɛw⁵³] in Cantonese, represented by the coined character, 踞 (or 踞). The Zhong-shan equivalent is [pɛw⁵⁵].

The regular correspondent of the Xin 心 (*s-) initial is /s/ in Zhong-shan (and Cantonese). Zhong-shan examples are:

(25)	10-17	些	/sia ⁵⁵ /	'some'
	23-16	須	/sy ⁵⁵ /	'necessary'
	110-6	心	/sam ⁵⁵ /	'heart'
	170-6	索	/sok ² /	'a large rope'
	206-7	醒	/sing ¹³ /L.	'to awaken' (ts'ia:ng ¹³ /C.)

About ten words in the present data exhibit either /ts/ or /ts'/ as the reflex of the Xin initial, most of which Hashimoto (p.635) has attributed to analogical reading of more common words in Cantonese. In some Zhong-shan exceptions, Hashimoto's analysis of those found in Cantonese may also be applied to Zhong-shan. The word seng 僧 (184-20) 'a Buddhist priest', for example, has an unaspirated affricate initial, which Hashimoto may be correct in attributing to the analogical reading of the surname zeng 曾 (184-15) [tsɛŋ⁵³] (/tseng⁵⁵/ in Zhong-shan).

In the case of the literary word ci 伺 (58-22) 'to wait upon', Hashimoto records [tsi:³³]. In the Zhong-shan data, Chen pronounces the word as /ts'i²²/, and Yang as /si²²/. From the historical point of view, Yang's pronunciation represents the regular correspondence to the Xin initial. Hashimoto suggests the analogical reading of ci 伺 in Cantonese to such words as si 嗣 (58-25) 'to connect' and si 飼 (58-26) 'to feed', which are pronounced [tsi:²²] in Cantonese. In Zhong-shan, si 嗣 is /tsi²²/ and si 飼 is /ts'i²²/. Chen's pronunciation of ci 伺 with an aspirated initial may be based on the analogical reading of the word si 飼.

There are also a few cases in which Cantonese has the regular reflex and only Zhong-shan shows an irregular form, as in the word sui 髓 (61-13) 'marrow'. The word is pronounced /ts'øj¹³/ in Zhong-shan, with initial /ts'/. Norman (personal communication, hereafter "p.c." for short) points out that the initial is *ts'- in Min, with [ts'e³] in Amoy, for example, and suspects that the Zhong-shan /ts'/ initial for the word is a survival of an older stratum.

The Ru-sheng word xie 褻 (126-12) 'dirty, ragged' is /tsi²²/ in Zhong-shan. The highly irregular pronunciation of this word may have been read in error except that double-checking still resulted in the same pronunciation. (It is [si:t⁴] in Cantonese.) Pulleyblank suggests that the Zhong-shan form could be a Qu-sheng derivative. Norman supplied the Amoy word [i' - tsi'] 'dirty', which appears to be a related form.

In Zhong-shan, the word xing 醒 (206-7) 'to awaken is /sing¹³/ in the literary reading, but is colloquially /ts'ia:ng¹³/.

An aspirated affricate initial is found in various Min dialects; for example, Chao-zhou has [ts'ẽ⁵²], and Amoy [ts'ĩ³] (Zi-hui, p.259). Again, it is possible that the colloquial form in Zhong-shan is a survival of an earlier form.

The regular reflexes of the Xie 邪 (*sɦ- < EMC *z-) initial in Zhong-shan is the same as those found in the Cong initial (see (24)): /ts' / for Ping-sheng and the colloquial layer of Shang-sheng; and /ts/ for Qu- and Ru-sheng, and for the literary layer of Shang-sheng. The same pattern occurs in Cantonese.

About a quarter of the Xie-initial words, however, have /s/ as the reflex in the Zhong-shan data (Cantonese has slightly fewer exceptions of /s/ than Zhong-shan). The word su 俗 (225-16) 'common' is /suk²/ colloquially in Zhong-shan. The variant form /tsuk²/ is borrowed from Cantonese and considered a literary pronunciation. Xun 旬 (160-14) 'a period of ten days' is /søn⁵¹/ as opposed to an aspirated affricate initial in Cantonese: [ts'øn²¹]. Interestingly, of the southern dialects represented in the Zi-hui (p.84,220), only Cantonese has an affricated initial for the words su 俗 and xun 旬, as opposed to Mei-xian, Xia-men, Chao-zhou and Fu-zhou, for all of which the initial is [s].

Hui (or sui, old reading) 慧 (45-9, 64-17) 'a comet' has initial /w/ in Zhong-shan (/waj²²/), which reflects the reading with the Yu 喻 initial, historically and synchronically homophonous with wei 衛 (46-6) 'to protect' /waj²²/.

3.1.2.5. Retroflexes (LMC)

With the exception of the retroflex nasal, the Late Middle Chinese retroflexes have all merged with their dental sibilant

counterparts discussed in the immediately preceding section. Thus, /ts/ is the regular correspondent of the Zhi 知 (*tr-) initial, and /ts'/ that of the Che 徹 (*tr' -) initial. The Cheng 澄 (*trɰ- < EMC *dr-) initial undergoes the same distribution of sound correspondence as Cong 從, exemplified in (24). The retroflex Niang 娘 (*nr-) initial has already been discussed in conjunction with the Ni 泥 initial.

A few exceptions to the historical retroflex series will be discussed. The correspondence of dental stops in Zhong-shan to this series is of interest since they may be vestiges of the southern branch of the series which had dentals instead of retroflexes (see Chart 5). Dental correspondences found in the present data are listed in (26) below. Normally, one would not expect to find syllables /ty/, /tione/ and /tiok/ in Zhong-shan if all correspondents of the retroflex series were affricates in the dialect.

(26)	20-14	貯	/ty ¹³ /	'to store up'
	20-16	苧	/ty ¹³ /	'(a hemp-growing plant)'
	154-8	秩	/tit ² /	'orderly'
	175-8	暢	/tione ²² /	'joyful'
	183-9	琢	/tiok ² /	'to cut/polish stone'
	183-10	啄	/tiok ² /	'to peck' (/tione ⁵⁵ /C.)

A /t/ initial for zhu 貯 is also recorded by Chao for Zhong-shan although he includes an alternate form with an affricate initial: /ts'y¹³/, which is not found in the present data. Historically, the fan-qie for zhu 貯 is ding-lü 丁呂 /ting⁵⁵ ly¹³/, implying a dental stop initial.

It is highly probable that Zhong-shan has preserved the

dental initial despite Chao's suggestion that the /t/ initial in zhu 貯 may be due to dialectal influence from Fu-jian (i.e., Min). His proposal is based on the fact that it is in the Min dialects that dentals are the regular correspondents of the LMC retroflexes. Chao records only two other words with a /t/ initial from this historical series: zhuo 琢 (183-9) (see above), and deng (or cheng) 瞪 (188-6) in the combination yan-deng-deng 眼瞪瞪 /nga:n¹³ tang²² tang²²/ 'to stare fixedly, to glare'. (All the dialects recorded in the Zi-hui (p.244) in fact show a dental stop for deng 瞪). The paucity of data, combined with an alternate affricate initial for zhu 貯, makes Chao's suggestion of dialectal borrowing quite plausible.

It is the writer's contention, however, that the dental initials exhibited in the Zhong-shan words represent a preservation of an historical dental initial rather than the result of dialectal borrowing. First of all, one would not expect influence of Min in Shi-qi speech in the pronunciation of words such as chang 暢, for which Chen gave not only the meaning, but various combinations in which it occurs. Secondly, a /t/ initial for zhuo 琢 and zhuo 啄 occurs in Ball's data for both (Macao) Zhong-shan and Cantonese. A /t/ initial for these two words continues to be used in modern Cantonese and Zhong-shan. It would appear that the preservation of a dental for these two words at least exceeds the boundary of influence that Min may claim to exert on Shi-qi speech. Finally, the syllable /tiok/ also occurs in the characterless, colloquial words /tiok⁵/ 'to chop (e.g., in half)', and /tiok²/ 'to mince (by chopping)' in Zhong-shan. Likewise, the syllable /ty/ occurs in at least one colloquial Zhong-shan word: /ty¹³/

'to poke with a long object (e.g., as, accidentally, with a closed umbrella)'. Such data suggest that these syllables are probably indigenous to the dialect. Further investigation is likely to yield more evidence to support this position. For the present, as a general observation, there are a number of Zhong-shan words which show vestigial traces of an earlier layer of the language that do not necessarily point to dialectal influence. Initial /t/ in some lexical items from the LMC retroflex series may be part of that set of genuine survivals of an earlier stratum.

A number of words have the initial /s/ as a reflex of the retroflex series. Some of the exceptions have already been identified by Hashimoto (p.636-637) as being due to analogical readings in Cantonese. The same claim could be made in Zhong-shan in those cases where the two dialects overlap in exhibiting the same irregular initial. In some cases, the exception of an /s/ initial only occurs in the Zhong-shan data, as in the words chǔ 褚 (20-15) '(a surname)' /sy¹³/, and chi 飭 (189-14) 'to order, to instruct' /sik⁵/. Both words are derived from the Che initial. (Hashimoto gives no pronunciation for these two words; they are [ts'y: ³⁵] and [ts'ɪk⁵] respectively in the Zhong-hua Xin Zi-dian.) Of the small number of Cheng-initial words with the /s/ initial in Zhong-shan, the literary word chú 儲 (19-7) 'to collect' /sy⁵¹/ has the regular affricate initial in Cantonese: [ts'y: ²⁴]. Colloquially, 'to collect' is /ts'u¹³/ in Zhong-shan and [ts'ow²⁴] in Cantonese. Cross-dialectally, an [s] initial for the word chú 儲 is found in Mei-xian. In that dialect, it is pronounced [su¹¹] (Zi-hui, p.87).

3.1.2.6. Retroflex Sibilants (EMC) and Palatals (EMC)

As mentioned earlier, the sibilant series of retroflexes and palatals of Early Middle Chinese were no longer phonologically distinct by Late Middle Chinese. By then, they had merged to become the Late Middle Chinese retroflex sibilant series (see Charts 4, 5 and 6). The original two series nevertheless remained in complementary distribution: EMC retroflex sibilant series occur in Grade II of the LMC retroflex sibilant series, and the EMC palatal series in Grade III of the LMC retroflex sibilant series, as shown in Chart 6. By Southern Song (1127-1279), the retroflex series had also merged with the retroflex sibilants (Pulleyblank, 1970-71:214).

Synchronically, Zhong-shan has merged the LMC retroflex sibilant series with the LMC dental sibilant series, just as it has that of the LMC retroflex series in the previous section. Thus, in Zhong-shan the regular correspondent of the Zhuang 莊 (EMC *t_ʂ-) and Zhao 照 (EMC *t_ʂ-) initials is /ts/, that of Chu 初 (EMC *t_ʂ'-) and Chuan 穿 (EMC *t_ʂ'-) initials is /ts'/, and that of Shan 山 (EMC *_ʂ-) and Shén 神 (EMC *_ʂ-) is /s/. The muddy Chuang 牀 (EMC *d_ʂ-) initial behaves similarly to the Cong initial, with /ts/ or /ts'/ depending on the historical tones and the style of speech, literary or colloquial. The same pattern of correspondence is found in Cantonese.

There are, of course, the other initials in these two series, which will be discussed later. We will first deal with some exceptions pertaining to the initials just mentioned.

Two exceptions are found in the data for words descending from the Zhuang 莊 initial. Although one would expect initial

/ts/, ce (or ze) 側 (190-1) 'the side' /ts'ak⁵/ has an aspirated affricate initial in Zhong-shan. An aspirated initial is also found in Xia-men, Fu-zhou and a number of northern Chinese dialects including Peking Mandarin (Zi-hui, p.14). The other word is zheng 睁 (195-7) 'to open the eyes', which has the regular correspondent of the Zhuang initial in the literary layer (tsang⁵⁵/), but /ts'/ in the colloquial layer (/ts'a:ng²²/). No aspiration is recorded for the word in any of the dialects represented in the Zi-hui (p.245).

There are six words in the data which do not exhibit the initial /ts/ as the regular correspondent of the Zhao 照 initial. They are listed in (27) below. All six words are pronounced with an aspirated affricate initial in Hashimoto's data, with the exception of zhun 朮 for which nothing was given.

- | | | | | |
|------|--------|---|-------------------------|----------------|
| (27) | 76-1 | 昭 | /ts'iw ⁵⁵ / | 'bright' |
| | 151-14 | 診 | /ts'an ¹³ / | 'to examine' |
| | 151-15 | 疹 | /ts'an ¹³ / | 'a rash' |
| | 160-18 | 朮 | /sø ⁵¹ / | 'gizzard' |
| | 160-19 | 諄 | /sø ⁵¹ / | 'to reiterate' |
| | 188-5 | 拯 | /ts'ing ¹³ / | 'to save' |

The pronunciation of zhao 昭 with the aspirated /ts'/ may be based on the analogical reading of the word chao 超 (75-24) 'to leap over', which often occurs in a combination such as chao-guo 超過 'to exceed; to surpass' /ts'iw⁵⁵ ko²²/. Hashimoto (p.639) suggests that the aspiration in the words zhen 診 and zhen 疹 in Cantonese may be due to the analogical reading of the common word chen 趁 (152-12) 'to take advantage of', which has the [ts'] initial.

(In Zhong-shan, chen 趁 likewise has initial /ts'/: /ts'an²²/.) The initial /s/ in the words zhun 朧 and zhun 諄 in Zhong-shan may also be based on analogical readings: the former to shun 純 (160-22) 'pure' and the latter to shun 醇 (160-24) 'rich, good (as wine)'. The source of /ts'/ in Zhong-shan and Cantonese for the word zheng 拯 is not known to the writer, and probably not to Hashimoto either since she offers no explanation for the irregular sound change in that word.

In Zhong-shan, there is also the word zhi 枝 (48-13) 'a branch', which is usually pronounced /tsi⁵⁵/, except in the combination li-zhi 荔枝 'lichee (a fruit grown in southern China)' /la:j²² ki⁵⁵/. In the latter case, Zhong-shan has a /k/ initial for zhi 枝, as opposed to an affricated one for the word in the various dialects represented in the Ci-hui (p.90). Note, however, that in C. Douglas' Amoy dictionary (1899:101), for example, the word zhi 枝, as a monosyllabic word, is transcribed as [ki] in Xia-men (or Amoy), with an unaspirated velar stop initial. Chao-zhou likewise has [ki] as the pronunciation for zhi 枝 when it occurs in isolation (Zi-hui, p.44). As regards the graphic variant, zhi 支 (48-12) 'a branch', although it is pronounced /tsi⁵⁵/ in Zhong-shan, in the Southern Min dialects of Xia-men and Chao-zhou, for instance, zhi 支 is pronounced [ki⁵⁵] and [ki³³] respectively (Ci-hui, p.424).

It is highly probable that the word zhi 枝 once bore a *k- initial in Zhong-shan. Today, it is only in the polysyllabic word 'lichee' that *k- has been preserved in the dialect. In other contexts, the velar initial has been lost. It is also significant that zhi 支 occurs as a phonetic in such words as qi 歧 /k'i⁵¹/

(as in Shi-qi 石歧), ji 技 (50-3) 'skill' /ki²²/, and ji 妓 (50-4) 'a singing girl, a prostitute' /ki²²/, which have maintained the velar pronunciation of the Middle Chinese velar initial Qun 群 (*kʰ- < EMC *g-). The historical velar series, one might note, has since undergone palatalization in Mandarin. To claim that zhi 枝 (or 支) had probably undergone a similar process in Zhong-shan, with thus far the singular exception of the word in the frozen form of li-zhi 荔枝, is not far-fetched, especially in view of the reconstruction of this word by Tong-he Dong, for example, as Archaic Chinese *kʰiæg (Chou, 1973:125,141), and by Fang-kuei Li as Archaic Chinese *krjig (class notes, 1977). A velar initial for zhi 枝 (and its graphic variant 支) has also been postulated by Pulleyblank for Old Chinese based on foreign transcriptions in early texts (1962:105-106). It is reconstructed by Pulleyblank as *tɕia in Early Middle Chinese, although he suggests that an earlier form underlying EMC *tɕia is *kjia. He further proposes the same form for proto-Min. It would appear that the same could also be postulated at least for proto-Zhong-shan, and perhaps proto-Yue as well.

With regard to the Chu 初 initial, the unaspirated /ts/ initial in the word chou 搯 (86-18) 'to pluck stringed instrument with fingers' /tsaw²²/, instead of /ts'/, which is the normal Zhong-shan correspondent to the Chu initial, is not an irregular development. Chou 搯 has a Qu-sheng derivative which contains the Zhuang 莊 initial, for which Zhong-shan /tsaw²²/ would be a regular correspondent.

The Chuan 穿 initial has only three exceptions to /ts'/ as its regular reflex. All three are probably based on the

analogical reading of more common words: shu 樞 (24-4) 'a pivot' /k'y⁵⁵/ on qu 區 (24-11) 'a district', che 掣 (127-3) 'to hinder' /tsaj²²/ on zhi 制 (36-8) 'to regulate' and zhi 製 (36-9) 'to make', and chong 銃 (220-2) 'a blunderbuss' /t'ung¹³/ on tong 統 'to govern', which has the Tou initial.

The Shan 山 initial has /s/ as its regular correspondent in Zhong-shan. There are only four exceptions in the data. Xià (literary reading shà) 廈 (9-25) 'a great house' /ha²²/ is not distinguished from xià 廈 (9-6) (as in Xia-men 廈門 'Amoy' /ha²² mun⁵¹/), which is a descendent of the Xiá 匣 (*xh-< EMC *ɣ-) initial.

The source of initial /ts'/ for the word shan 杉 (97-13) 'name of various species of fir and pine' /ts'a:m²²/, which possesses the historical Shan initial, is not known to the writer. The same irregular initial also appears in Cantonese (Hashimoto, p. 638), for which Hashimoto provides no explanation. It should be noted, however, that the same anomaly occurs in Hakka. Mantaro Hashimoto (1973:222) records shan 杉 as [ts'am⁷] (or [ts'am⁵⁵], conforming with the present use of tone numerals and the transcription used in the Zi-hui) for Hakka. It constitutes one of the few exceptions to [s] as the regular correspondent of the Shan initial in that dialect. Whatever the source of the sound change, it had obviously affected both the Hakka and Yue dialects. (This is contrasted with another southern Chinese dialect, Amoy, for example, which has the regular /s/ initial for the word (Douglas, 1899:190).)

The reading of /ts'yn⁵¹/ for the literary word, shuan 拴 'to tie up', which is found under both the Shan initial (138-6)

and the Qing initial (140-4), may be based on the analogical reading of the common word, quan 全 (140-5) 'entire' /ts'yn⁵¹/, which possesses the muddy Cong initial. That would account for shuan 拴 occurring with a Yang-ping /51/ tone instead of the Yin-ping /55/ tone. (Shuan 拴 (138-6 and 140-4) is in Ping-sheng in both entries. Because in neither case is it a muddy-initial word, it should have had the Yin-ping tone as the regular tonal correspondent.)

The word shua 刷 (140-1) 'to brush' /ts'a:t²/ is pronounced with the affricate /ts'/ initial in both Zhong-shan and Cantonese (for Cantonese, see e.g., Hashimoto, p.538; Zi-hui, p.11; Huang, 1970:362). It is possible that the pronunciation of shua 刷 in these two dialects has fused with the semantically overlapping word ca 擦 (118-1) 'to scour, to rub in'; for example, 'to brush the teeth' may be given as shua-ya 刷牙 or ca-ya 擦牙 in Chinese (Mathews, 1971:836,973). (Shua-ya is the more common term in colloquial Mandarin.) The fact that Cantonese [ts'a:t⁴] is recorded in the Zi-hui under the pronunciation of shua 刷, whereas ca 擦 is the character recorded as the Cantonese word corresponding to Mandarin shua 刷 in the Ci-hui (p.293) may be demonstrative of at least some confusion between these two words in Cantonese, and the same apparently holds for Zhong-shan. What may have happened is that, in many instances, Zhong-shan and Cantonese use ca 擦 as the term corresponding to Mandarin shua 刷. Eventually, the word shua 刷 itself became identified in Cantonese and Zhong-shan (the latter probably following in wake of the former's influence) as being pronounced [ts'a:t⁴] and [ts'a:t²] respectively. In contrast to the Cantonese and Zhong-shan situation, Xia-men,

although it also has ca 擦 corresponding to the term shua in Mandarin, nonetheless has retained the pronunciation of shua 刷 as [suat³²] distinct from that of ca 擦, which is [ts'at³²] (Ci-hui, p.293).

Zhong-shan has /s/ as the regular descendent of the Shén 神 initial, with only two exceptions. The word shi 紙 (49-16) 'to lick' has two forms: a literary form of /laj¹³/ and a colloquial one of /la:j¹³/. An /l/ initial is also found in an alternate pronunciation for the word in Cantonese: [lA:j³⁵]. The literary versus colloquial form given by Chen for the word remains a puzzle. What is interesting at this point is that, quite possibly, the word for 'to lick' in Zhong-shan and Cantonese with the /l/ initial is etymologically related to the colloquial term for 'tongue', for which Cantonese has coined the character 脣, pronounced [lej³³] in Cantonese and [li:²²] in Zhong-shan. This term for 'tongue' is also found in Tai-shan ([lej³³]) and Yang-jiang ([lej⁴⁵⁴]), and perhaps other southern Chinese dialects as well (Wong, 1970:262; Ci-hui, p.194).

It has been suggested by Pulleyblank (p.c.) that /la:j¹³/ for shi 紙 in Zhong-shan is in fact a genuine survival of an earlier form for the word; for example, it is Old Chinese *lǝj? > *zia?, recalling that the Shén 神 initial is EMC *ʒ. The same can also be said of she 舌 (127-4) 'tongue' /sit²/, which likewise has the Shén initial. It may very well be the case that the /l/ initial in the various Yue dialects reflects a much earlier form of she 舌 containing *l-. Pulleyblank pointed out to the writer that the two words have correspondences in Sino-Tibetan and Tibeto-Burman according to Benedict. Pulleyblank also notes that

Vietnames has a word for 'tongue' which has initial /l/ and appears to be an old Sino-Vietnamese loan: lu̯i. Tonally, it would correspond to Cantonese [lɛːj³⁵].

There are some, on the other hand, who claim that the use of [lej³³] in Cantonese in place of she 舌 is due to the avoidance of homophony with the word 𧸛 [siːt³] 'to lose money' (Norman, Pulleyblank, p.c.). Such avoidances of taboo syllables are common. For example, instead of saying du-shu 讀書 'to read a book--to study' /tuk² sy⁵⁵/, one often finds the syllable /sy⁵⁵/ replaced by sheng 勝 /sing²²/ 'to excel', since /sy⁵⁵/ in Zhong-shan (and Cantonese) is homophonous with the inauspicious word, shi 失 'to lose'. Given the historical arguments, it may be the case that this latter theory of the origin of an /l/ initial word for 'tongue' is simply folk etymology.

Another exception to /s/ as a reflex of the Shén initial in Zhong-shan is dun 盾 (161-9) 'a shield' /t'ɒn¹³/, which represents the Middle Chinese reading with the Ding initial (number 158-3). An unaspirated /t/ is recorded for the word in Chao (/tɒn¹³/).

Aside from the initial /ts/ and /ts'/ entering into the regular patterning of the muddy Chuang 牀 initial, there are eight words in Zhong-shan for which the reflex is that of /s/:

(28)	57-16	士	/si ²² /	'a scholar'
	57-17	仕	/si ²² /	'to fill an office'
	57-19	俟	/si ²² /	'to wait for'
	59-5	事	/si ²² /	'an affair, a matter'
	86-19	愁	/saw ⁵¹ /	'sad'
	110-12	岑	/sam ¹³ /	'a mountain peak'

118-9 潺 /sa:n⁵¹/ 'sound of water'

219-1 崇 /sung⁵¹/ 'lofty'

Seven of the words in (28) likewise have /s/ as the irregular correspondent of the Chuang initial in Cantonese according to Hashimoto (p.638). Only si 俛 in Hashimoto's data has [ts] as the initial in Cantonese. Si 俛 is in fact one of the rare words the initial of which is descended from the Early Middle Chinese Si 俛 (*z-) initial which, by Late Middle Chinese, had merged with the retroflex sibilant initial, Chuang 牀 (LMC *(t)ʂh-), and occurs in Grade II of that initial. That Zhong-shan has /s/ for si 俛 may represent the retention of its distinction from the Chuang initial. As observed by Hashimoto, shì 士, shì 仕 and shì 事 are pronounced with a fricative rather than an affricate in most of the modern Chinese dialects. (See also Zi-hui, p.51 for shi 士 and shi 事.)

Although Mandarin data would suggest that the Chuang initial has always been an affricate, Pulleyblank (1970:223) notes that ancient evidences were not consistent in showing an affricate initial. Vietnamese, for instance, has an affricate exceptionally; it most frequently has /s/, thus implying a fricative rather than an affricate for the Chuang initial. For example, shi 士 is sĩ, shi 事 sũ, chou 愁 sàu, cen 岑 sâm, chan 孱 sàn, and chong 崇 sùng. Even though Sino-Korean usually has c- or c'-, thus implying an affricate, among the words with initial s- is shi 事 se. Tibetan likewise shows both fricatives and affricates. Among the fricatives are shi 士 ši and shi 事 še, ši.

To account for what appears to be an irregular correspondent to the Chuang initial, Pulleyblank (1970:223), for example,

suggests that the Chuang and Chan 禪 (LMC *ʃɑ-) initials formed one initial phonemically and were pronounced as a fricative before /i/ or /iu/, with a tendency toward affrication elsewhere. (Recall that Pulleyblank regards them as nondistinct phonemically in LMC.) He proposes that it was later, when the retroflex stop initial, Cheng 澄 (EMC *dr- > LMC *trɑ-), became assibilated becoming *trɰ-, that a new phonemic distinction emerged between Chuang (*tʃɑ-) and Chan (*ʃɑ-) before /i/. It was then that the Chuang initial in Grade II became stabilized as an affricate. The sibilant initial in a number of Chuang-initial words in Zhongshan and other dialects, as well as cognates in Vietnamese, etc., can therefore be explained as being based on a fricative pronunciation before Chuang became stabilized as an affricate initial.

Conversely, as can be expected, although /s/ is the regular reflex in Zhongshan for the Chan 禪 initial, slightly over 10% of the data has /ts/ and /ts'/ as correspondents. A similar set of correspondences is found in Cantonese (Hashimoto, p.640).

Usually, whatever word has an affricate in Cantonese is likewise affricated in Zhongshan corresponding to the Chan initial. For example, both dialects have a /ts'/ initial for chou 酬 (86-30) 'to pledge with wine' (Cantonese [ts'ɛw²¹], Zhongshan /ts'aw⁵¹/; she 折 (127-6) 'broken' has /ts/ as initial in both Cantonese ([tsi:t⁴]) and Zhongshan (/tsit²/). It is possible that she 折 in the two dialects is based on the reading with the Zhao 照 initial (i.e., zhe 折 (127-1) 'to break'). Interestingly, she 折, which also has the meaning of 'to lose money', as in the bimorphemic word she-ben 折本 'to lose money in business' ('to

lose + capital money') is /sit²/ in Zhong-shan ([si:t³] in Cantonese), for which Cantonese has coined the characters 賒 (Hashimoto, p.307) and 餒 (Huang, 1970:440). It appears quite likely that the sibilant initial in Zhong-shan and Cantonese [si:t] is in fact a preservation of the original descendent of the Chan initial. Moreover, in the case of Cantonese, the pronunciation of tone [3] in [si:t³], as opposed to [4] in [tsi:t⁴], shows more clearly than Zhong-shan the preservation of the original Yang-ru tone for she 折 descending from the muddy Chan initial. Contrast this with the descendent of the Zhao initial zhe 折, which has a voiceless initial and a tense nuclear vowel in modern Cantonese, thereby conditioning the reflex of the Middle Yin-ru tone [4].⁴

In the case of zhi 植 (190-16) 'trees' /tsik²/, it has a reading with the Cheng initial upon which the Zhong-shan reading may have been based. Shao 芍 (176-15) /ts'io²/, as in shao-yao 芍藥 'peony', on the other hand, is probably a Ching-initial derivative.

There are two additional words in Zhong-shan which have an affricate initial corresponding to [s] in Hashimoto's data for the Chan initial:

- | | | | | |
|------|-------|---|------------------------|------------|
| (29) | 86-29 | 仇 | /ts'aw ⁵¹ / | 'an enemy' |
| | 226-6 | 蜀 | /tsuk ⁵ / | 'Szechwan' |

Chou 仇 is affricated in the majority of the Chinese dialects, including Cantonese in the Zi-hui (p.153). The pronunciation of /tsuk⁵/ for shu 蜀 in Zhong-shan is probably due to the analogical reading of a word such as zhu 燭 (226-1) 'a candle', which occurs

in such common terms as la-zhu 蠟燭 'wax candle' /la:p² tsuk⁵/. The fact that /tsuk⁵/ has the Yin-ru tone /5/ instead of Yang-ru /2/, which would be the expected tonal reflex of a muddy initial word, is additional evidence that the pronunciation of /tsuk⁵/ for zhu 蜀 is probably based on analogy.

The Shěn 審 initial has /s/ as the regular correspondent in both Zhong-shan and Cantonese. In general, the same words with an affricate initial as a correspondent of the Shěn initial are found in the two dialects. Thus, the word chi 翅 (50-17) 'wings, fins', for example, is /ts'/ in both dialects: /ts'i²²/ in Zhong-shan and [ts'i:⁴⁴] in Cantonese. In most Chinese dialects, the initial is [ts'] or [tʂ'] for this word. In fact, none of the dialects represented in the Zi-hui (p.48) has a fricative initial for chi 翅. In contrast, the Shěn-initial word shi 始 (58-5) 'to begin' is /ts'/ in both Zhong-shan and Cantonese; with the exception of Mei-xian, which also has the initial [ts'] for the word, all the dialects in the Zi-hui (p.50) show a fricative [s] or [ʃ].

In addition to the exceptions cited by Hashimoto, two other words in Zhong-shan have an affricate as the reflex of the Shěn initial. Although Hashimoto records nothing beside these two words, listed in (30) below, the Zhong-hua Xin Zi-dian agrees with the Zhong-shan data in recording affricate initials for them.

- (30) 49-17 豕 /ts'i¹³/ 'a pig'
 123-11 羶 /tsin⁵⁵/ 'odour of sheep or goat'

The pronunciation of shan 羶 in Zhong-shan (and Cantonese) is probably based on the analogical reading of the word zhan 氈

(123-9) 'felt'.

Two words with a highly irregular reflex of /h/ for the Shěn initial are shang 晌 (174-6) 'noon' /hiong¹³/, and xiǎng 餉 (175-17) 'rations or pay for troops' /hiong¹³/. Cantonese likewise has initial [h] for the two words which, as Hashimoto suggests (for Cantonese, but also applicable to Zhong-shan), is probably due to the analogical reading of more common words such as xiàng 向 (175-21) 'facing towards' or xiǎng 响 (=響 174-14) 'noise, sound'.

The EMC palatal nasal initial, Ri 日 (*ɾ- > LMC *r-) has one regular reflex in Cantonese, the high front glide [j], which is rounded to [ɥ] before rounded nuclear vowels. Zhong-shan has two regular correspondents to the Ri initial: /j/ and /ng/, which are conditioned by whether the final has a high vowel or not: /j/ occurs before non-high vowels and /ng/ before high ones, or more specifically, the high front vowels [i:] and [y:]. Note, however, that /j/ and /ng/ are not in complementary distribution in the phonological system of Zhong-shan as a whole, since /ng/ also occurs with non-high vowels when it functions as the regular reflex of the Yí 疑 (*ɲ-) initial. (/j/, however, never occurs before the high vowels [i:] and [y:].) Examples of Ri-initial words from different rhyme groups with /j/ and /ng/ as initials in Zhong-shan are listed in (31). The rhyme group to which each word belongs is also specified in (31) within round brackets.

(31) a. /ng/ before high front vowels:

- | | | | | |
|-------|---|----------------------|-------------------------|---------|
| 19-16 | 如 | /ngy ⁵¹ / | 'like, as' | (Yu 遇) |
| 55-6 | 爾 | /ngi ¹³ / | 'you, your' (classical) | (Zhi 止) |

76-5	饒	/ngiw ¹³ /	'to forgive'	(Xiao 效)
103-5	染	/ngim ¹³ /	'to dye'	(Xian 咸)
141-17	軟	/ngyn ¹³ /	'soft'	(Shan 山)

b. /j/ elsewhere:

11-17	惹	/ja ¹³ /	'to provoke'	(Jia 假)
26-3	乳	/jɔj ¹³ /	'milk'	(Yu 遇)
61-15	榮	/jɔj ¹³ /	'stamen'	(Zhi 止)
87-1	柔	/jaw ⁵¹ /	'soft'	(Liu 流)
114-10	入	/jap ² /	'to enter'	(Shen 深)
154-15	日	/jat ² /	'sun'	(Zhen 臻)
175-20	讓	/jong ²² /	'to yield'	(Dang 宕)
221-12	肉	/juk ² /	'flesh, meat'	(Tong 通)

Recall that the syllable /jɔj/, in ru 乳 and rui 榮, is [yɔy] phonetically (see 1.2.3).

In a couple of cases, the alternation of a nasal or palatal glide initial reflects a colloquial versus literary reading, as demonstrated in (32).

- (32) 151-17 忍 /ngan¹³/C., /jan¹³/L. 'to endure'
 172-13 瓤 /nong⁵¹/C., /jong²²/L. 'pulp'

The /n/ reflex in rang 瓤 may stem from the reading with the Niang initial, which is recorded in the Guang-yun.

For the word ren 認 (153-7) 'to recognize', which belongs to the Zhen rhyme group, the literary reading is /jan²²/ and the colloquial /nging²²/, with a different final as well as a different initial. The word ren 軟 (153-8) 'elastic' only has a colloquial reading of /ngan²²/ in the present Zhong-shan data, but it may be observed that Cantonese has a literary reading of [jɛn³³] contrast-

ing with a colloquial reading of [ɲɛn³³]. Moreover, in his syllabary, Chao records /ngan²²/ as the colloquial reading for ren 靛, implying that there is a literary counterpart, presumably with a glide initial. Another colloquial with initial /ng/ is nian 廿 'twenty', which is historically homophonous with ru ㄣ, listed in (31b) above. Again, there is no /j/ initial counterpart in the dialect.

Initial /n/ as a reflex of the Ri initial occurs in only a few words in Zhong-shan. It was brought to the writer's attention by Norman that the Ri initial is reconstructed as *n- for Min. Recall also that the Ri initial is EMC *ɲ-. It is possible that the dental nasal in a few Zhong-shan words is a survival of an earlier stratum. A word with initial /n/ in Zhong-shan is er 餌 (59-12) 'cakes' /ni²²/, from the Zhi rhyme group. The Cantonese pronunciation for the word is [lej³³] according to Hashimoto (p.460) and [nej³³] according to the Zhong-hua Xin Zi-dian (1976:631).

Another word with /n/ corresponding to the Ri initial in Zhong-shan is ru 汝 (21-8) 'you' /ni¹³/, from the Yu 魚 rhyme of the Yu 遇 rhyme group. Although Long-du also has syllable /ni²⁴/ for ru 汝 (Egeriod, p.85), one would not expect the borrowing into Zhong-shan of a classical word such as ru 汝 from Long-du. Although the Yu 魚 rhyme is treated as a He-kou category in the dialect survey, it was in fact classified as Kai-kou in the Yun-jing. The reading of final /i/ in Zhong-shan for ru 汝 would suggest possible preservation of Kai-kou which in virtually every other instance has been lost in the dialect. Ru 汝 is reconstructed by Tong-he Dong, for instance, as Archaic Chinese *ɲiag, and

by Pulleyblank tentatively as Old Chinese *n_ja¹. In Cantonese, ru 汝 is pronounced [ɥy:²⁴]. Ball's data (p.531) likewise show a He-kou final; the initial in this case is /ng/: /ngü/.

There are four words in the Zhong-shan data with the zero initial as the reflex of the historical Ri initial, which may be due to Cantonese influence; that is, normally /ø/ is the Zhong-shan correspondent to the glide initial in Cantonese in the environment before high tense vowels.

(32)	24-7	儒	/y ⁵¹ /	'a scholar'
	123-16	然	/in ⁵¹ /	'certainly'
	123-17	燃	/in ⁵¹ /	'to burn'
	187-20	仍	/ing ⁵¹ /	'as usual'

Not in the dialect survey, but included in Chao's data (p.67), is ru 孺 'a child' /y⁵¹/ and /y²²/, which also has a zero initial as a reflex of initial Ri.

3.1.2.7. Velars (LMC)

The regular correspondent to the Jian 見 (*k-) initial in Zhong-shan (and Cantonese) is /k/, as exemplified in (33).

(33)	1-15	哥	/ko ⁵⁵ /	'older brother'
	37-23	雞	/kaj ⁵⁵ /	'a chicken'
	90-12	救	/kaw ²² /	'to rescue'
	177-12	廣	/kong ¹³ /	'extensive, wide'
	194-19	格	/ka:k ² /	'to reach'

There are, however, about forty words which have /k'/ as a reflex of the Jian initial, accounting for roughly one-tenth of the

Jian-initial words in the data. Approximately the same number of aspirated exceptions occurs in Hashimoto's data on Cantonese, albeit not necessarily involving the same words. Thus, while both Zhong-shan and Cantonese exhibit an aspirated velar stop initial in such words as gui 規 (61-4) 'regulations', gei 給 (114-13) 'to give', jue 決 (148-1) 'to decide' and kuang 礦 (208-5) 'metal ore', for example, there are other Jian-initial words in which only one of the two dialects has an aspirated initial while the other the regular unaspirated one. For instance, gou 溝 (82-7) 'a ditch' and jiu 鳩 (87-3) 'a pigeon' are aspirated in Cantonese, a sound change which Hashimoto (p.641) attributes to the avoidance of homophony with a taboo syllable. Both words are transcribed as [k'w⁵³] by Hashimoto for Cantonese, in contrast to /kaw⁵⁵/ in Zhong-shan. Information on these two words in Cantonese is not consistent, however; for example, both words are recorded as unaspirated by the Zhong-hua Xin Zi-dian (1976) for Cantonese. In contrast, while Wong (1954:11-12) likewise records an unaspirated initial for jiu 鳩, for the word gou 溝, he has an aspirated initial as the colloquial reading and an unaspirated one for the literary counterpart. The unaspirated initial in Zhong-shan for gou 溝 is the colloquial reading since the word for 'ditches', which are found in the villages, is gou-qu 溝渠 /kaw⁵⁵ k'y⁵¹/.

In the case of the words jū 居 (19-17) 'to dwell', gua 掛 (45-1) 'to hang up', and jú 菊 (221-13) 'chrysanthemum', they are aspirated in Zhong-shan but unaspirated in Cantonese.

Other irregular reflexes of the Jian initial present in Zhong-shan are also found in Cantonese. A number of the Cantonese exceptions have been accounted for by Hashimoto (p.641). In

general, since it is the same words which are affected in the two dialects, Hashimoto's suggestions for the source of the irregular development of certain words can also be used for the Zhong-shan exceptions. Initial /h/ in the word jiào 酵 (74-11) 'leaven, yeast' may be based on the analogical reading of xiào 孝 (74-14) 'filial', and those of jiāo 澆 (80-1) 'to cleanse with water' and jiǎo 僥 (80-10) 'to be lucky' based on xiǎo 曉 (80-11) 'dawn'. Both xiào 孝 and xiǎo 曉 are descendents of the Xiao 曉 (*x-) initial.

The presence of [ŋ] instead of [k] in the words gou 勾 (82-5, 84-19) 'to hook' and gou 鉤 (82-6) 'a hook' is attributed by Hashimoto to the avoidance of a taboo syllable in Cantonese. The readings with [k] are, nonetheless, also found in Cantonese (see, for example, Wong, 1954:11; Zhong-hua Xin Zi-dian, 1976:57, 585). Zhong-shan also has the velar nasal initial for these two words despite the fact that the other word with which they should be homophonous, namely gou 溝, mentioned above, has a /k/ initial.

In some cases, an unexpected initial has its source in another reading with a different historical initial. The word chuan 串 (139-7) 'to string together' /ts'yn²²/, with initial /ts'/ in Zhong-shan, for example, is probably derived from the reading with the EMC Chuan 穿 initial.

The /t/ initial in jiu 糾 (87-5) 'to involve' and jiu 糾 (91-5) 'to correct', both /taw¹³/ in Zhong-shan ([tew³⁵] in Cantonese) is highly irregular, and may be due to the analogical reading of dou 斗 (83-1) 'a peck (a dry measure)', which has the Duan initial, although such a proposal is quite unlikely.

The zero initial in the word kuai 會 (43-4) 'to calculate' /uj²²/ probably has its source in the reading with the Xia initial: hui 會 (43-8) 'to meet' and hui 會 (43-9) 'to be able'.

Another exceptional reflex to the Jian initial is /l/, occurring in the word lian 臉 (103-8) 'face'. Apparently, the lateral initial for the word is common among the modern Chinese dialects (cf., for example, Zi-hui, p.181). Historically, moreover, there is evidence that the word had once contained a lateral initial since it had a fan-qie of li-jian 力減, with li 力 possessing the Lai 來 (*l-) initial in Middle Chinese (cf. Hashimoto, 1972b:29).

The pronunciation of a /w/ initial for guō 鍋 (4-7) 'a cooking pot' and guō 蝟 (12-17) 'a kind of wasp' (both /wo⁵⁵/ in Zhong-shan) is probably due to the analogical reading of the word wo 窩 (4-17) 'nest'. Norman suggests that initial /w/ may perhaps also be the result of contamination from huo 鑊 'a wok' /wok²/.

With regard to the Qi 溪 (*k'-) initial, almost half of the Zhong-shan data have /k'/ as a correspondent of the historical initial, and about the same number have /h/. In a few cases, as shown in (34), the data demonstrate a clear distinction between literary and colloquial readings vis-à-vis /k/ and /h/.

- | | | | | |
|------|-------|---|--|-----------------|
| (34) | 18-14 | 庫 | /k'u ²² /L., /hu ¹³ /C. | 'a store-house' |
| | 71-12 | 靠 | /k'a:w ²² /L. /how ²² /C. | 'to depend on' |
| | 201-1 | 輕 | /k'ing ⁵⁵ /L. /hia:ng ⁵⁵ /C. | 'light, young' |

The initial /h/ in ku 庫 is used colloquially for the name of the village, Ku-chong 庫充 /hu¹³ ts'ung⁵⁵/, for instance, while the literary reading of ku 庫 is /k'u²²/.

as a rising /13/ parallels other colloquial-literary pairs in which the colloquial reading has /13/ and the literary form /22/ (see, for example, (15) and 24).) In this case, however, the initial is not 'muddy' historically, as is true of the previous examples of such a tonal alternation.

Most of the words containing the /h/ initial descending from the Qi initial represent the colloquial layer of the dialect, as exemplified by (35) below.

(35)	22-12	去	/hy ²² /	'to go away'
	58-11	起	/hi ¹³ /	'to rise'
	83-12	口	/haw ¹³ /	'mouth'
	117-8	看	/hon ²² /	'to see, to look at'
	216-5	哭	/huk ⁵ /	'to weep, to cry'

Those words with initial /k'/ tend to be literary words, as shown in (36).

(36)	24-12	驅	/k'y ⁵⁵ /	'to expel'
	31-4	磕	/k'oj ²² /	'to hit against'
	37-25	溪	/k'aj ⁵⁵ /	'a rivulet'
	147-5	犬	/k'yn ¹³ /	'a dog'
	154-17	詰	/k'it ² /	'to investigate'

It might be of interest to point out that kan 看 'to see, to look at' in (35) is a colloquial word in Zhong-shan, whereas it is a literary one in Cantonese (pronounced [hɔ:n⁴⁴]). The colloquial Cantonese equivalent is di 睇 [t'ɛj³⁵]. In Cantonese, where two-thirds of the Qi-initial words are now pronounced with [h] (or further changed to [f] in He-kou words), there are more instances

of literary words being pronounced with the [h] initial in that dialect than in Zhong-shan. The word quan 犬 in (36) is a case in point. In both Zhong-shan and Cantonese, this word is strictly literary. The common word for 'dog' is gou 狗 (83-9), pronounced [kew³⁵] in Cantonese, and /kaw¹³/ in Zhong-shan. In the latter dialect, the word quan 犬 has the /k'/ initial, thereby reflecting its status as a literary word. In Cantonese, on the other hand, quan 犬 is pronounced [hy:n³⁵]. It is obviously observations of this unpredictable sort that prompted Hashimoto (p.642) to simply note that one-third of the Qi-initials in Cantonese have initial [k'], most of which are literary words, while the two-thirds which have an [h] (or [f]) initial are either colloquial or literary words.

Accepting the assumption that sound change is regular, one would analyze the apparent bifurcation of the Qi initial into /h/ and /k'/ not as an incomplete process of deplosivization, as Hashimoto wishes to suggest, but as the complete deplosivization of the Qi initial. Presumably, the literary words in the dialect later became subject to influence from a northern standard which had not undergone the deplosivization process.

Only four words in Zhong-shan show a change from /h/ to /f/, affecting some words in the Guo 果 rhyme group and the He-kou rhymes of the Xie 蟹 rhyme group. Unlike Cantonese, the words with the /f/ initial in Zhong-shan only occur with non-high (and non-front) nuclear vowels in the modern dialect. Contrast, for instance, ku 褲 (18-15) 'trousers', which is Cantonese [fu:⁴⁴] and Zhong-shan /hu²²/, with ke 科 (4-9) 'a class', which has initial /f/ in both dialects: [fɔ:⁵³] in Cantonese, and /fo⁵⁵/

in Zhong-shan. A more detailed analysis of the process that changed /h/ to /f/ in the Yue dialects will be given in the discussion of the Xiao 曉 initial where the change of /h/ to /f/ affects a greater proportion of the Zhong-shan data.

Two literary words have /l/ as the correspondent of the Qi initial: ke 棵 (4-11) 'classifier for trees' /lo¹³/ (with /ko¹³/ as a variant form), and ke 顆 (5-16) 'a kernel; classifier for small, round objects' /lo¹³/.

There are a few words in Grades III and IV rhymes containing the Qi initial in which the syllable-initial segment is /j/, implying a loss of the original initial, resulting in the medial serving as the new initial in the dialect. One such word is giu 丘 (87-6) 'a hillock' /jaw⁵⁵/. However, the word giu 邱 'a place; a surname', which should be homophonous with giu 丘 according to historical sources, is pronounced /hia:w⁵⁵/ in the surname of a Zhong-shan relative of the informants. Another word with initial /j/ is the common word chi 吃 (208-3) 'to eat'--/ja:k²/ in Zhong-shan. It is pronounced [hɛ:k⁴] in Cantonese, and [hjɛk] in Kai-Ping another Yue dialect (from 1977 fieldnotes). (Ball (p.531), however, records /yák/ for both Cantonese and Shi-qi speech, contrasting with /yiek/ for Macao Zhong-shan.)

Initial /w/ occurring in Qi-initial words should also be viewed as the loss of the original reflex, with the historical medial becoming the new initial /w/ in the dialect. This can be clearly seen in the following example. Although in the present data /wat⁵/ is the only pronunciation given for qu 屈 (165-13) 'a grievance', it is significant that Chao (p.65) records both /wat⁵/ and /k'wat⁵/ for the word.

The zero initial also occurs in a couple of Qi-initial words; for example, the personal name of Mencius, ke 軻 (1-16), is /o⁵⁵/ in Zhong-shan.

The pronunciation of giu 糗 (88-20) 'parched wheat or rice' /ts'aw²²/, with initial /ts'/, may be due to the analogical reading of the common word chou 臭 (90-7) 'foul odour', descending from the Chuan initial. Given the tendency to avoid homophony with words having unpleasant or inauspicious connotations, it is surprising to find the present analogical reading.

The Qun 群 (*kʰ- < EMC *g-) initial behaves similarly to other muddy initials; in this case, Zhong-shan has the reflexes of /k/ or /k'/ depending on the historical tones and on whether the style is colloquial or literary. Examples are given in (37).

(37) a. Ping-sheng:

3-5 茄 /k'ø⁵¹/ 'eggplant'

b. Qu-sheng:

90-14 舊 /kaw²²/ 'old'

c. Ru-sheng:

199-15 屐 /kia:k²/ 'clogs'

d. Shang-sheng:

155-10 近 /k'an¹³/C. 'near to'

155-10 近 /kan²²/L. 'near to'

Naturally, there are some exceptions to the pattern of correspondences to the Qun initial. Ju 劇 (199-4) 'drama' /k'ia:k²/, for example, has an aspirated instead of the unaspirated form for a Ru-sheng word. In fact, most of the southern Chinese dialects, including Cantonese, Mei-xian, Xia-men, and Fu-zhou,

have [k'] as the initial in the word ju 劇 (Zi-hui, p.97).

The Yí 疑 (*ŋ-) initial has /ng/ as the regular Zhong-shan correspondent. In contrast, Cantonese has [ŋ] in those words descending from Grades I and II rhymes, and [j] or [ɥ] in those Grade III and IV rhymes which have a high or front vowel in the modern dialect, and [ŋ] in other Grade III and IV rhymes. Zhong-shan examples are given in (38).

(38)	2-5	我	/ngo ¹³ /	'I, me'
	19-22	魚	/ngy ⁵¹ /	'a fish'
	56-20	疑	/ngi ⁵¹ /	'to doubt'
	117-9	岸	/ngon ²² /	'shore'
	198-7	迎	/nging ⁵¹ /	'to welcome'

In the case of Grade III Yi-initial words from the Dang 宕 and Tong 通 rhyme groups, the modern reflex in Zhong-shan is /j/, as exemplified in (39) below.

(39)	174-12	仰	/jong ¹³ /	'to look up to'
	176-20	虐	/jok ² /	'harsh'
	226-13	玉	/juk ² /	'jade'

The Yí-initial words in the first grade of the Yu 遇 rhyme group (or more precisely, in the Mo 模 rhyme) have the syllabic velar nasal [ŋ] as the modern Zhong-shan (and Cantonese) reflex. The syllabic nasal constituting the entire syllable in these words is without exception in the data. A few examples, a couple of which have already been cited in 1.2.4 in connection with the discussion of syllabic nasals in the dialect, are presented in (40).

(40)	15-6	吳	/ng ⁵¹ /	'Wu'
	16-25	五	/ng ¹³ /	'five'
	16-27	午	/ng ¹³ /	'noon'
	18-16	誤	/ng ²² /	'to be mistaken'

Observe, however, that in Ball's article, while a syllabic nasal is recorded for Cantonese, the Zhong-shan form has syllable /ung/.

Aside from the systematic exceptions discussed above, there are very few exceptions to /ng/ as the reflex of the Yí initial in Zhong-shan. The Grade IV word yan 硯 (131-16) 'ink-stone' /in²²/ may have been subject to dialectal influence. The word in Cantonese, for instance, is [ji:n^{33,35}]. As noted earlier, the zero initial in Zhong-shan often corresponds to the Cantonese palatal [j] initial when it occurs before high front vowels. Observe that yan 研 (129-24) /ngin⁵¹/, which can be used as a graphic variant of yan 硯, has initial /ng/ in Zhong-shan. Given the velar nasal reflex in yan 研, it does not appear to be the case that yan 硯 underwent the following sound change: *ŋjian > *jian > jin, which would have been the case had the zero initial been a genuine Grade IV reflex. One can quite safely conclude that the zero initial in yan 硯 is not a true reflex of the Grade IV Yí initial, but is in all probability the product of dialectal contamination.

The last two velar initials to be discussed are Xiao 曉 (*x-) and Xia 匣 (*xʰ- < EMC *ɣ-), both of which, one might have noted from Chart 4, were traditionally classified as hou-yin 喉音 ('throat sound'), or guttural, initials.

There are two regular correspondents of the Xiao initial in Zhong-shan (and Cantonese): /h/ and /f/, which are conditioned

by the nature of the final. In Zhong-shan, /h/ occurs in Kai-kou words and in those He-kou words which have the reflex of a high and/or front vowel (viz., /i/, /y/, /u/ or /ø/), while /f/ occurs only in words descending from He-kou rhymes which have a non-high, non-front vowel in the modern dialect. Examples of this pattern of distribution is given in (41).

(41) a. /h/ in Kai-kou words:

60-1	希	/hi ⁵⁵ /	'rare'
70-4	好	/how ¹³ /	'good'
172-23	香	/hiong ⁵⁵ /	'fragrant'

/h/ in He-kou words with a high and/or front vowel:

6-17	靴	/hø ⁵⁵ /	'boots'
17-1	虎	/hu ¹³ /	'a tiger'
148-4	血	/hyt ² /	'blood'
209-7	兄	/hing ⁵⁵ /	'an elder brother'
223-3	胸	/hung ⁵⁵ /	'bosom'

b. /f/ in He-kou words with a non-high, non-front vowel:

5-17	火	/fo ¹³ /	'fire'
13-1	花	/fa ⁵⁵ /	'a flower'
160-4	忽	/fat ⁵ /	'suddenly'
177-2	荒	/fong ⁵⁵ /	'wild, barren'

Although Cantonese (Hashimoto, p.644) also has [h] and [f] as the regular correspondents of the Xiao initial, their distribution differs somewhat from that in Zhong-shan. Initial [h], for instance, occurs in Kai-kou words and in only those He-kou words which have the reflex of a front vowel in the dialect, while [f] occurs in He-kou words with a non-front vowel, the height of

which is not relevant. In Cantonese, moreover, the Tong 通 rhyme group constitutes an exception to this distribution in that, although the reflex of the Tong rhyme group is a non-front vowel in modern Cantonese, the initial is nonetheless [h] rather than the expected [f] (e.g., xiong 胸 in (41) is [hʊŋ⁵³] in Cantonese, not [fʊŋ⁵³], the latter being the pronunciation of words descending from Late Middle Chinese labiodentals.

It has been suggested that the fronting of the Xiao initial to a labiodental (i.e., the so-called "dentilabialization" process) in the Yue dialects in certain environments is quite a recent sound change. W. Boltz (1978), for instance, proposes to date the dentilabialization process at circa mid-eighteenth century on the basis of a Sino-Portuguese glossary compiled around 1750. As has been argued elsewhere (Chan, forthcoming), the data Boltz cited gave evidence not for the period when dentilabialization was in the process of affecting Cantonese (actually Zhong-shan, to be more correct⁵), but rather the terminus ad quem of that sound change, for the data show quite clearly that the dentilabialization of the Xiao initial (and, to a more limited extent, the Qi initial, especially in Zhong-shan) had stabilized by the middle of the eighteenth century. When that sound change had taken place still remains to be solved.

Among the irregular correspondents to the Xiao initial in Zhong-shan is the labial /w/ segment, as in hui 諱 (67-3) 'taboo' /waj¹³/. The pronunciation may be based on the analogical reading of the more common word wei 偉 (66-10) 'admirable', with the EMC Yun 云 (*w-) initial. The source of /w/ as the initial segment in the literary word hui 卉 (67-4) 'plants' /waj¹³/ is a bit more

difficult to explain. Hui 卉 is classified under Qu-sheng words, although it does have a Shang-sheng reading from which the Zhong-shan form may have been derived, which would account for the reflex of /13/ instead of /22/; however, the historical initial of the Shang-sheng derivative is also Xiao.

In discussing /w/ occurring as the initial segment in the Zhong-shan pronunciation of those words descending from the Xiao initial in the paragraph above, it should be added that they are He-kou words, and diachronically, one can equally claim that Zhong-shan had lost the initial segment that should correspond to the Xiao initial. The labial medial /w/ by default then becomes the initial segment in the modern dialect. This remark is also relevant to the observation of /w/ or /j/ as the syllable-initial segment of some words descending from the Qi 溪, Xia 匣 and Ying 影 initials. Diachronically, /w/ and /j/ correspond not to the historical initials, but to the medials. In other words, with the loss of the original reflex of these historical initials, the medials became the new syllable-initial segment in the modern Zhong-shan dialect.

The word qi 迄 (156-5) 'to reach to' /ngat²/ has a velar nasal initial in Zhong-shan corresponding to the Xiao initial. No explanation can be offered at this point, although it is observed that Cantonese also has a velar nasal initial for the word. Xiu 休 (87-13) 'to rest' /jaw⁵⁵/ has a /j/ initial in Zhong-shan (and Cantonese). Again, the writer can give no immediate explanation for the irregular correspondence. (This is, of course, a case of the loss of the original initial, since xiu 休 is a Grade III Kai-kou word; the initial /j/ segment in the modern dialect would be

the original medial in the word.)

There are two regular correspondents to the Xia ɥ initial in Zhong-shan, namely /h/ and /w/. Their distribution is similar to that of that Xiao initial: /h/ occurs in Kai-kou rhymes and in those He-kou rhymes which have the reflex of a high vowel in Zhong-shan (i.e., /y/ or /u/), and /w/ as the initial segment in the remainder of the He-kou rhymes. Cantonese also has [h] and [w] as the main correspondents of the Xia initial. The distribution of the two reflexes parallels the distribution found in Cantonese of initials [h] and [f] in Xiao-initial words. Zhong-shan examples are provided in (42).

(42) a. /h/ in Kai-kou words:

3-4	賀	/ho ²² /	'to congratulate'
33-21	鞋	/ha:j ⁵¹ /	'shoes'
205-14	形	/hing ⁵¹ /	'a form'

/h/ in He-kou words with a high vowel:

15-13	壺	/hu ⁵¹ /	'a pot'
147-3	懸	/hyn ⁵¹ /	'to hang up'
216-6	斛	/huk ² /	'a corn measure'

b. /w/ in He-kou words with a non-high vowel:

4-13	和	/wo ⁵¹ /	'peace'
138-2	滑	/wa:t ² /	'slippery'
177-4	黃	/wong ⁵¹ /	'yellow'

There are also about ten He-kou words in the data in which the initial underwent a change from /h/ to /ø/ in Zhong-shan, as exemplified by the following:

(43)	43-8	會	/uj ²² /	'to meet'
	134-8	完	/yn ⁵¹ /	'to finish'
	137-11	活	/ut ² /	'living'
	211-6	螢	/ing ⁵¹ /	'a glow-worm'

These words may have been generally influenced by words descending from the Ying 影 and Yu 喻 initials, which have the reflex of the zero initial when the following segment is a high vowel. In Cantonese, these vowels are preceded by homorganic glides (e.g., hui 會 (43-8) is pronounced [wu:ɟ^{33,35}], wan 完 [ɥy:n²¹], ying 螢 [jɪŋ²¹], etc.).

A number of words in the data have a velar stop as the reflex of initial Xia. Although some may be based on alternate readings with a Middle Chinese velar stop initial or on analogical readings, others may suggest possible preservations of an Old Chinese *g- initial which had later merged with Old Chinese *h- to form the Middle Chinese Xia initial (see, for example, Pulleyblank, 1962:86-88). A list of velar-stop initial words from the Xia initial is given below.

(44)	1-24	苛	/k'o ⁵⁵ /	'small plants'
	13-4	划	/ko ⁵⁵ /	'to punt a boat'
	15-18	糊	/k'u ⁵¹ /	'pudding, (edible) paste'
	34-7,8	解	/ka:ɟ ¹³ /	'surname; to understand'
	42-22	潰	/k'uj ²² /	'a stream overflowing its banks'
	43-10	繪	/k'uj ²² /	'to draw, to paint'
	47-1	攜	/k'waj ⁵¹ /	'to lead by the hand'
	47-2	畦	/k'waj ⁵¹ /	'a plot of land'
	74-17	校	/ka:w ²² /	'a military or naval title'

101-3	匣	/ka:p ² /	'a casket'
135-7	皖	/k'un ¹³ /	'bright'
182-4	項	/k'ong ²² /	'nape of the neck'
195-13	莖	/king ²² /	'the stalk of a plant'
215-4	閔	/kung ²² /	'the din of battle'

Hu 糊 also has the form of /hũ⁵¹/, which is the literary pronunciation, and /u⁵¹/, which is used to mean '(non-edible) paste' or 'to paste'. Apparently, Min likewise has a number of velar stops as a reflex of the Xia initial. Hu 糊, for example, has a /k/ initial in virtually all the Min dialects, and is in fact reconstructed by Norman (1969:255) as containing initial *k in Proto-Min. Xiang 項 has an alternate reading of /hong²²/, as in ji-xiang 鷄項 'young chicken' /kaj⁵⁵ hong²²/, which undoubtedly is derived from Cantonese, where the only pronunciation for xiang 項 is [hɔːŋ³³].

There are also a couple of words with a velar nasal initial in Zhong-shan as a reflex of the Xia initial. These are:

(45)	72-24	肴	/nga:w ⁵¹ /	'savoury food'
	72-25	淆	/nga:w ⁵¹ /	'mixed, muddy'

Yao (old reading, xiao) 肴, for example, has a velar nasal not only in Zhong-shan, but also in Cantonese, Xia-men, Chao-zhou and Fu-zhou; and in Xi-an (a Mandarin dialect), the word has a palatal nasal initial (Zi-hui, p.148).

There are a few cases of /l/ and /f/ corresponding to the Xia initial; for example, jian 艦 (100-7) 'a warship' /la:m²²/, and huang 晃 (177-15) 'bright' /fong¹³/. It is possible that the irregular reflexes in such cases are due to analogical readings;

the pronunciation of /la:m²²/ for jian 艦, for instance, may be based on that of lan 濫 (96-10) 'to overflow', or lan 纜 (96-11) 'a cable', which have the historical Lai initial. An /f/ initial on huang 晃 in Zhong-shan may be based on the analogical reading of huang 恍 (177-14) 'wild, mad' /fong¹³/, with the Xiao initial.

3.1.2.8. Gutturals (LMC)

Two guttural initials are discussed in this section, Ying 影 (*ʔ-) and Yu 喻 (*#-). In Zhong-shan, both initials have /ø/, /j/ and /w/ as regular correspondents, differing only somewhat in their distribution.

In discussing the distribution of /ø/, /j/ and /w/ in Ying-initial words, a separation between Kai-kou and He-kou words would simplify the description to some extent. In reference to Kai-kou words only, the regular correspondent is /ø/ in Grades I and II, and in those syllables which have the reflex of a high vowel; and /j/ in those Grade III and IV syllables where the modern reflex is a non-high vowel. With regard to the He-kou series--excluding the Tong 通 rhyme group--the regular correspondent of the Ying initial is /ø/ in those syllables which have the reflex of a high vowel, and /w/ elsewhere. In the case of the Tong rhyme group, /ø/ occurs in Grades I and II, and /j/ in Grades III and IV. Examples of the distribution of these correspondents, as outlined above, are given in (46).

(46) a. Kai-kou Series:

/ø/ in words with a high vowel:

79-3 要 /iw²²/ 'important'

154-18 乙 /yt²/ 'second of the Ten Stems'

188-2 應 /ing⁵⁵/ 'ought, should'

/ø/ in remaining Grade I & II words:

8-16 鴉 /a⁵⁵/ 'a crow'

94-2 暗 /om²²/ 'dark'

122-5 晏 /a:n²²/ 'quiet'

/j/ in remaining Grade III & IV words:

91-7 幼 /jaw²²/ 'young'

154-19 一 /jat⁵/ 'one'

173-1 央 /jong⁵⁵/ 'central'

b. He-kou Series (excluding the Tong rhyme group):

/ø/ in words with a high vowel:

15-20 烏 /u⁵⁵/ 'a crow'

146-2 怨 /yn²²/ 'to find fault with'

/w/ elsewhere:

4-17 窩 /wo⁵⁵/ 'nest'

67-5 畏 /waj²²/ 'to dread'

138-4 挖 /wa:t²/ 'to dig out'

c. Tong rhyme group:

/ø/ in Grade I & II words:

215-5 甕 /ung²²/ 'an earthen jar'

216-7 屋 /uk⁵/ 'a room'

/j/ in Grade III & IV words:

221-18 郁 /juk⁵/ 'elegant'

224-11 擁 /jung¹³/ 'to crowd'

In the case of exceptions to the above distribution, some may have resulted from the merging of finals, and others from analogical readings. For example, Grade I of the Kai-kou series of

the Zhen 臻 rhyme group has merged with those in Grades III and IV, which may account for the presence of initial /j/ instead of /Ø/ in the Grade I word, en 恩 (148-10) 'grace' /jan⁵⁵/. (However, an alternative proposal will be offered later.) The pronunciation of /ing⁵⁵/ in the Grade II Kai-kou words ying 鸚 (195-15) (which has an alternate reading of /ang⁵⁵/ 'a parrot') and ying 櫻 (195-16) 'cherry' is probably due to the analogical reading of the Kai-kou word ying 嬰 (201-2) 'an infant', which is a Grade IV word.

A comment should be added at this point concerning the various grades in the dialect survey. The Fang-yan Diao-cha Zi-biao often collapses certain grades which in most dialects no longer show any phonemic distinction. More will be said about this subsequently (in the analysis of the grades per se), but for now, the primary implication of this observation is that many Grade IV Kai-kou words have been included under the category of Grade III words. One example is that of ying 嬰 above, which, although it is listed as a Grade III word in the dialect survey, is in fact from the Grade IV category.

Recall from Chapter 1.2 that the syllable /ing¹³/ in the rising tone is accompanied by the [j] on-glide. Two words in the data are thus affected: ying 影 (198-15) 'shadow' and ying 映 (199-9) 'to reflect', both of which are phonemically /ing¹³/, but phonetically [jɪŋ¹³].

There are two exceptions to the distribution of the Tong rhyme group: weng 翁 (213-20) 'an old man' /jung⁵⁵/, and wo 沃 (218-3) 'to water' /juk⁵/. According to the pattern of correspondences, these should have had the zero initial instead of a

palatal onset. However, the pronunciation of an initial glide in the word weng 翁, for instance, seems to be a peculiarity not only to Zhong-shan, but to the Yue dialect as a whole, and appears moreover to be restricted to that dialect group (cf., e.g., Zi-hui, p.271; McCoy, 1966:82). The palatal glide preceding en 恩 (148-10) /jan⁵⁵/ mentioned earlier likewise appears to be exceptional to the Yue dialects (e.g., Cantonese [jɛn⁵³]; see also: Zi-hui, p.209). As suggested by Pulleyblank, it may be the case that Cantonese and Zhong-shan underwent a sound change such that *#ɛn > *#jɛn (as in the case of en 恩), *#oŋ > *#joŋ (e.g., weng 翁), and the corresponding stop *#ok > *#jok (e.g., wo 沃). (Apparently, wo 沃 is also irregular in its development in Min (Norman, p.c.), and may be part of the same sound change observed in Yue.)

Cantonese, like Zhong-shan, has [j], [w] and the zero initial corresponding to the Ying initial. What differences exist between Zhong-shan and Cantonese with respect to the distribution of these modern reflexes are only very superficial. Basically, where Zhong-shan has the zero initial preceding high vowels, Cantonese has a glide which is homorganic with the following high vowel.

Among the miscellaneous exceptions corresponding to the Ying initial are: /k'/ (e.g., ye 謁 (129-3) 'to visit a superior' /k'it²/, /ts/ (in ya 軋 (120-10) 'to crush' /tsa:t²/, /ŋg/ (e.g., yi 抑 (190-22) 'or' /ŋgik⁵/, and /m/ (in yao (or miao) 杳 (80-12) 'obscure' /miw¹³/).

The Yu 喻 initial has, to a greater or lesser extent, merged with Grades III and IV of the Ying initial. According to Pulleyblank (1970-71:227), the distinctions between initials Ying and Yu had by and large disappeared between the latter part of the Tang dynasty (618-907) and the Yuan dynasty (1279-1368). Distinction between the Yin- and Yang-ping tones, however, has been preserved (e.g., in Peking tones 1 and 3). It should also be brought to mind that the enclitics yi 矣 (58-16 /i¹³/ and yan 焉 (123-23) /in⁵¹/, which represent words with the true zero initials in Early Middle Chinese, are analyzed as Grade III Yu-initial words in Late Middle Chinese.

The Late Middle Chinese Yu initial itself arose out of two Early Middle Chinese initials (see Chapter 3.1.1): Yun 云 (*w-) and Yǐ 以 (or Yang 羊, in Pulleyblank's reconstructions) (*j-). The distinction of the two earlier initials is maintained in Late Middle Chinese insofar as they occur in different grades: Yun in Grade III rhymes, and Yǐ in Grade IV rhymes. In the modern Zhongshan dialect, there is no longer a phonological distinction between them, save in the He-kou series of the Xie 蟹 rhyme group, exemplified by the pair in (47).

- | | | | | | |
|------|------|---|----------------------|--------------------------|-----------|
| (47) | 46-6 | 衛 | /waj ²² / | 'to guard' | (EMC *w-) |
| | 46-7 | 銳 | /jɔj ²² / | 'a sharp-pointed weapon' | (EMC *j-) |

Both wei 衛 and ruì 銳 are Qu-sheng, He-kou words occurring in the Ji 祭 rhyme of the Xie rhyme group, differing only in that wei 衛 originated from the EMC Yun (> Yu III) initial, and ruì 銳 from the EMC Yǐ (> Yu IV) initial.

There is, nonetheless, another difference between the two

Early Middle Chinese initials, and that is in their distribution with respect to the finals. Only the Yi initial, for example, occurs with the Xiao 效, Jia 假, Shen 深 and Tong 通 rhyme groups. (There is no rhyme group which takes only the Yun, and not the Yi, initial.) Within a given rhyme group, the distribution of the two initials may also differ. The Yun initial, for instance, combines with the He-kou series of the Dang 宕 rhyme group, while the Yi initial combines with the Kai-kou portion of the same rhyme group.

Phonologically speaking, however, the differences cited above do not affect the distribution of /ø/, /j/ and /w/ corresponding to the two EMC initials, which became the Late Middle Chinese Yu 喻 initial. The distribution of the correspondents of the Yu initial is as follows: in the Kai-kou series, /ø/ occurs with front vowels (i.e., [i:], [ɪ] and [y:]), and /j/ elsewhere; in the He-kou series--with the exception of the Tong 通 rhyme group, which takes initial /j/--/ø/ occurs with tense high vowels (viz., [u:] and [y:]), and /w/ elsewhere. Examples are given in (48).

(48) a. Kai-kou Series:

/ø/ in words with a high vowel:

76-20	搖	/iw ⁵¹ /	'to shake'
105-6	葉	/ip ² /	'a leaf'
201-5	贏	/ing ⁵¹ /L.	'to win'

/j/ elsewhere:

89-2	有	/jaw ¹³ /	'to have'
173-4	羊	/jong ⁵¹ /	'a sheep'

201-5 贏 /ja:ng⁵¹/C. 'to win'

b. He-kou Series (excluding the Tong rhyme group):

/ø/ in words with a tense high vowel:

26-6 雨 /y¹³/ 'rain'

67-11 彙 /uj²²/ 'a class, a series'

141-6 圓 /yn⁵¹/ 'round'

/w/ elsewhere:

165-5 運 /wan²²/ 'to transport goods'

179-5 王 /wong⁵¹/ 'a prince, king'

211-5 役 /wik²/ 'a jailor'

c. Tong rhyme group - /j/ (without exception):

221-19 育 /juk²/ 'to nourish, to bring up'

223-8 容 /jung⁵¹/ 'appearance'

225-10 用 /jung²²/ 'to use'

In addition to /j/ occurring in Tong-rhyme words, recall that it also occurs in the fourth grade of the Xie rhyme group which, in the present Zhong-shan data, only involves the word 锐 銳 (in (47)).

As regards to exceptions, there are three He-kou words in the data from the Geng 梗 rhyme group which have the zero initial instead of /w/. One is from the EMC Yun initial (Yu III) and the other two from the EMC Yi^Y initial (Yu IV). They are listed below.

(49) 209-8 榮 /ing⁵¹/ 'glory'

210-7 營 /ing⁵¹/ 'an encampment'

210-8 塋 /ing⁵¹/ 'a grave'

At present, the writer is not entirely certain as to why these words in (49) have no labial on-glide. It may be that the inter-

action between a certain combination of segments and a given tone serves as a contributing factor. There may be an avoidance of the sequence /wing/ in the Yang-ping /51/ tone in Zhong-shan, for instance, such that the syllable /wing⁵¹/ does not occur in the dialect. There is not enough evidence to determine whether this is an historical accident or a phonological constraint in the dialect.

In Cantonese, a phonological distinction between the two EMC initials is preserved in the Geng rhyme group: [w] is the regular correspondent of the Yun (Yu III) initial, and [j] the regular correspondent of the Yi (Yu IV) initial. Thus, rong 榮, containing the historical Yun initial, has a labial initial in modern Cantonese, and is pronounced [wɨŋ²¹], in contrast to Zhong-shan /ing⁵¹/ for the word, as demonstrated in (49). Ying 營 and ying 塋, on the other hand, contain the EMC Yi initial and, thus, have a palatal initial in Cantonese. The two words are pronounced [jɨŋ²¹] in that dialect; again, Zhong-shan has /ing⁵¹/ for these two words, also, as indicated in (49). Observe from the Pin-yin that Mandarin, like Cantonese, has preserved a phonological distinction between the EMC Yun and Yǐ initials: rong for 榮, but ying for 營 and 塋.

Given the phonological conditioning in Cantonese and Mandarin for the three words in (49), it might be tempting to suggest the same conditioning to be in effect in Zhong-shan by attributing the presence of /j/ in rong 榮 to analogical readings. Such a proposal, however, would lead to other complications. If /w/ and /j/ were to be considered the regular correspondents of the EMC Yun and Yǐ initials respectively in the Geng rhyme group in Zhong-

shan, there would be two more exceptions to be accounted for in the dialect: both yi 疫 (211-4) 'pestilence' /wik²/ and yi 役 (211-5) 'a jailor' /wik²/ are Yǐ-initial words in the He-kou series of the Geng rhyme group, and yet have /w/ as the initial segment. (They are pronounced [jik³] in Cantonese, with [j] being the regular reflex of the Yǐ initial.) The writer will not attempt to draw any conclusions at this time. Perhaps more information at a later date may clarify certain points, and determine more conclusively the pattern of correspondences of the Yu initial in the Geng rhyme group in the Zhong-shan dialect.

A few exceptions to the regular correspondents to the Yu initial will now be discussed. The words xiong 熊 (219-11) 'a bear' /hung⁵¹/ and xiong 雄 (219-12) 'a male bird' /hung⁵¹/ both have /h/ as the correspondent to the EMC Yun initial. The irregular [h] initial in the two words is also observed by Hashimoto (p.646) for Cantonese. Hashimoto, moreover, claims that the exceptional correspondent is suggestive of traces of an earlier form of the Yun initial. She supports her argument with data from the northern dialects, which also point to a fricative rather than a glide initial. In fact, if one accepts the Han-yu Fang-yin Zi-hui as a reliable source for making generalizations about the pronunciation of words in the Chinese dialects as a whole, then one might simply state that a fricative pronunciation for the two words in question occurs in an overwhelming majority of the Chinese dialects today. That would lend even stronger support for arguing in favour of an earlier form of the initial as some sort of fricative or laryngeal before it was lost.

Evidence from rhyme dictionaries and rhyme tables, however,

suggests that the reverse is in fact the case. Our sources so far show that xiong 雄, for example, was a Grade III Yu-initial word, a categorization based on the Qie-yun rhyme dictionary of 601 A.D. By the time of the earliest rhyme table extant, namely the Yun-jing 韻鏡⁶, xiong 雄 had shifted categories and had become a Grade III word with the initial Xia 匣. That would make the /h/ initial the correspondent one would have expected in the Zhong-shan pronunciation of the word. Presumably, the word xiong 熊 had also undergone the same category/sound change which is reflected in the modern dialects.

A highly irregular reflex of the EMC initial is /s/ in the word yan 簷 (102-12) 'eaves of a house' /sim⁵¹/. The same irregular reflex is found in Cantonese ([si:m²¹]), as well as in Min (Norman, p.c.), e.g., Fu-zhou has [sɿŋ]C., [sien]L., and Amoy has [siam] and [ts'ĩ]. Norman also informs the writer that a significant number of words in Min have initial /s/ (or other sibilants) corresponding to the Yi initial. As a consequence, he reconstructs the initial in proto-Min as *z- for these words. The /s/ initial in Yue for the word yan 簷 is therefore clearly another survival from the old Min-like substratum. On this basis, it is also possible that yang 佯 (173-11) 'to pretend' /ts'iong⁵¹/, with initial /ts'/ (also in Cantonese) has a similar origin.

3.2. Finals

3.2.1. Reconstructed Values of Late Middle Chinese Finals

In discussing Zhong-shan reflexes of Chinese finals based on the rhyme tables, there are several traditional categories which have already been introduced but will now be further

elaborated. First of all, the final consists of a non-rhyming part (which does not affect rhyming practices), and a rhyming part. Of the former, we will first mention the two-way distinction called hu 呼, or 'voices': Kai-kou 開口 ('open mouth') and He-kou 合口 ('close mouth'). Chinese phonologists have agreed that the distinction concerns labialization: Kai-kou pertains to the absence of labialization, and He-kou to its presence.

Of greater controversy among the phonologists is the interpretation of the four-way distinction called deng 等, or 'grade, division'. Karlgren, for instance, reconstructed the system of the four grades--yi 一, er 二, san 三, si 四, or I, II, III, IV in Roman numerals respectively--partly in terms of distinctions in the medial segment and partly in terms of differences in the nuclear vowel in order to account for his Ancient Chinese, the language of both the Qie-yun and the rhyme tables. The main criticism of his solution is that no clear phonological criteria could be stated from the overall system of the grades. It is this failure to account for a systematic phonological contrast of the grades that motivated Pulleyblank (1970-71) to propose, for the rhyme table language (LMC), the distinction of the grades strictly in terms of phonological distinctions in the medials. Although Pulleyblank has since made modifications to his 1970 theory of the grades, his basic premises remain the same. We will first look at Pulleyblank's original proposal.

Essentially, Pulleyblank constructs the system of the grades parallel to the distinction of the Kai- and He-kou hu; that is, whereas the latter involves labialization, the former concerns palatalization. Unlike the Kai-He distinction, the

contrast of the grades cannot be explained simply in terms of a binary opposition of presence or absence of palatalization. Pulleyblank accomplishes a fourfold phonological system by first borrowing a distinction introduced by Karlgren of consonantal versus vocalic medials, namely /j/ and /w/ versus /i/ and /u/. Pulleyblank then divides the grades into two subsets, A and B, with A containing Grades I and II, and B Grades III and IV. Subset A is characterized by the absence of medial /i/ and subset B by its presence. Further distinctions of the grades into each subset Pulleyblank relegates to differences in the Middle Chinese initials, as summarized in Chart 8 (from Pulleyblank (1970-71:231), which also takes Kai-He distinctions into consideration. Note that although the retroflex glide -r- is an element which is fused to the retroflex initials, since it shares certain characteristics with the other glides⁷, -r- is treated as a medial in the chart. The following conventions are used to identify the various classes of LMC initials: K = velars and gutturals, T = dentals (excluding *l-) and dental sibilants, Tr = retroflexes and retroflex sibilants (the latter series from EMC retroflex sibilants and palatals, excluding *r-), P = bilabials, F = dentilabials (or labiodentals), and L = laterals (*l- or *r-). (Chart 8 appears on the following page.)

In Chart 8, note first of all that not every class of initials occurs with every grade, as shown by the blank entries for Grades II and IV under the Kai-kou section of P (bilabials) and L (laterals). The chart also demonstrates the complementarity between bilabials and labiodentals (recalling that the latter had in fact arisen out of the former): labiodentals occur strictly in

Chart 8. Distribution of the LMC Glides and Medials.

Subset	Grade	KAI-KOU				HE-KOU			
		K	T	P	L	K	T	P	L
A -ø-	I	K-	T-	P-	L-	Ku-	Tu-	Pu-	Lu-
	II	Kj-	Tr-	Pj-	L-	Kw-	Trw-		
B -i-	III	Ki-	Tri-	Pi-	Li	Kiu-	Triu-	*Fiu-	Liu-
	IV	Kji-	Ti-	Pji-	Li-	Kjiu-	Tiu-		

* Fiu > Fø-, Fiuø > Fuo-, except that Fiu-j > Fji-j

(From: Pulleyblank, 1970-71:231)

Grade III He-kou rhymes, and bilabials in the remaining rhymes.

What Chart 8 does obscure, however, is the complementary distribution of the dental sibilants, EMC retroflex sibilants and the EMC palatals with respect to the grades. As mentioned in the preceding section on initials, EMC retroflex sibilants occur in Grade II only of the LMC retroflex sibilant series, while the EMC palatals are found only in the corresponding third grade of the same set of LMC initials. On the other hand, the dental sibilants, although a distinct set of Middle Chinese initials, occur only in Grades I and IV. The complementarity of these initials is clearly one of the motivations behind combining certain grades in the Fang-yan Diao-cha Zi-biao. Many of the so-called Grade III rhymes in the survey list, for example, are actually composed of rhymes in Grades II, III and IV, as witness the inclusion of the EMC retroflex sibilants, EMC palatals and the LMC dental sibilants under the category of "Grade III". In Zhong-shan, the collapsing of

certain rhymes in these grades often reflects their mergers in the modern dialect.

What we have thus far neglected to mention are the retroflex and dental series. According to Pulleyblank (1970-71:214), the retroflex series had merged with the corresponding sibilants by Southern Song (1127-1279), as we had mentioned previously, and is found in both Grade II and III rhymes. The dental series, kept distinct from the two LMC retroflex series in most modern Chinese dialects, occurs with Grade I and IV rhymes only, thus sharing the same distribution with dental sibilants, as indicated in Chart 8.

One might add as an aside that, in the case of the Ri 日 (*r-) initial, it is not apparent from Chart 8 that this initial actually occurs in Grade III Kai-kou rhymes only. It is the Lai 來 (*l-) initial which enjoys a wide distribution. This point, however, is only relevant to the study of the interaction between the Ri initial and the various finals, serving to help explain certain observations, and is not of direct import to the theory of the grade system per se.

Turning now to Pulleyblank's revision of his theory of the grade system, the changes are in fact quite slight, but the revision is made easier to comprehend with the original proposal having been presented first. To begin with, in the later model (Pulleyblank, 1977:65) the sequence -iu- has been coalesced, forming the medial -y-, present in Ky-, Kjy-, Try-, Ty- and Fy-. These were the earlier Kiu-, kjiu-, Triu-, Tiu- and Fiu- respectively. Since -i- and -y- are in complementary distribution with respect to Kai-He distinctions, the change consists of representing -iu-,

which is actually treated like a unit phoneme anyway, simply by a unitary front, rounded vowel, -y-

Of greater theoretical significance is the withdrawal in the later treatise of the assumption that medial -u- characterizes Grade I, He-kou rhymes. In his revision, Pulleyblank (1977:65) reconstructs both medials -u- and -w- in this category (i.e., Grade I, He-kou: Ku-/Kw-, Tu-/Tw-, Pu-/Pw-, Lu-/Lw-). This modification serves to simplify the accounting of later developments of certain rhyme groups in different dialects. At the same time, Pulleyblank also puts forward the assumption that He-kou finals were actually distributed between Grades I and II by analogy with the corresponding Kai-kou finals, and were not independently motivated. Thus, the contrast between a vocalic and a consonantal labial medial, according to Pulleyblank, was not noted as such in the rhyme table analysis. (The revised formulation will be shown later in conjunction with the reconstruction of the rhyming portion of the finals in Chart 10.)

With regard to the rhyming part of the final, the various finals in Late Middle Chinese are subcategorized into sixteen major divisions called she 攝, or 'rhyme groups'. As mentioned earlier, the name of a given rhyme group is derived from one of its members. The rhyme groups were in fact not explicitly named until the Si-sheng Deng-zi 四聲等子, a rhyme table in which mergers that had taken place in Late Tang and Northern Song (Pulleyblank, 1970-71:236) were already indicated by the collapsing of certain rhyme groups. The fact that the rhyme table showed such mergers suggests quite strongly that the names of the sixteen she must have by then been established as traditional terms.

The sixteen rhyme groups are further divided into those which belong to the nei-zhuan 內轉 ('inner turn') and those to the wai-zhuan 外轉 ('outer turn'). The division of the she into the two zhuan by Pulleyblank (1970-71:232,336) do not correspond precisely to their distribution to the Yun-jing rhyme table. His rationale for the redistribution of the finals under Nei- or Wai- is based on his agreement with Chang-pei Luo, that the original distinction of Nei and Wai concerns the relative closeness or openness of the nuclear vowel. Interpreting Nei to mean close vowels and Wai to mean open ones, Pulleyblank (1970-71) reconstructs *-ə- and *-a- for the nuclear vowel in the respective zhuan in his first set of reconstructions of Late Middle Chinese finals. As in the case of the medials, it is this set of reconstructions that we will present first, leaving aside for the time being Pulleyblank's revisions.

To begin with, the sixteen rhyme groups, divided according to whether they belong to the Nei- or Wai-zhuan, are presented in Chart 9 on the next page, together with Pulleyblank's reconstructed values for them. Observe also that the majority of the rhyme groups form pairs, with one member of the pair belonging to the Nei-zhuan and the other to the Wai-zhuan.

There is one major revision Pulleyblank made in his 1977 reconstruction of the rhyme groups. He recognizes a tense/lax distinction of the low central vowel, a distinction which is not found in his earlier work. He posits for the low vowels in his system: (a) lax a, and (b) tense a: /a/aḥ/, and ɔ /au/. The non-low vowels are: (a) lax ə, and (b) tense ɤ /əḥ/ and ō /əu/. Not only does this tense/lax distinction affect the various rhyme

Chart 9. The 16 Rhyme Groups.

<u>WAI-ZHUAN</u>			<u>NEI-ZHUAN</u>		
I.	Guo	果 } aɪ	III.	Yu	遇 ei
II.	Jia	假 }			
IV.	Xie	蟹 aj	V.	Zhi	止 ej
VI.	Xiao	效 aw	VII.	Liu	流 əw
VIII.	Dang	宕 aɪŋ/aɪk	IX.	Zeng	曾 əiŋ/əɪk
X.	Geng	梗 aɪŋ/aɪk			
XI.	Jiang	江 auŋ/auk	XII.	Tong	通 əuŋ/əuk
XIII.	Shan	山 an/at	XIV.	Zhen	臻 ən/ət
XV.	Xian	咸 am/ap	XVI.	Shen	深 əm/əp

(From: Pulleyblank, 1970-71:236)

groups, but it also affects the grades within these rhyme groups, as shown in Chart 10, which appears on the next four pages. In the chart, the finals are reconstructed taking into consideration rhyme groups, grades, Kai-He and Nei-Wai distinctions, and the various classes of LMC initials discussed earlier (summarized in Chart 8). Labiodentals (F) (occurring only in Grade III He-kou rhymes), however, are kept distinct in Chart 10. The order of the rhyme groups correspond to the order that they appear in the dialect survey.

Aside from the observation that some grades have been collapsed in the dialect, a comparison of Chart 10 with the dialect survey reveals other differences not yet mentioned. For instance,

Chart 10. Late Middle Chinese Finals.

Rhyme Gp./Gr.	Voice Initial	Kai-Kou					He-Kou				
		P	F	T	L	K	P	F	T	L	K
1. Guo	I			a	a	a	a		wa	wa	wa
	III			ria		ia		ya > a			ya
2. Jia	II	aɿ		raɿ	aɿ	jaɿ			rwaɿ		waɿ
	III			riaɿ							
	IV	jiaɿ		iaɿ		jiaɿ					
3. Yu	I						ua		ua	ua	ua
	II			ɤ					rua		
	III			ria	ia	ia		ya > ua	rya	ya	ya
	IV			ia		jia		ya			jya
4. Xie	I			aj	aj	aj	uaj		uaj	uaj	uaj
	II	aɿj		raɿj		jaɿj			rwaɿj		waɿj
	III			riaɿj	iaɿj	iaɿj		yaj > jiaɿj	ryaɿj	yaj	yaj
	IV	jiaɿj		iaɿj	iaɿj	jiaɿj		yaj			jyaɿj
5. Zhi	II			ri					rwei		
	III	i		ri	i	i		yj > ji	ryj	yj	yj
	IV	ji		i (ɿ)*		ji		yj			jyj

Voice Initial Rhyme Gp./Gr.	Kai-Kou					He-Kou				
	P	F	T	L	K	P	F	T	L	K
6. Xiao	I II III IV	I a:w iaw jiaw	aw ra:w riaw iaw	aw a:w iaw iaw	aw ja:w iaw jiaw	uaw				
7. Liu	I II III IV	I əw riw jiw	əw rəw riw iw	əw iw iw iw	əw iw iw jiw		yw > uw			
8. Xian	I II III IV	I am/p a:m/p iam/p	am/p ra:m/p riam/p iam/p	am/p a:m/p iam/p iam/p	am/p ja:m/p iam/p jiam/p		yam/p > a:m/p			
9. Shen	II III IV	II im/p	rəm/p rim/p im/p	im/p im/p jim/p						
10. Shan	I II III IV	I a:n/t ian/t jian/t	an/t ra:n/t rian/t ian/t	an/t a:n/t ian/t ian/t	an/t ja:n/t ian/t jian/t	uan/t	uan/t rwa:n/t yan/t a:n/t yan/t	uan/t yan/t yan/t	uan/t wain/t yan/t jyan/t	

Voice Initial Rhyme Gp./Gr.	Kai-Kou					He-Kou				
	P	F	T	L	K	P	F	T	L	K
11. Zhen I			ən/t		ən/t	ən/t		wən/t	wən/t	wən/t
II			rən/t					rwət		
III	in/t		rin/t	in/t	in/t	yn/t > un/t		ryn/t	yn/t	yn/t
IV	jīn/t		in/t		jīn/t			yn/t		jyn/t
12. Dang I	aŋ/k		aŋ/k	aŋ/k	aŋ/k			waŋ/k	waŋ/k	waŋ/k
II			raŋ/k							
III	iaŋ/k		riaŋ/k	iaŋ/k	iaŋ/k	yaŋ/k > aŋ/k				yaŋ/k
IV			iaŋ/k		jiaŋ/k					
13. Jiang II	ɔŋ/k		ɔŋ/k	ɔŋ/k	jɔŋ/k					
14. Zeng I	əŋ/k		əŋ/k	əŋ/k	əŋ/k					wəŋ/k
II			rək							
III	iŋ/k		riŋ/k	iŋ/k	iŋ/k					yk
IV			iŋ/k		jīŋ/k					
15. Geng I			aɿjŋ							
II	aɿjŋ/k		raɿjŋ/k	aɿjŋ/k	jaɿjŋ/k					waɿjŋ/k
III	iaŋ/k		riaŋ/k		iajŋ/k			ryajŋ/k		yajŋ/k
IV	jiaŋ/k		iajŋ/k	iajŋ/k	jiajŋ/k			yajŋ/k		jyajŋ/k

Voice Initial		Kai-Kou					He-Kou				
Rhyme Gp./Gr.		P	F	T	L	K	P	F	T	L	K
16. Tong	I	oŋ/k		oŋ/k	oŋ/k	oŋ/k					
	II			roŋ/k							
	III		ywŋ/k > uŋ/k	rioŋ/k	ioŋ/k	ioŋ/k	yŋŋ/k	oŋ/k	ryoŋ/k	yŋŋ/k	yŋŋ/k
	IV			ioŋ/k		jioŋ/k			yŋŋ/k		jyŋŋ/k

* Occurs with sibilants.

not all the categories in the chart are included in the dialect survey, since some of the categories have few words representing them, and these are often very obscure words (e.g., the rare occasion of "F + a" in Grade III Guo-she has no representation in the dialect survey).

Another, more important, observation concerning Chart 10 is that Kai- and He-kou rhymes are in complementary distribution vis-à-vis LMC bilabial initials. Evidences from various stages of the language, from modern reflexes of these rhymes in Chinese dialects, and from Chinese loans in other Asian languages, supported by the complementarity observed in the rhyme tables, suggest that the bilabial initials must have been accompanied by lip-rounding, and the positing of a rhyme with a bilabial initial as Kai or He was somewhat arbitrary in the rhyme tables. Pulleyblank's reconstruction of non-labial finals in some He-kou rhymes on the one hand, and labial finals in some Kai-kou rhymes on the other, was therefore an attempt to reflect the development of the language rather than a blind adherence to the Kai-He categories which contradicted the evidences found.

With regard to the Yu 遇 rhyme group, the dialect survey only shows He-kou rhymes for this she. The Yu 魚 rhyme was in fact originally Kai-kou in the Yun-jing; it was later rhyme tables which reclassified the Yu 魚 rhyme as He-kou.

Likewise, the dialect survey shows the Tong 通 rhyme group as consisting of only He-kou rhymes, which was not the case in the Yun-jing. There, the Dong 東 rhyme was categorized as Kai-kou, and the combined Dong 冬 and Zhong 鍾 rhymes as Kai-He, which Pulleyblank has interpreted as referring to Kai-kou Dong 冬 and

He-kou Zhong 鍾. The Kai-He categories of the Tong 通 rhyme group had merged by Southern Song times, with the result that the Kai-He distinction has largely disappeared among the Chinese dialects. Only isolated cases of contrast have survived in Chinese. In Wen-zhou, for example, the word long 隆 (218-9) 'eminent', from the Dong 東 rhyme, is [lɔŋ³¹] (< *liɔŋ; Zhong-shan /lung⁵¹/). The word long 龍 (222-9) 'a dragon', differing from long 隆 only in that it belongs to the Zhong 鍾 rhyme, has the literary pronunciation of [lɔŋ³¹] and, more significantly, a colloquial one of [liɛ³¹] (< *lyɔŋ; Zhong-shan /lung⁵¹/) (Zi-hui, p.263).

In the case concerning the Xiao 效 rhyme group, it might be observed that although the rhyme group is recorded here as Kai-kou only, agreeing with both the Yun-jing and the dialect survey, Grade I final (Hao 豪 rhyme), with the LMC bilabial initial, has been reconstructed by Pulleyblank as *-uaw. His reconstruction of a labial medial agrees with Shao Yong's eleventh century tables in which this part of the final was categorized as He-kou. The Zhong Yuan Yin-yun shows a distinction between Grade I *puǎw and Grade II *paw (< paǎw) although it does not explicitly label Grade I as He-kou (Pulleyblank, p.c.). Treating this set as He-kou also serves to explain Kan'on glosses. Consequently, the above observation of He-kou in the environment given should be kept in mind since, for the sake of simplicity, the present thesis will treat the Xiao-she as containing only Kai-kou rhymes.

Similarly, the Liu 流-she is also treated in the Yun-jing and the dialect survey as having only Kai-kou rhymes, although Pulleyblank reconstructs the finals with a labiodental initial (which only occurs in Grade III) as He-kou. Again, for simplicity,

the Liu-she will be analyzed as containing only Kai-kou rhymes.

It is the revised reconstruction in Chart 10 that will be used in the following discussion of Zhong-shan correspondences of LMC finals. Before we actually begin that section, however, there is one subdivision within each rhyme group found in the rhyme tables and in the survey list which should be elaborated upon, and that is the various yun 韻, or 'rhymes', within a rhyme group. Each rhyme group is composed of one or more rhymes. Strictly speaking, members of the same rhyme are also of the same tone. Nevertheless, for the sake of economy and greater potential for general remarks concerning rhymes differing only with respect to tone, the rhyme in the historical Ping-sheng is used here to represent the set of rhymes differing in tone but otherwise identical. Recall that Ru-sheng words end in a stop consonant, but are nonetheless treated in the same set as their counterparts in the Ping, Shang, and Qu tones. The Fang-yan Diao-cha Zi-biao in fact gives both the Ping and Ru-sheng rhymes in each set of rhymes which contains Ru-sheng finals.

In the case of a set of rhymes lacking a Ping-sheng rhyme as one of its members, the rhyme containing the next tone--in the conventional order of reciting the tones in Chinese, namely, "Ping, Shang, Qu, Ru"--serves as the name of that set of rhymes in both the dialect survey and the present study. Chart 11 records the sixteen rhyme groups and breaks them down further into rhymes. Each rhyme further represents a set in which the only significant variation is that of tone. Whether these rhymes are Kai- or He-kou, or both, is also noted. The four grades are indicated by the use of Roman numerals only. Those grades which are combined under

Chart 11. Rhymes and Grades Within Each Rhyme Group.

<u>Rhyme Group</u>	<u>Kai-Kou</u>	<u>He-Kou</u>
1. Guo 果	Ge 歌 I Ge 戈 III	-- Ge 戈 I, III
2. Jia 假	Ma 麻 II; III (IV)	Ma 麻 II
3. Yu 遇	(Yu 魚 (II) III (IV) - treated as He-kou in the dialect survey)	Mu 模 I Yu 虞 (II) III (IV)
4. Xie 蟹	Tai 泰 II Hai 咍 I; [III, IV] Jia 佳 II Jie 皆 II Guai 夬 II Ji 祭 [II]; III (IV) Fei 廢 III Qi 齊 [III]; IV	Tai 泰 I -- Jia 佳 II Jie 皆 II Guai 夬 II Ji 祭 [II]; III (IV) Fei 廢 III Qi 齊 IV
5. Zhi 止	Zhi 支 (II) III (IV) Zhi 脂 (II) III (IV) Zhi 之 (II) III (IV) Wei 微 III	Zhi 支 (II) III (IV) Zhi 脂 (II) III (IV) -- Wei 微 III
6. Xiao 效	Hao 豪 I Yao 肴 II Xiao 宵 III (IV) Xiao 蕭 IV	-- -- -- --
7. Liu 流	Hou 候 I You 尤 (II) III (IV) You 幽 IV	-- -- --

<u>Rhyme Group</u>	<u>Kai-Kou</u>	<u>He-Kou</u>
8. Xian 咸	Tan 覃 I Tan 談 II Xian 咸 II Xian 銜 II Yan 鹽 [II]; III (IV) Yan 嚴 III Tian 添 IV	-- -- -- -- -- -- Fan 凡 III
9. Shen 深	Qin 侵 (II) III (IV)	--
10. Shan 山	Han 寒 I Shan 刪 II Shan 山 II Xian 仙 [II]; III (IV) Yuan 元 III Xian 先 IV	-- Shan 刪 II Shan 山 II Xian 仙 [II]; III (IV) Yuan 元 III Xian 先 IV
11. Zhen 臻	Hen 痕 I Zhen 真 [II]; III (IV) (Zhen 臻 II included under Zhen 真 III) [Zhun 諄 II, III, IV] Yan 殷 III	Hun 魂 I [Zhen 真 II, III, IV] -- Zhun 諄 (II) III (IV) Wen 文 III
12. Dang 宕	Tang 唐 I Yang 陽 (II) III (IV)	Tang 唐 I Yang 陽 III
13. Jiang 江	Jiang 江 II	--
14. Zeng 曾	Deng 登 I Zheng 蒸 (II) III (IV)	Deng 登 I Zheng 蒸 III
15. Geng 梗	Geng 耕 [I]; II Geng 庚 II; III Qing 清 III (IV)	Geng 耕 II Geng 庚 II; III Qing 清 III (IV)

<u>Rhyme Group</u>	<u>Kai-Kou</u>	<u>He-Kou</u>
(15. Geng)	Qing 青 IV	Qing 青 IV
16. Tong 通	Dong 冬 I	--
	Dong 東 I; (II) III (IV)	Zhong 鍾 III (IV)

(): merged with Grade III in the dialect survey.

[]: not recorded in the dialect survey.

another grade in the dialect survey, but are kept distinct according to historical sources, are enclosed in round brackets "()" to indicate that they do not actually appear in the dialect survey as a separate category. Grades which have no character representation in the dialect survey are set off with square brackets "[]".

Zhong-shan correspondences to Late Middle Chinese finals with respect to rhyme groups are summarized in Chart 12 overleaf. The correspondences will be discussed in detail in the following section. In Chart 12, reflexes marked with asterisks (*) indicate that very little actual data are present in the given division. Stop endings corresponding to nasal endings are implied. Segment /w/ is treated as though it is a medial whether it occurs as an initial segment in the modern Zhong-shan syllable or as a medial following a velar stop. Medial /i/ in the chart is /j/ in syllable-initial position. This is significant since, in general, it only occurs in Grades III and IV Kai-kou rhymes. Segment /j/ is included in those divisions where it occurs as an initial segment

Chart 12. Zhong-shan Correspondences to the LMC Finals.

voice grade rhyme group	KAI-KOU				HE-KOU			
	I	II	III	IV	I	II	III	IV
Guo	o	--	ø*	--	(w)o	--	ø*	--
Jia	--	a	ia		--	(w)a	--	
Yu	--	o	y		u~ng	u	u~y	
Xie	oj~a:j	a:j	aj		uj	(w)a:j	øj~(w)aj	
Zhi	--	i			--	øj	øj~(w)aj	
Xiao	ow	a:w	iw		--			
Liu	aw		(j)aw		--			
Xian	a:m~om	a:m	im		--		a:n	--
Shen	--	am	(j)am~an		--			
Shan	a:n~on	a:n	in		un~yn	(w)a:n	yn~a:n	
Zhen	an		(j)an		un~yn~ (w)an	øn~(w)an		
Dang	ong		iong		(w)ong	--	(w)ong	--
Jiang	--	ong	--		--			
Zeng	ang		ing		wang*, wa:k*	--	wa:k*	--
Geng	a*	ang-L, a:ng-C	ing-L, ia:ng-C		--	(w)ang-L, (w)a:ng-C	(w)ing	
Tong	ung		(j)ung		--		(j)ung	

* Very little actual data.

in the modern Zhong-shan syllable. Round brackets are used to indicate that the enclosed segment only occurs with certain historical initials. The symbol "~" is used to indicate alternation of finals due to phonological conditioning within a given historical rhyme and with respect to certain series of Middle Chinese initials. The round brackets in fact serve as an abbreviated version of alternations of finals (e.g., "(w)ong" is a shortened alternative to "wong~ong").

3.2.2. Modern Zhong-shan Correspondences to LMC Finals.

In analyzing the modern Zhong-shan finals as reflexes of those in Late Middle Chinese, the labial and palatal glides in the modern Zhong-shan syllable are treated as elements of the final even though in many cases they actually occur in syllable-initial position in the modern dialect. As we have observed, the grades play a role in determining the nature of the LMC medial, as do Kai- and He-kou distinctions. The Zhong-shan labial and palatal segments, as reflexes of historical medials, are therefore relevant to the analysis of modern Zhong-shan correspondents to historical finals, and should be included in the discussion. Moreover, reference to a particular grade is based on rhyme table phonology, and not on the mergers found in the Fang-yan Diao-cha Zi-biao.

The study in this section will also focus on regular correspondences, and in general will only touch upon those exceptions which may have historical implications. Thus, analogical readings, readings of a word based on another historical phonological category in the rhyme tables, etc., will not be included.

One quite obvious reason, of course, is that often one would be dealing with the same exceptions mentioned in the previous section on the initials.

3.2.2.1. Guo 果 -she

In the discussion of the present and subsequent rhyme groups, the reflex of the various grades in the Kai-kou series will be presented first, then those in the He-kou series. Thus, the regular Zhong-shan correspondent of the Guo-she is /o/ (< *-a) in Grade I of the Kai-kou rhymes. Examples are shown in (50) below.

(50)	1-15	哥	/ko ⁵⁵ /	'elder brother'
	1-21	河	/ho ⁵¹ /	'a river'
	2-3	左	/tso ¹³ /	'left'

Cantonese likewise has [ɔ:] corresponding to this rhyme.

There are only a couple of exceptions in Zhong-shan. The literary word ta 他 (1-3) 'he, she' /t'a⁵⁵/ has final /a/ corresponding to this rhyme. A couple of colloquial words have final /a:j/ as the correspondent:

(51)	1-12	搓	/ts'a:j ⁵⁵ /	'to knead'
	2-7	大	/ta:j ²² /	'big'

There is also another reading for cuo 搓 /ts'o⁵⁵/, which has the meaning of 'to rub between the fingers', corresponding to the standard dictionary definition. Although final /a:j/ in da 大 may be based on the reading in the Tai 泰 rhyme (number 30-20), it is possible that the /a:j/ final in the Guo-she is a genuine

survival of an earlier *-aj final. It has been observed by Hashimoto (p.647), for example, that there are a number of words in the Guo-she which have final [ɔi] or [ai] in other Yue dialects, which may suggest that [ai] is the colloquial correspondent of this final in Yue. It may in fact be the case that the glide final is a vestigial trace of an older layer of the language, since it is not restricted to Yue, but occurs in Min as well. Wo 我 (2-5) 'I, me', for example, is [ŋɔj³³] in Tai-shan, [ŋɔj²²] in Kai-ping, both Yue dialects (Cheng, 1973:275; 1977 fieldnotes). It is [ŋuai⁴⁴] in the colloquial layer of Fu-zhou, a Northeastern Min dialect (Zi-hui, p.31). (Another word in the Zhong-shan data with an off-glide corresponding to the Guo-she is the He-kou word, bo 跛 (4-18) 'lame' /paj⁵⁵/.)

There is only one Kai-kou word in Grade III of the Guo-she in the survey, namely gie 茄 (3-5) 'eggplant' /k'ø⁵¹/ ([k'æ:⁵¹]; [k'ɛ:²¹] in Cantonese), which Pulleyblank has reconstructed as *kɦia < EMC *gɦa. The Zhong-shan form represents the more regular development from the rare *-ia final as compared to its Cantonese counterpart. The reason is explained by Pulleyblank to the writer as follows: by analogy with the final in *-ŋ, one should expect *kɦia to become *k'io > k'ø in Cantonese, as in jiang 疆 (172-15) 'boundary' (Cantonese [kœ:⁵³]): *kiaŋ > kiɔŋ > kœŋ, while in the Geng 梗-she, *-iaăjŋ gave *iaăŋ > -ɛŋ. In Cantonese, the back vowel of *-ia had in fact merged with the central vowel in *-iaă in Grade III, Ma 麻 rhyme, with the subsequent umlauting to *-ɛ, as in gie 且 (11-11) 'moreover' (LMC *ts'iaă, Cantonese [ts'ɛ:³⁵]). Pulleyblank further suggests a similar development in Mandarin may have occurred (or conceivably, the direct laxing of *-ia to

-iǎ).⁸ Hence, while the Cantonese form of [k'ɛ:²¹] in gie 茄 shows Mandarin influence, the Zhong-shan form of [k'æ:⁵¹] preserves the more direct derivation from *k'io < *kɦia. Note that Min has /kio/ in a number of its dialects for gie 茄, thus representing the intermediary stage between the LMC and Zhong-shan forms. Not surprisingly, Norman (1969:249) reconstructs gie 茄 as Proto-Min *kio.

In Zhong-shan, the Grade I He-kou of the Guo-she has /o/ (< *-a after LMC bilabials, and *-wa elsewhere) as the reflex after all the Middle Chinese initials except the gutturals. After the historical gutturals, the final in Zhong-shan is /wo/. Examples of these two finals are given in (51). He 和 /wo⁵¹/ has the Xia initial, and contrasts with the Xia-initial word he 河 /ho⁵¹/ 'river' in (50), which is in the Kai-kou series.

(51)	3-6	波	/po ⁵⁵ /	'waves'
	4-13	和	/wo ⁵¹ /	'peace'
	6-10	過	/ko ²² /	'to cross'
	6-11	課	/fo ²² /	'a lesson'

Cantonese has the same set of reflexes as Zhong-shan, with a similar distribution. In Cantonese, however, the final [wɔ:] also follows those historical velar initials the modern reflex of which is [k]. Thus, guo 過 is [kwɔ:⁴⁴] in Cantonese. The labial segment has been lost in Zhong-shan, a point which had been raised much earlier (see Chapter 1.2.1 in the discussion of nuclear vowels). Hashimoto (p.647) also mentions the loss of the labial medial in syllables with [f] as a reflex of the Qi 溪 (*k'-) initial, as in ke 課 in (51) above ([fɔ:⁴⁴] in Cantonese), and postulates the

following sound change to have occurred in Cantonese: *hw- > f-. In Zhong-shan, one would then expect the dentilabialization to have taken place before the loss of *-w- in words such as guo 過 above. In other words, the change of *hw- > f- is needed to derive /f/ in ke 課 /fo²²/. In Zhong-shan, the dentilabialization process must precede the loss of labial *-w- in words descending from LMC velars. It is the subsequent loss of the labial medial that yields Zhong-shan /ko²²/ in guo 過. Thus, the dentilabialization rule bleeds the condition for the application of the medial deletion in Zhong-shan.

There are several exceptions to /o/ and /wo/ as finals in the He-kou Grade I of the Guo-she which are of historical interest. The word bo 跛 (4-18) 'lame' /paj⁵⁵/ (/p'o¹³/L.) has already been mentioned. Apparently, the pronunciation of [pɛj] is widespread (Norman, p.c.), and is probably another example of vestiges of an older form of the language. The words luo 騾 (3-17) 'a mule' /lɔ⁵¹/ and luo 螺 (3-18) 'a conch' /lɔ⁵¹/ may also constitute traces of a pre-Middle Chinese *-j, as Pulleyblank (p.c.) has suggested for the exceptional /ɔ/ final in these two words. Norman, for example, reconstructs them as *lhoi for Proto-Min. The two words are pronounced [lɔ:²¹] in Cantonese.⁹

With regard to the third grade in the He-kou series of the Guo rhyme group, the regular reflex in Zhong-shan (and Cantonese) is /ɔ/ (< *-ya). Very few words occur in this phonological category. There is only one word in the Zhong-shan (and Cantonese) data for which a pronunciation has been obtained. That word is xue 靴 (6-17) 'boots', /hɔ⁵⁵/ in Zhong-shan, and [hɛ:⁵³] in Cantonese, from LMC *xya, which is in turn descended from EMC *xua.

3.2.2.2. Jia 假-she

The Jia-she contains only the Ma 麻 rhyme. In Grade II Kai-kou, the reflex of the Ma rhyme is /a/ (< *-a) in Zhong-shan (and Cantonese), as exemplified by (52).

(52)	7-8	麻	/ma ⁵¹ /	'hemp'
	9-1	假	/ka ¹³ /	'false'
	9-13	怕	/p'a ²² /	'to fear'

Grades III and IV Kai-kou of the Ma rhyme have the reflex of /ia/ (< *-ia:) as the regular correspondent in Zhong-shan. After the historical Ri (EMC palatal *ɲ-) and Yu 喻 IV (EMC *j-) initials, the Zhong-shan syllable is /ja/, which should not be considered an exception. Phonemically, the syllable /ja/ can equally be represented as /ia/ due to the complementarity of final /ia/ and syllable /ja/. Consequently, for simplicity's sake, only the final /ia/ is represented in Chart 12, implying syllable /ja/ if no consonantal initial precedes /ia/. Cantonese has [ɛ:] and [jɛ:] corresponding to Zhong-shan /ia/ ([ɛa:]) and /ja/ ([ja:]) respectively. Zhong-shan examples are presented below.

(53)	11-2	車	/ts'ia ⁵⁵ /	'a chariot'
	11-16	社	/sia ¹³ /	'god of the soil'
	12-14	夜	/ja ²² /	'night'

Practically all the words in the He-kou series of the Jia-she are words descending from historical velar and guttural initials. The regular Zhong-shan reflex is /wa/ (< *-wa:), with two sets of exceptions. After the velar nasal (which descends from the Yí 疑 initial), the correspondent is /a/, with labiali-

zation lost in Zhong-shan. As a general rule, Zhong-shan loses its labial /w/ following velar nasal /ng/, but selectively preserves it after velar stops in finals containing a low vowel in the modern dialect. (Contrast He-kou Jia-she, for instance, with the corresponding He-kou series in the Guo-she, where labialization after all velars has been lost.) The only exception to this general rule is words with the LMC Qi and Xiao initials, where the reflex of these two initials is /f/. In such cases, the final is simply /a/ in Zhong-shan, the labial segment having been taken care of by the process of *hw- > f. Cantonese has the same correspondents to this rhyme as Zhong-shan. Examples to the pattern of correspondences described above are given in (54) for Zhong-shan.

(54) a. /a/ after /ng/ and /f/:

13-13	瓦	/nga ¹³ /	'tile'
13-16	化	/fa ²² /	'to transform'

b. /wa/ elsewhere:

12-16	瓜	/kwa ⁵⁵ /	'melon'
13-2	華	/wa ⁵¹ /	'flowers'

3.2.2.3. Yu 遇 -she

In the dialect survey, it appears as though Yu-she only occurs in He-kou. As noted earlier, the Yu 魚 rhyme, in which Grades II, III and IV have been combined under Grade III in the dialect survey, was in fact originally Kai-kou. Zhong-shan correspondents to Grades III and IV (*-ia) of the Yu 魚 rhyme have merged with the corresponding grades of the Yu 虞 rhyme (*-ya), which is He-kou. Only Grade II of the Yu 魚 rhyme remains

distinct. As a result of the merger in Grades III and IV, these two grades of the Yu 魚 rhyme will be discussed in conjunction with the He-kou series. In the case of Grade II, Yu 魚 rhyme, which contains only words descending from EMC retroflex sibilants, it has only /o/ (< *ɣ-) as the regular reflex in Zhong-shan, as exemplified by the words in (55). Cantonese likewise has [ɔ:] as the reflex of this grade of the Yu 魚 rhyme.

- (55)
- | | | | |
|-------|---|-----------------------|--|
| 19-8 | 初 | /ts'o ⁵⁵ / | 'the beginning' |
| 19-9 | 鋤 | /ts'o ⁵¹ / | 'a hoe'; /tso ⁵¹ / 'to hoe' |
| 20-20 | 所 | /so ¹³ / | 'that which' |

With regard to He-kou rhymes in the Yu-she, only the Mu 模 rhyme has Grade I finals. The regular Zhong-shan correspondent of this rhyme, which moreover occurs in Grade I only, is /u/ (< *-ua). The principal exception is Yí-initial (*ɣ-) words, which have a syllabic velar nasal as the entire syllable. Examples of the Grade I He-kou rhyme are given below.

(56) a. Syllabic /ng/ in words descending from Yí-initial:

- | | | | |
|-------|---|---------------------|--------------|
| 16-25 | 五 | /ng ¹³ / | 'five' |
| 18-7 | 悟 | /ng ²² / | 'to realize' |

b. Final /u/ elsewhere:

- | | | | |
|-------|---|---------------------|--------------|
| 14-9 | 都 | /tu ⁵⁵ / | 'metropolis' |
| 15-23 | 補 | /pu ¹³ / | 'to mend' |
| 16-16 | 古 | /ku ¹³ / | 'ancient' |

Cantonese is similar to Zhong-shan with respect to Yí-initial words in this grade. For the remaining finals, however, there is a phonological conditioning involved in Cantonese: [u:] after

historical gutturals and velars (excepting Yi *ŋ-), and [ow] elsewhere. Thus, like Zhong-shan, gu 古 in (56) is [ku:³⁵] in Cantonese, with final [u:]. Bu 補, on the other hand, is [pow³⁵] in Cantonese, in contrast to Zhong-shan [pu:¹³].

There is one exception to the Mu 模 rhyme which may be worth mentioning. The word mo 摸 (14-8) 'to feel for with fingers' is colloquially /mo⁵⁵/ in Zhong-shan, with /mo¹³/ and /mo⁵¹/ literary counterparts. Tonewise, Cantonese has [mɔ:³⁵] for the pronunciation of this word, and may be the source of the rising tone in one of the two literary readings in Zhong-shan. The other literary form with tone /51/ fits into the regular correspondence of a Yang-ping tone for the word in question. While we have just accounted for the various tones of the word, the final /o/ instead of the regular /u/ has not yet been discussed. It appears possible that the /o/ final is a vestige of an earlier form. Pulleyblank (1977:101), for example, has reconstructed rhyme Mu 模 as EMC *-ɔ which resulted from the rounding of Old Chinese *-a during the Later Han dynasty (25-220 A.D.). A final [ɔ] (or [uɔ]) is also found in a number of other Chinese dialects, including Peking Mandarin, Mei-xian, Xia-men, Fu-zhou, etc. (Zi-hui, p.23).

Another word with final /o/ in the Mu rhyme in Zhong-shan is cuo 錯 (18-4) 'wrong'. As in the case of the word mo 摸, cuo 錯 likewise has final [ɔ] or [uɔ] in a large portion of the dialects represented in the Zi-hui (p.27), and may represent vestigial traces of an older layer of the language.

The Yu 虞 rhyme of the Yu-she has Grades II, III and IV even though only Grade III is indicated per se in the dialect survey. Grade II is restricted to words descending from EMC

retroflex sibilants, with /u/ (< *-ua) as the regular correspondent in this grade in Zhong-shan, thus contrasting with Grade II Kai-kou Yu 魚 rhyme, which has reflex /o/ in Zhong-shan. Four words belonging to this grade appear in the survey, only two of which exhibit the regular Zhong-shan correspondence. The other two words have /o/ as the final. All four words are listed in (57). Cantonese has [ow] corresponding to Zhong-shan /u/ in this final. The irregular [ɔ:] in chu 芻 and chu 雛 also occurs in Cantonese.

(57) a. /u/ as the regular final:

25-23 數 /su¹³/ 'to count'

27-4 數 /su²²/ 'a number'

b. /o/ as the irregular final:

23-23 芻 /ts'o⁵⁵/ 'to cut grass or hay'

23-24 雛 /ts'o⁵⁵/ 'a chick, a fledgling'

As noted earlier, Grades III and IV of the Yu 魚 rhyme have merged with the He-kou rhyme, Yu 虞, in the corresponding grades in Zhong-shan. The regular Zhong-shan correspondents to the two rhymes in Grades III and IV are: /u/ (< *-ua < *-ya) after the historical labiodentals, and /y/ (< *-ya) elsewhere, as exemplified by (58). (The bilabial stop in fu 斧 marks the reflex as a survival from a pre-LMC layer, as noted in the section on initials.)

(58) a. /u/ after LMC Labiodentals:

23-1 夫 /hu⁵⁵/ 'a sage'

25-6 斧 /pu¹³/ 'an axe'

26-18 霧 /mu²²/ 'fog'

b. /y/ elsewhere:

19-4	徐	/ts'y ⁵¹ /	'dignified'
19-13	胥	/sy ⁵⁵ /	'all'
19-14	書	/sy ⁵⁵ /	'a book'
24-11	區	/k'y ⁵⁵ /	'a district'
25-22	柱	/ts'y ¹³ /	'a pillar'
27-15	遇	/ngy ²² /	'to meet'
27-19	喻	/y ²² /	'a parable'

The set of correspondences in Cantonese is somewhat more complicated: [u:] occurs after descendants of the historical labiodentals, except after the Wei (*v- < EMC *m) initial where final [u:] had diphthongized to [ow] (e.g., wu 霧 in (58) is [mow³³] in Cantonese). In a parallel case, [y:] occurs in the remaining finals except for the diphthongization of [y:] to [øy] after words with initials descending from LMC dental sibilants and velars. Thus, xu 徐 (Xie *sɬ- initial), xu 胥 (Xin *s- initial), and qu 區 (Qi *k'- initial) in (58) are [ts'øy²¹], [søy⁵³] and [k'øy⁵³] respectively in Cantonese. The rest of the words in (58) have final [y:] in Cantonese, as in Zhong-shan.

The sole exception to the above description of Cantonese final [øy] after LMC velars concerns the Yí (*ɳ-) initial: Cantonese syllables descending from the Yí initial in this set of rhymes are pronounced [qy:], with a homorganic, rounded on-glide; for example, the Cantonese pronunciation of yu 遇 in (58) above is [qy:³³], and is homophonous with yu 喻, the initial of which descends from the Yu 喻 initial.

It should be noted that strictly speaking, there are no LMC dentilabials in the Yu 魚 rhyme. Consequently, the only

correspondent of Grades III and IV Yu 魚 is simply /y/, as shown in Chart 12.

3.2.2.4. Xie 蟹 -she

The Xie-she has a number of rhymes, in both Kai- and He-kou, and in all grades. Discussing Kai-kou series first, there are two rhymes which occur in Grade I: Hai 咍 and Tai 泰. The bilabial series in the Tai 泰 rhyme will be treated separately later. Of the remaining words in the Hai and Tai rhymes, Zhongshan has /oj/ (< *-aj < EMC *-əj) as the regular correspondent for both rhymes with the exception of words in the Tai rhyme with LMC dentals. In the latter case, the correspondent is /a:j/. Examples are presented below.

(59) a. /a:j/ after LMC dentals in the Tai rhyme:

30-17	帶	/ta:j ²² /	'a belt'
30-18	太	/t'a:j ²² /	'excessive'
30-22	賴	/la:j ²² /	'to rely on'

b. /oj/ elsewhere:

28-7	來	/loj ⁵¹ /	'to come'
29-4	怠	/t'oj ¹³ /	'idle'
31-6	害	/hoj ²² /	'to injure'

The same correspondences are found in Cantonese. Hashimoto (p.650) seeks to explain the [ɔ:j] ~ [a:j] alternation in Cantonese in terms of an incomplete merger of the two rhymes, and suggests that the Hai and Tai rhymes may originally have been [ɔ:j] and [a:j] respectively.

Pulleyblank (1977:100), on the other hand, explains the

observation in terms of the merger of dental-initial words in Grade I with Grade II words, which had final *-aɿj. Pulleyblank points out that the lengthening of *-a to *-aɿ after dental initials was a general feature of Late Middle Chinese in Northern Song (960-1127 A.D.), and suggests that it may have been the case that the vowel *-a- lengthened to *-aɿ- after dental initials, before the lowering of *-əj to *-aj in Grade I in Cantonese, thereby establishing minimal pairs containing a dental initial and an *-aj versus *-aɿj final. Two points are implied in this proposal: firstly, that *-ə- must have lowered to *-a- after *a had lengthened to *aɿ after dentals; and secondly, that the Hai and Tai rhymes must have differed in their course of sound change vis-à-vis dental-initial words in order for there to emerge a new opposition such as *taj ~ taɿj, *laj ~ laɿj, etc. That is, if all Grade I finals in this Xie-she had become *-aɿj after dental initials, there would not have been any syllables such as *taj and *laj, which later became *tɔj and *lɔj respectively, when *-aj became *-ɔj. What appears to be suggested for Cantonese is that dental-initial words in the Tai rhyme merged with Grade II *-aɿj finals, while the corresponding dental-initial words in the Hai rhyme did not undergo vowel lengthening, but later underwent a sound shift from *-aj to *-ɔj. A similar solution would also account for the Zhong-shan data.

The Tai 泰 rhyme after the LMC bilabial initials has final /uj/ in Zhong-shan (and Cantonese). Although this set of words--two of which are recorded for Zhong-shan, listed in (60)--is recorded as Kai-kou in the dialect survey, the Yun-jing and other sources, such words have also been reconstructed as He-kou

by Karlgren (Anc. Ch. *-wâi < Arc. Ch. *-wâd), Pulleyblank (LMC *-uaj), and others.

- | | | | | |
|------|-------|---|-----------------------|-----------------------------------|
| (60) | 30-14 | 貝 | /puj ²² / | 'cowries (was used as currency).' |
| | 30-15 | 沛 | /p'uj ²² / | 'copious' |

Final /uj/ (< *-uaj) is also the reflex of the Tai rhyme in what is ostensibly regarded as Grade I, He-kou Tai rhyme in the survey. The treatment of this set of bilabial descendants as He-kou would also be congruent with the Zhong-shan data. It might be added that in other rhymes as well, the positing of words descending from LMC bilabial initials as Kai-kou or He-kou sometimes seems to contradict evidences from the modern dialects. The arbitrary assignment of Kai or He stems from the nature of the initials involved. Pulleyblank, for instance, regards the bilabial initials as having had simultaneous lip-rounding. It is this labial feature which became a separate phoneme in some cases. It appears particularly anomalous among Kai-kou rhymes where one does not expect to find a labial medial or final, as in the case of the two words in (60), which were treated as Grade I, Kai-kou in the Tai rhyme. Of course, the converse may also be true; that is, one may find, as in the Guo-she, that the He-kou final of Grade I words with bilabials is reconstructed as LMC *-a, in contrast to *-wa for words with other initials in this rhyme group (see Chart 10 on LMC finals).

The various Grade II Kai-kou rhymes in the Xie-she have all merged in Zhong-shan, with the final /a:j/ (< *-a:j) in the dialect for this set of finals, as shown in (61). Cantonese likewise has final [a:j].

- (61) 31-9 排 /p'a:j⁵¹/ 'a row, a line'
 33-17 街 /ka:j⁵⁵/ 'a street'
 35-6 寨 /tsa:j²²/ 'a stockade'

The Grade III and IV Kai-kou rhymes of the Xie rhyme group have also merged in the Zhong-shan dialect: /aj/ (< *-iaj) is the Zhong-shan correspondent to the Ji 祭 and Qi 齊 rhymes in Grades III and IV Kai-kou. (The Qi rhyme only occurs in Grade IV of the Ji rhyme has been combined under the Grade III category in the dialect survey.) Examples from the two rhymes are given below. (Cantonese likewise has [ɤj] as the correspondent.)

- (62) 37-3 迷 /maj⁵¹/ 'to deceive'
 38-10 洗 /saj¹³/ 'to wash'
 39-1 帝 /taj²²/ 'a ruler'

The present data have no pronunciation for yi 刈 (36-15) 'to mow', the only word in the survey representing the Grade III rhyme, Fei 廢. However, yi 刈 is recorded in Chao as /nga:j²²/, agreeing with Cantonese [ŋa:j³³] for the word. There is insufficient evidence to determine whether final /a:j/ in the Fei 廢 rhyme has preserved a distinction from Grade III Qi 齊 rhyme, which has /aj/ as its regular correspondent in Zhong-shan.

In Zhong-shan, the regular correspondent of Grade I He-kou in the Xie-she is /uj/ (< *-uaj), as mentioned in connection with LMC labial-initial words descending from the Tai rhyme. There is no distinction between the two Grade I rhymes, Tai 泰 and Hui 灰. Examples are given in (63).

- (63) 40-16 雷 /luj⁵¹/ 'thunder'

41-1	灰	/huj ⁵⁵ /	'ashes'
41-9	餓	/nuj ¹³ /	'hungry'
42-8	妹	/muj ²² /	'a younger sister'
42-17	碎	/suj ²² /	'fragments'

In Cantonese, the final is [øɥ] after dentals and dental sibilants, and [uɣ] elsewhere. Thus, lei 雷, nei 餓 and sui 碎 in (63) above have final [øɥ] in Cantonese, whereas the remaining two examples in (63) have final [uɣ], as in Zhong-shan.

A couple of Zhong-shan exceptions are nei 內 (42-14) 'inside' /noj²²/ and wai 外 (43-7) 'outside' /ngoɣ²²/, which have final /oɣ/ corresponding to Grade I He-kou series of the Xie-she. No syllable /nguɣ/ exists in Zhong-shan. It would appear that Kai- and He-kou words in Grade I of the Xie-she have coalesced with respect to the velar nasal initial. Cantonese likewise has final [ɔɣ] for the two words, nei 內 and wai 外.

Each of the Grade II He-kou rhymes of the Xie-she is represented by only a handful of words. As a result, the picture which is formed must take that into consideration. In the Jie 皆 rhyme, the majority of the words in Zhong-shan have /waɣj/ (< *waɣj) as the correspondent, as exemplified in (64).

(64)	43-11	乖	/kwaɣj ⁵⁵ /	'good (of child)'
	44-2	怪	/kwaɣj ²² /	'strange'
	44-5	壞	/waɣj ²² /	'bad, spoilt'

Three words have final /waj/, perhaps reflecting a pre-LMC layer (Pulleyblank, p.c.):

(65)	43-12	懷	/waj ⁵¹ /	'bosom'
------	-------	---	----------------------	---------

- 43-13 槐 /waj⁵¹/ 'kind of tree'
 43-14 淮 /waj⁵¹/ 'name of a river'

The Jia 佳 rhyme has /wa:j/ as the Zhong-shan final in Ping-and Shang-sheng, but /wa/ in Qu-sheng. Thus, wai 歪 (44-6) 'aslant', and guai 拐 (44-8) 'an old man's staff' are /wa:j⁵⁵/ and /kwa:j¹³/ respectively, but gua 卦 (45-2) 'to divine' is /kwa²²/, although both Zhong-shan finals descend from LMC *-wa:j. The /a:j/~/a/ alternation noted here is also found in Mandarin (as observable in the Pin-yin romanization above) and other dialects. Pulleyblank (1977:120) suggests that the sporadic loss of *-j in the Jia rhyme must have taken place quite early, as evidenced in some of the rhyming found in Tang poetry (618-907) as well as in other sources cited by Pulleyblank.

The Guai 夬 rhyme has three words in the dialect survey, only two of which are found in the rhyme tables. These two are: kuai 快 (45-4) 'fast' /fa:j²²/ and hua 話 (45-6) 'to speak' /wa²²/; again, both are descendants of LMC *-wa:j. Recall that *k->*h-, and *hw->f. The absence of an overt labial segment in the final of kuai 快 is therefore not significant since the labial medial has been absorbed into the initial. The observation made above for the loss of *-j in some words from the Jia 佳 rhyme is also applicable to hua 話.

The He-kou rhymes of Grades III and IV Xie-she have /aj/ (< *-jiaj < *-yaj) after /f/ descending from labiodentals, /waj/ (< *-yaj) after LMC velars and gutturals, and /øj/ (< *-yaj) elsewhere (i.e., after LMC dental sibilants and retroflexes) in Zhong-shan, as shown in (66). Cantonese has the same pattern of correspondence in this set of rhymes.

(66) a. /aj/ after /f/ from LMC labiodentals:

46-8 廢 /faj²²/ 'to abrogate'

46-9 吠 /faj²²/ 'to bark'

b. /waj/ after LMC velars and gutturals:

46-12 圭 /kwaj⁵⁵/ 'a jade tablet or baton'

47-4 惠 /waj²²/ 'favour'

c. /øj/ elsewhere:

45-8 歲 /søj²²/ 'age'

46-1 贅 /tsøj²²/ 'to repeat'

Observe that while the Grade I final /uj/ is distinct from the Grade IV final /øj/ after LMC dental sibilants in Zhong-shan, as exemplified by sui 碎 /suj²²/ in (63) versus sui 歲 /søj²²/ in (66) above, the two finals have merged in Cantonese, with [søŋ⁴⁴] the pronunciation of both words.

3.2.2.5. Zhi 止 -she

The rhymes of the Zhi-she occur in all but the first grade. In the dialect survey, Grades II and IV of both Kai-kou and He-kou series of the Zhi 支 and Zhi 脂 rhymes have been combined under their respective Grade III rhymes. The Zhi 之 rhyme is Kai-kou only. Grades II and IV of that rhyme are likewise incorporated under its Grade III rhyme in the survey list. The Wei 微 rhyme only has Grade III, but does occur in both Kai- and He-kou series.

The Kai-kou rhymes have all merged in Zhong-shan. Even grade distinctions have disappeared. The Zhong-shan correspondent to Kai-kou Zhi-she is /i/ (ㄟ *-i after Grade III sibilants, *-i elsewhere) irrespective of grade or rhyme. Examples are given

in (67) below, with rhyme and grade included in brackets.

(67)	48-6	知	/tsi ⁵⁵ /	'to know'	(支 III)
	49-2	移	/i ⁵¹ /	'to move across'	(支 IV)
	54-12	地	/ti ²² /	'ground, earth'	(脂 IV)
	57-20	使	/si ¹³ /	'to employ'	(之 II)
	58-6	市	/si ¹³ /	'a market'	(之 III)
	60-1	希	/hi ⁵⁵ /	'rare'	(微 III)

One interesting exception concerns the Grade IV word, 鼻 (54-8) 'nose'. In Zhong-shan, the word is pronounced /pi²²/ when it refers to 'nose' in general, but /pat²/ when it refers specifically to the 'trunk' of an elephant. The form with the final Ru-sheng ending bearing the specialized meaning is also found in other Chinese dialects (cf. Hashimoto, p.652; Zi-hui, p.52). Pulleyblank informs the writer that the Mandarin reading of bi implies a Ru-sheng reading (LMC *pɰjit < EMC *bjit) that is not attested in the Guang-yun. Pulleyblank (1973:372) stated that 'nose' was EMC *bjĩ (< bjis) from which the current pronunciation of various dialects (including Zhong-shan /pi²²/) is descended; that is, the Qu-sheng in EMC *bjĩ developed out of the loss of final *-s. Zhong-shan tone /22/, for example, is the regular reflex of the historical Qu-sheng. Pulleyblank postulates that in the northwestern dialects, there was a dialectal shift of *-s > *-t. It is the borrowing of *bjit (< *bjis) into the standard colloquial of Tang, supplanting the original Qu-sheng reading, that would account for the reflex of an implied Ru-sheng reading in modern Mandarin bi. In Zhong-shan and Cantonese, and perhaps other dialects, the Ru-sheng reading from *bjit and the Qu-sheng reading

from *bji` have been preserved by having [pət], descending from *bjit, acquire a meaning restricted to 'elephant's trunk'.

Regarding the Kai-kou Zhi-she, Cantonese had also merged all the grades and rhymes. There are, however, two correspondents in Cantonese as a result of phonological conditioning: [ej] occurs after initials descending from LMC retroflexes and retroflex sibilants, and [i:] elsewhere. On the basis of historical and cross-dialectal data, it appears that *-i had diphthongized to -ej under certain conditions in Cantonese--a change which had not affected the Zhong-shan dialect. (That process in Cantonese is parallel to the diphthongization of *-u > ow and *-y > øy in that dialect.) Thus, although all the words in (67) have final /i/ in Zhong-shan, only zhi 知, yi 移, shi 市 and shi 使 in (67) have final [i:] in Cantonese; the rest have final [ej]. Moreover, words with initials descending from Ri *r-, Yí *ŋ-, Ying *ʔ-, and Yu IV (< EMC *j-), have the syllable [ji:] in Cantonese; that is, final [i:] is accompanied by a [j] on-glide in the absence of a consonantal initial in the modern reflex of such words. Hence, Cantonese pronounces yi 移, for example, as [ji:²¹] (Zhong-shan [i:⁵¹]).

A number of words in Kai-kou Zhi-she have final /aj/ or /a:j/ in Zhong-shan (and Cantonese) which may reflect an older stage of the Chinese language. Pulleyblank (1977:120), for example, observes that the Zhi 支 (EMC *-ia < Old Chinese *-aj and *-al) rhyme had rhymed with the Jia 佳 (O.C. *-aj) rhyme during the Wei-Jin and early part of the Northern and Southern Dynasties period (i.e., 3rd-5th c. A.D.), and proposes the likelihood that the Zhi 支 rhyme still had a final glide at that time, and was *-iaj (> EMC *-ia > LMC *-i). A list of Zhong-shan words in this

rhyme with final /aj/ or /a:j/ is given in (68).

(68)	48-11	篩	/saj ⁵⁵ /	'sieve'
	49-11	璽	/sa:j ¹³ /	'Imperial signet'
	49-12	徙	/sa:j ¹³ /	'to move one's abode'
	49-16	舐	/laj ¹³ /L., /la:j ¹³ /C.	'to lick'
	50-5	蟻	/ngaj ¹³ /	'an ant'
	50-12	荔	/la:j ²² /	'lichee'

Only a few words occur in Grade II of He-kou Zhi-she, and even fewer appear in the dialect survey. All the words belonging to the second grade have descended from words containing an EMC retroflex sibilant initial. Zhong-shan has final /øj/ as a regular correspondent to this set of historical finals (as does Cantonese). However, in Zhong-shan there are, in fact, only two words in this category which have the /øj/ final. They are:

shuai 衰 (63-7) 'to decrease' /søj⁵⁵/, and shuai 帥 (65-1) 'a leader' /søj²²/.

In Grade III and IV of the Zhi 支 and Zhi 脂 rhymes, the Zhong-shan finals are: /øj/ after descendents of EMC palatals, and LMC dentals, dental sibilants, retroflexes; and /waj/ after LMC velars and gutturals (all from *-yj). In the case of the Yí *ŋ-) initial, unlike the other velar initials, the labial medial in words containing that initial has been lost in Zhong-shan. Examples are presented below.

(69) a. /øj/ after EMC palatals, and LMC dentals, dental sibilants and retroflexes:

60-11	隨	/ts'øj ⁵¹ /	'to follow'
61-11	累	/løj ¹³ /	'to tie'

61-15 蕊 /jøj¹³/ 'stamen'

b. /aj/ after /ng/:

61-7 危 /ngaj⁵¹/ 'dangerous'

62-9 偽 /ngaj²²/ 'false'

c. /waj/ elsewhere:

61-4 規 /k'waj⁵⁵/ 'regulations'

62-11 為 /waj²²/ 'for, because of'

64-3 軌 /kwaj¹³/ 'a track'

Cantonese has the same pattern of correspondence as Zhong-shan in the Zhi 支 and Zhi 脂 rhymes.

The Wei 微 rhyme differs from the other two He-kou rhymes of the Zhi-she not only in its restriction to Grade III, but also in its inclusion of words containing labiodentals (with LMC final *-ji < *yj). In terms of words occurring with the initials also found in the Zhi 支 and Zhi 脂 rhymes, essentially the same finals and pattern emerge in the Wei rhyme in Zhong-shan. The only exception concerns words with initial /f/ descending from the Xiao (*x-) initial. In fact, with respect to the Zhi-she as a whole, it is only in the Wei rhyme that one finds /f/ corresponding to the Xiao initial. The final in this case is /aj/. Final /aj/ is also the Zhong-shan correspondent in Qu-sheng words with initial /f/ descending from LMC labiodentals. The remaining words in this class of historical initials have final /i/ in Zhong-shan. Examples of /aj/ and /i/ finals for the Wei rhyme are given in (70).

(70) a. Words with initials descending from LMC labiodentals:

/aj/ after /f/ in Qu-sheng words:

66-12 痛 /faj²²/ 'pimples'

66-14 費 /faj²²/ 'to waste'

/i/ elsewhere:

65-10	飛	/fi ⁵⁵ /	'to fly'
66-5	匪	/fi ¹³ /	'vagabonds'
66-8	尾	/mi ¹³ /	'a tail'
66-16	未	/mi ²² /	'not yet'

b. /aj/ after /f/ descending from Xiao (*x-) initial:

65-17	揮	/faj ⁵⁵ /	'to move'
65-19	徽	/faj ⁵⁵ /	'honourable'

Cantonese has final [ej] corresponding to Zhong-shan /i/ above; Zhong-shan /aj/ in this rhyme, however, is likewise [ɛj] in Cantonese.

3.2.2.6. Xiao 效 -she

As mentioned earlier, the present study will treat the Xiao-she as a rhyme group which contains only Kai-kou rhymes. On this basis, the Hao 豪 rhyme only occurs in Grade I Kai-kou, and has the reflex of final /ow/ (<*-uaw after LMC bilabials, *-aw elsewhere) in Zhong-shan. Examples are presented below.

(71)	67-14	毛	/mow ⁵¹ /	'hair of animals'
	69-16	早	/tsow ¹³ /	'early'
	71-9	告	/kow ²² /	'to tell'

Cantonese also has final [ow] for the Hao rhyme.

One exception in Zhong-shan is bao 褒 (67-12) 'to praise' /paw⁵⁵/, with final /aw/ instead of /ow/. Three other words have final /a:w/ in Zhong-shan (and Cantonese): kao 考 (70-2) 'to examine' /ha:w¹³/, kao 烤 (70-3) 'to roast' /ha:w¹³/, and kao 靠 (71-12) 'to depend on' /k'a:w²²/L. (/how²²/C.). The literary

reading for kao 靠 is probably borrowed from Mandarin.

The Yao 肴 rhyme is in Grade II only. The Zhong-shan correspondent for this rhyme is /a:w/ (< *-a:ɿw), as in Cantonese, with Zhong-shan examples presented in (72).

- (72) 72-9 猫 /ma:w⁵⁵/C. 'a cat' (/miw⁵⁵/L.)
 73-6 炒 /ts'a:w¹³/ 'to fry'
 74-16 校 /ha:w²²/ 'a school'

Grades III and IV (the latter having been combined under the former in the dialect survey) of the Xiao 宵 rhyme, and Grade IV of the Xiao 蕭 rhyme have merged in the Zhong-shan final, /iw/ (< *-iaw), corresponding to these rhymes. Examples are:

- (73) 75-8 貓 /miw⁵⁵/L. 'a cat' (/ma:w⁵⁵/C.)
 76-11 橋 /k'iw⁵¹/ 'a bridge'
 80-11 曉 /hiw¹³/ 'dawn'

It might be noted that mao 貓 in Grade II (number 72-9) and Grade III (number 75-8) have been re-interpreted in Zhong-shan in terms of a colloquial versus literary distinction.

As in Zhong-shan, Cantonese likewise has [i:ɿw] as the final corresponding to the rhymes in Grades III and IV of the Xiao-she.

3.2.2.7. Liu 流 -she

The Liu-she has only Kai-kou rhymes. Grade I occurs only in the Hou 候 rhyme. Grades II and IV of the You 尤 rhyme are combined under their Grade III counterpart in the same rhyme in the dialect survey. The You 幽 rhyme has Grade IV only. The general correspondent of the Liu-she in Zhong-shan is /aw/, with

the merger of the four grades. The basic exception is words the initial of which descends from the Ri initial (which only occurs in Grade III), or words in Grades III and IV with the LMC guttural initials. In such cases, the Zhong-shan reflex is the syllable /jaw/:

- (74)
- | | | | |
|-------|---|------------------------|-------------------------------------|
| 81-16 | 偷 | /t'aw ⁵⁵ / | 'to steal' |
| 82-21 | 牡 | /maw ¹³ / | 'male animal' |
| 83-21 | 歐 | /aw ¹³ / | 'to fight with stick/fist' |
| 85-5 | 浮 | /faw ⁵¹ /L. | 'to float' (/p'u ⁵¹ /C.) |
| 87-1 | 柔 | /jaw ⁵¹ / | 'soft' |
| 89-2 | 有 | /jaw ¹³ / | 'to have' |

There are some exceptions, such as /u/ (< *-aw after LMC bilabials, and *-uw after LMC dentilabials) in Zhong-shan, as shown in the colloquial pronunciation of fou 浮 in (74). Other occurrences of /u/ are listed in (75) below.

- (75)
- | | | | |
|-------|----|--|-----------------------------------|
| 82-22 | 母 | /mu ¹³ / | 'mother' |
| 84-1 | 戊 | /mu ²² / | 'fifth of the Heavenly Stems' |
| 87-24 | 婦 | /hu ²² / | 'a wife' (/p'u ¹³ / in |
| | 新婦 | /san ⁵⁵ p'u ¹³ / | 'daughter-in-law') |
| 87-25 | 負 | /hu ²² / | 'to bear' |
| 89-7 | 富 | /hu ²² / | 'wealth' |
| 89-8 | 副 | /hu ²² / | 'to aid' |

In Grades III and IV, there are also exceptions with final /iw/ (< *-iw) (e.g., zhou 帚 (88-10) 'a broom' /tsiw¹³/), and final /a:w/ (e.g., zhou 肘 (88-6) 'elbow' /tsa:w¹³/). In the case of the word qiu 邱 (87-6a) 'surname' /hia:w⁵⁵/, the final

is /ia:w/, which only occurs in a couple of colloquial words.

Cantonese correspondences to the Liu-she do not differ much from those in Zhong-shan. There is an occasional [A:w] final in Cantonese instead of the regular [ɐw] final, and the distribution of finals [ow] and [u:] is dependent upon the initial (e.g., [ow] after bilabials, such as mu 母 [mow³⁵] in (75), but [u:] after labiodentals, such as fu 富 [fu:⁴⁴] in (75)).

3.2.2.8. Xian 咸 -she

The Xian-she has a number of rhymes, most of which occur in Kai-kou. The He-kou words are found in the Fan 凡 rhyme only. Furthermore, in the dialect survey, only words with the historical labiodental initials are included in the Fan 凡 rhyme. Note also that in this rhyme group, words occur in all four historical tones --Ping, Shang, Qu and Ru--with the last containing a stop corresponding to the point of articulation of the nasal ending in the other three tones. To simplify the description of correspondences, the Ru-sheng stop ending will be assumed in the present and subsequent discussion of rhyme groups, all of which contain the four historical tones. Thus, a final such as "/om/" would also represent the corresponding final, "/op/", and so forth.

Discussing first the Kai-kou series of the Xian-she, the regular Zhong-shan correspondents to Grade I, Xian-she are: /om/ after historical velars and gutturals, and /a:m/ elsewhere--namely, after dentals and dental sibilants. Both sets of finals are descended from LMC *-am. Examples are shown on the following page.

(76) a. /om/ after LMC velars and gutturals:

92-11	堪	/k'om ⁵⁵ /L.	'to sustain' (/k'am ⁵⁵ /C.)
93-7	揩	/om ²² /L.	'to cover with hand' (/am ¹³ /C.)
94-16	盒	/hop ² /	'a small box with lid'
96-4	取	/kom ¹³ /	'to dare'

b. /a:m/ elsewhere:

92-5	南	/na:m ⁵¹ /	'south'
94-10	雜	/tsa:p ² /	'mixed'
95-16	膽	/ta:m ¹³ /	'the gall'

As shown in kan 堪 and an 揩 above, there are a couple of cases of colloquial versus literary forms in which the colloquial has final /am/. It may be the case that the colloquial forms were borrowed into the dialect from Cantonese (more on this point shortly).

The word han 喊 (96-6, 98-8) 'to call' occurs in both Grades I and II, with /hom²²/ a literary form and /ha:m²²/ the colloquial counterpart. The distinction between Grade I with the /om/ final and Grade II with the /a:m/ final, as we shall soon observe, has been re-interpreted as a distinction of style in Zhong-shan. The words in the two grades are both [hɛɪm⁴⁴] in Cantonese, although in Grade I, Xian-she, Cantonese normally has [ɛm] corresponding to Zhong-shan /om/ after historical velars and gutturals, and [Aɪm] elsewhere, as in Zhong-shan.

There are very few irregular finals in Zhong-shan corresponding to Grade I, Xian-she. One is sa 卅 (97-3) 'thirty' /sa⁵¹/, perhaps borrowed from Mandarin. Another is la 拉 (94-9) 'to pull' /la:j⁵⁵/. Pulleyblank observes that la 拉 is also exceptional in other dialects, and suggests that the pronunciation

given in Zhong-shan (and other dialects) may in fact not be the word originally represented by the graph.

The regular Zhong-shan (and Cantonese) correspondent of Kai-kou, Grade II Xian-she is /a:m/ (◁ *-a:m), as mentioned above, and exemplified below.

- (77) 98-5 斬 /tsa:m¹³/ 'to behead'
 100-7 艦 /la:m²²/ 'a warship'
 101-3 匣 /ka:p²/ 'a small box'

Besides han 喊, discussed earlier, two other words in Grade II have final /om/ in Zhong-shan: xián 咸 (98-3) 'together' /hom⁵¹/, and xiàn 餡 (99-3) 'meat, fruit, etc. for pastry stuffing' /hom²²/.

There are three cases listed in (78) where the labial ending had become dental in both Zhong-shan and Cantonese.

- (78) 98-10 賺 /tsa:n²²/ 'to earn'
 101-6 押 /a:t²/ 'to press down'
 101-7 壓 /a:t²/L. 'to press, to crush' (/a:t⁵/C.)

It is possible that the dental nasal articulation is due to Mandarin influence. The writer does not know what may be the source of the dental stop articulation in the two Ru-sheng words in (78). There is, moreover, a colloquial word /a:p²/ meaning 'to pressure or force someone' which can probably be associated with ya 壓.

Grades III and IV Kai-kou of the Xian-she have final /im/ (◁ *-iam) in Zhong-shan; for example:

- (79) 102-6 鉗 /k'im⁵¹/ 'pliers'

- 106-6 業 /ngip²/ 'property'
 107-14 僭 /tsim²²/ 'to usurp'

Again, there are three instances where the labial ending had become dental in articulation in the present Zhong-shan data.

- (80) 102-13 貶 /pin¹³/ 'to censure'
 107-10 店 /tin²²/ 'a shop'
 108-2 跌 /tit²/ 'to fall down'

The change of /m/ to /n/ in the word bian 貶 is due to the general process of labial dissimilation, which affected almost all the Chinese dialects. None of those represented in the Zi-hui (p.177), for instance, have final [m] for the word bian 貶. Nasal /m/ for dian 店, it may be noted, is recorded by Chao (/tim²²/). A bi-labial nasal ending is also recorded for Cantonese. The dental stop for die 跌 in Zhong-shan (as well as Cantonese) is due to the reading from the Shan-she (number 132-10). Cross-dialectally, Mei-xian and Xia-men show final [t] for die 跌: it is [tiɛt⁴] in Mei-xian, and [tiɛt⁵] in Xia-men (Zi-hui, p.32)

He-kou Xian-she is restricted to the Fan 凡 rhyme, which only occurs in Grade III. Moreover, all the words in the dialect survey contain the LMC labiodentals. Due to labial dissimilation, the Zhong-shan correspondent to this rhyme is /a:n/ (ㄤ *-a:m). There are no exceptions found in the data. Examples are given below.

- (81) 109-1 凡 /fa:n⁵¹/ 'all'
 109-5 犯 /fa:n²²/ 'to transgress'
 109-9 乏 /fa:t²/ 'to be in want'

3.2.2.9. Shen 深 -she

The Shen-she consists of only the Qin 侵 rhyme. Grades II and IV of that rhyme are combined under Grade III in the dialect survey. The regular Zhong-shan correspondent of the Qin rhyme in Grade II is /am/ (< *-əm). In the case of Grades III and IV, words with the historical Ri, Ying and Yu IV initials have the syllable /jam/ in Zhong-shan; otherwise, the final is /am/. (The finals in Grades III and IV all descend from LMC *-im.) Examples are presented in (82).

- | | | | | |
|------|--------|---|----------------------|------------------------|
| (82) | 110-13 | 森 | /sam ⁵⁵ / | 'luxuriant vegetation' |
| | 112-9 | 飲 | /jam ¹³ / | 'to drink' |
| | 114-11 | 急 | /kap ⁵ / | 'anxious' |

Whereas two of the words in the data from the Qin rhyme with final /a:m/ instead of the expected /am/ final can be traced to readings in the Xian-she, the pronunciation of /tsa:p²/ in the literary word xi 襲 (113-18) 'garment' cannot be similarly dismissed. Nevertheless, the same long nuclear vowel is found in Cantonese for the word (viz., [tsa:p³]). The word is likely to have undergone a sound change in Zhong-shan similar to its Cantonese counterpart--whatever may have been the source of that change. (Alternatively, of course, it could simply be a pronunciation borrowed from Cantonese.)

Labial dissimilation is again involved in the change of /m/ to /n/ in the two labial-initial words: bin 稟 (111-15) 'to petition' /pan¹³/, and pin 品 (111-16) 'personality' /p'an¹³/ (< *pim and *p'im respectively).

3.2.2.10. Shan 山 -she

The Shan-she has both Kai-kou and He-kou categories, as well as occurring in all four grades. Turning first to the Kai-kou series, there are two regular correspondents to the Grade I rhymes in Zhong-shan (and Cantonese): /on/ in words with LMC velars and gutturals, and /a:n/ elsewhere. Both sets of finals are derived from LMC *-an. Examples are:

(83) a. /on/ after LMC velars and gutturals:

115-25	安	/on ⁵⁵ /	'quiet'
117-9	岸	/ngon ²² /	'shore'
118-4	割	/hot ² /	'to hack'

b. /a:n/ elsewhere:

115-14	珊	/sa:n ⁵⁵ /	'coral'
115-8	難	/na:n ⁵¹ /	'difficult'
116-20	蛋	/ta:n ²² /	'an egg'

There are a number of exceptions in which the final accompanying the historical velar or guttural initial is /a:n/, as in kan 刊 (115-21) 'to carve' /ha:n⁵⁵/, kan 侃 (116-12) 'straight-forward' /ha:n¹³/, and han 罕 (116-13) 'rare, strange' /ha:n¹³/.

Grade II, Kai-kou of the Shan-she has only one regular correspondent in Zhong-shan (and Cantonese): /a:n/ (< *-a:n), as exemplified in (84) below.

(84)	118-10	山	/sa:n ⁵⁵ /	'a mountain'
	120-1	八	/pa:t ² /	'eight'
	122-5	晏	/nga:n ²² /	'a clear sky'

Note the homophony of shan 珊 in (83) and shan 山 in (84) in

Zhong-shan, where both finals are /a:n/ in spite of a difference in grade: the former is from Grade I and the latter Grade II. This is contrasted with the distribution of finals found in an 岸 in (83) and yan 晏 in (84), where an 岸 has final /on/ and yan 晏 final /a:n/. On the basis of Pulleyblank's reconstructions, it is obvious that a merger of Grade I (*-an) with Grade II (*a:n) had taken place except after historical velars and gutturals, where a distinction of the two grades has been preserved in Zhong-shan, as it has in Cantonese.

There are only two exceptions to final /a:n/ in Grade II, Kai-kou Shan-she: xiā 瞎 (122-8) 'blind', and xiá 轄 (122-9) 'to govern', both of which are /hat²/ in Zhong-shan ([het³] in Cantonese).

With regard to Grades III and IV (the latter subsumed under Grade III in the survey), Kai-kou rhymes of the Shan-she, the Zhong-shan (and Cantonese) correspondent is /in/ (< *-ian), as shown in (85).

(85)	122-15	綿	/min ⁵¹ /	'floss silk'
	131-17	現	/hin ²² /	'to manifest'
	133-1	結	/kit ² /	'to contract'

Besides the regular /in/ final, there are a number of words with /yn/ final as the correspondent in Zhong-shan. A list of these words are presented below.

(86)	122-18	聯	/lyn ⁵¹ /	'to connect'
	127-13	言	/ngyn ⁵¹ /	'words'
	128-1	鍵	/kyn ²² /	'a door-bolt'

128-2	建	/kyn ²² /	'to establish'
128-3	健	/kyn ²² /	'strong'
128-6	獻	/hyn ²² /	'to offer up'
130-2	弦	/hyn ⁵¹ /	'string of a musical instrument'
130-3	絃	/hyn ⁵¹ /	'string of a musical instrument'

Final /yn/ in lian 聯, xian (or xuan) 弦, and xian (or xuan) 絃 may have been He-kou originally, although they are categorized as Kai-kou in Middle Chinese, as suggested by xie-sheng evidence (Pulleyblank, p.c.). The phonetic 紉 occurs in the He-kou word, guan 關 (138-7) 'to shut' /kwa:n⁵⁵/, for example, while the He-kou word, xuan 玄 (147-2) 'dark' /hyn⁵¹/, occurs as the phonetic in xian 弦 and xian 絃. Observe, also, that the alternative reading xuan in Mandarin for the two words could reflect original He-kou finals.

Regarding the remaining words in (86), Pulleyblank brought the writer's attention to the fact that all these words are from the Yuan 元 rhyme (LMC *-ian < EMC *-ian). First of all, these words serve to preserve distinctions between the Yuan 元 and Xian 仙 (LMC *-ian < EMC *-ian) which have largely been lost elsewhere. Zhong-shan final /yn/ in these words suggests that they must represent pre-LMC, at a time before the fronting of medial *i > *i after velars and laryngeals in the Yuan 元 rhyme. The distinction between the two rhymes is maintained in Fu-zhou: final [yɔŋ] is the reflex of the Yuan rhyme, while [iɛŋ] that of the Xian rhyme. Thus, yan 言 is [ŋyɔŋ⁵²], jian 建 and jian 健 [kɣɔŋ²¹³], and xian 獻 [xɣɔŋ²¹³] (Zi-hui, pp.185,188,190). An example of Fu-zhou correspondence to the Xian rhyme is lian 連 (122-17) 'to connect': [liɛŋ⁵²] (Zhong-shan /lin⁵¹/).

The Fu-zhou data for the Yuan rhyme would suggest that the nuclear vowel in EMC *ian became a rounded back vowel (or in Pulleyblank (1962), it was already analyzed as back rounded *-a-). Possibly, medial *-i- then became *-y- by assimilating the rounding of the nuclear vowel. In Zhong-shan, the nuclear vowel was subsequently lost, resulting in the compensatory lengthening of the medial, which became the new nuclear vowel in the dialect.

There are also some words with the irregular final /im/ corresponding to Grade III and IV Kai-kou in the Shan-she. The writer can offer no explanation for this anomaly. However, in this case, Hashimoto's Cantonese data likewise shows a couple of [i:m] finals here. Those in Zhong-shan are listed in (87).

(87)	123-14	蟬	/sim ⁵¹ /	'a cicada'
	123-15	禪	/sim ⁵¹ /	'Zen, Buddhist'
	128-7	堰	/im ¹³ /	'an embankment'
	132-11	捏	/nip ² /	'to fabricate'
	132-15	竊	/ts'ip ² /	'to steal'

A cross-dialectal comparison shows that other dialects besides Zhong-shan and Cantonese have a labial final for at least some of the words in (87). Chan 蟬 is [siɛm²] in Fu-an (Min; Norman, 1981, p.c.). Chan 禪 and nie 捏 are two words from (87) which appears in the Zi-hui (pp.33,172). Regarding the word chan 蟬, the dialects with a labial ending for that word are: Cantonese ([sim²¹]), Mei-xian ([hiam¹¹]), and Chao-zhou ([siɛm⁵⁵]). The same dialects show a labial ending in the word, nie 捏: Cantonese ([nip³]), Mei-xian ([ɲiap⁴]), and Chao-zhou ([niɛp¹]). Thus, Cantonese and Zhong-shan (both representing the Yue dialect group), Mei-xian

(Hakka), and Fu-an and Chao-zhou (Min)--all of which are southern Chinese dialects--show a labial final for words which should have had contained a dental one in Late Middle Chinese. One would expect that these words in the southern dialects probably had the same origin.

A highly irregular correspondent to Grade III/IV, Kai-kou Shan-she in Zhong-shan is the word xie 褻 (126-12) 'dirty, ragged' /tsi²²/, which has already been mentioned in relation to its irregular /ts/ initial corresponding to the Xin (*s-) initial.

Another exception in Zhong-shan is nian 捻 (130-11) 'to twist with the finger' /nan¹³/. Hashimoto (p.529) records the word as [ni:n³⁵] for Cantonese, but elsewhere (p.246) states that final [i:n] is the literary form; the colloquial reading of nian 捻 is [nɛn³⁵], parallel to the form obtained in the Zhong-shan data. The syllable /nin¹³/, in the rising tone, does not occur in Zhong-shan. Hashimoto records nian 捻 as the only word with syllable [ni:n³⁵]. Note, moreover, that the syllable [nɛn³⁵], with the rising tone, is also rare; nian 捻 constitutes the only word filling that syllable-tone slot in Hashimoto's data for Cantonese. In Zhong-shan, it is also the only word with syllable /nan¹³/. Colloquially, the word is often used to mean 'to tease, to exasperate'.

Turning now to the He-kou series of the Shan rhyme group, the regular Zhong-shan (and Cantonese) correspondents in Grade I are: /yn/ after words the initials of which descend from LMC dentals and dental sibilants, and /un/ elsewhere, as exemplified in (88). Both Zhong-shan finals come from LMC *-uan.

(88) a. /yn/ after LMC dentals and dental sibilants:

134-16	知	/tyn ¹³ /	'short'
136-1	亂	/lyn ²² /	'disorderly'
137-6	撮	/tsyt ² /	'a pinch of'

b. /un/ elsewhere:

133-10	盤	/p'un ⁵¹ /	'a dish'
136-11	玩	/ngun ²² /	'to play'
137-11	活	/ut ² /	'living'

Among the exceptions in Zhong-shan, there are several with final /a:n/~/(w)a:t/, which are listed below. They appear to have merged with the Grade II series of He-kou Shan-she, where final /wa:n/ occurs after LMC velars and gutturals, and /a:n/ elsewhere.

(89)	133-12	瘢	/pa:n ⁵⁵ /	'a scar'
	133-14	饅	/ma:n ²² /	'steamed bread'
	135-15	漫	/ma:n ²² /	'water overflowing'
	135-16	幔	/ma:n ²² /	'a curtain'
	136-19	鈸	/pa:t ² /	'a small bell'
	136-20	跋	/pa:t ² /	'to walk'
	137-8	聒	/kwa:t ² /	'a clamour'

There are also a couple of other exceptions. Luan 卵

(134-20) 'an egg' /løn¹³/, for example, has final /ø/n/ in Zhong-shan (and Cantonese). Duo 撮 (137-1) 'to gather up' /tsy²²/ and duo 撮 (137-2) 'to weigh a thing in the hand' /tsy²²/ also have an alternative pronunciation of /tsøj²²/. The word wo 斡 (137-12) 'to revolve' is pronounced /k'un¹³/ in Zhong-shan, apparently based on the reading of guǎn 斡, which occurs in combination with guān 官 (134-1) 'an official' to form Guǎn-guān 斡官 /k'un¹³ kun⁵⁵/,

the title of an official under the Han dynasty. Wong (1954) gives the Cantonese pronunciation of wo 幹 as [wa:t⁴] and guǎn 幹 as [ku:n³⁵]. Hashimoto, on the other hand, records the pronunciation of [fu:n³⁵] for wo 幹, with no alternative pronunciations given.

As mentioned above, Grade II, He-kou series of the Shan-she has two regular correspondents in Zhong-shan (and Cantonese): /wa:n/ after historical velars and gutturals, and /a:n/ elsewhere (≠ *wa:n). Zhong-shan examples are given in (90). In the present data, there is one exception to the above conditioning; the velar nasal is followed not by /wa:n/, but by /a:n/. In both Egerod (1956) and Chao (1948)'s data on Zhong-shan, however, the syllable /ngwa:n/ does occur. As noted in a more detailed discussion of the topic in Chapter 1.2.2 on medials, this syllable is found solely in the word wan 頑 (137-14, 138-8) 'obstinate' /ngwa:n⁵¹/. The labial medial has apparently been lost in the speech of the informants in the present study.

- | | | | |
|------|-----------|------------------------|---------------------|
| (90) | 137-14, 頑 | /nga:n ⁵¹ / | 'obstinate' |
| | 138-8 | | |
| | 138-4 挽 | /wa:t ² / | 'to scoop out' |
| | 138-5 門 | /sa:n ⁵⁵ / | 'a bolt (for door)' |
| | 139-6 慣 | /kwa:n ²² / | 'accustomed to' |

For Grades III and IV (the latter included in Grade III in the survey) of the He-kou series of the Shan-she, Zhong-shan has two correspondents: /a:n/ (< *-a:n) before words with LMC labiodentals, and /yn/ (< *-yan) elsewhere, as shown in (91).

(91) a. /a:n/ after LMC labiodentals:

144-3	番	/fa:n ⁵⁵ /	'foreign'
145-2	晚	/ma:n ¹³ /	'evening'
146-7	罰	/fa:t ² /	'to punish'

b. /yn/ elsewhere:

140-16	船	/syn ⁵¹ /	'a boat'
145-16	願	/ngyn ²² /	'to be willing'
148-5	穴	/yt ² /	'a cave'

Cantonese has essentially the same set of correspondences as Zhong-shan except that Cantonese has [ɛt] in Ru-sheng finals, and [a:n] in non-Ru-sheng finals after LMC labiodentals. Thus, fan 番 and wan 晚 in (91) are Cantonese [fa:n⁵³] and [ma:n²⁴], with final [a:n], as in Zhong-shan. Fa 罰 in Cantonese [fɛt³], however, contrasts with Zhong-shan [fa:t²].

There are a few cases of final /un/ in Zhong-shan instead of the regular final /yn/, thus behaving like Grade I finals.

(92)	144-18	垣	/hun ⁵¹ /	'a wall'
	145-5	宛	/un ¹³ /	'to yield'
	145-7	婉	/un ¹³ /	'pleasant'

3.2.2.11. Zhen 臻 -she

The Zhen-she has both Kai-kou and He-kou rhymes. In the Kai-kou series, Grade I only occurs in the Hen 痕 rhyme. In Zhong-shan (and Cantonese), the regular reflex of the Kai-kou Grade I rhyme is /an/ (ㄣ *-ən). Examples are:

(93)	148-6	吞	/t'an ⁵⁵ /	'to swallow'
------	-------	---	-----------------------	--------------

- 149-4 很 /han¹³/ 'angry'
 149-5 良 /ngan⁵¹/ 'a limit'

In the case of the Ying-initial word, en 恩 (148-10) 'grace', the Zhong-shan pronunciation is /jan⁵⁵/ although one would have expected the syllable /an⁵⁵/ in Grade I. The exceptional presence of /j/ in the word, however, has already been dealt with in Chapter 3.1.2.8.

The Grade II Kai-kou rhyme is represented by the Zhen 臻 rhyme, which is included under the Zhen 真 (III) rhyme in the dialect survey. The only set of words in this Grade II rhyme is words with EMC retroflex sibilants. In Zhong-shan (and Cantonese), the correspondent of this grade is /an/ (< LMC *-ən). Only four words in this series are represented in the dialect survey:

- (94) 150-15 臻 /tsøn⁵⁵/ 'the utmost'
 152-14 觀 /ts'an²²/ 'to assist'
 154-9 瑟 /sak⁵/ 'a stringed, musical instrument'
 154-10 虱 /sat⁵/ 'a louse'

Of the above words, two are exceptions in Zhong-shan: the literary word, zhen 臻, with final /øŋ/ (final [øŋ] also in Cantonese), and se 瑟, with final /ak/ instead of /at/ in Zhong-shan (in this latter case, Cantonese has the regular pronunciation of [sət⁵] for the word). Final /k/ for se 瑟 in Zhong-shan is likely due to dialectal influence, since LMC *-t is regularly preserved in Zhong-shan. Observe, for example, the following Min forms for se 瑟 recorded in the Zi-hui (p.15), all of which show [k] or [ʔ] (recalling that Zhong-shan /k/ is sometimes phonetically a glottal

stop): Xia-men [sɿk³²], Chao-zhou [sek¹] and Fu-zhou [sai?²³].

Kai-kou Grades III and IV of the Zhe-she likewise have final /an/ (< *-in) as the regular correspondent in Zhong-shan. In the case of words with the LMC Ying or Yu IV initial, the Zhong-shan syllable is /jan/, as in yín 因 (151-3) 'because' /jan⁵⁵/, and yín 引 (152-2) 'to lead' /jan¹³/. Cantonese has a further conditioning in this series: final [øn] after LMC dentals, [øn] or [ɐn] after LMC dentals and retroflexes, and [ɐn] elsewhere. Thus, xin 信 (152-9) 'to believe in', for example, is /san²²/ in Zhong-shan, but [søn⁴⁴] in Cantonese. (Chao records /san²²/ and /søn²²/ as alternatives, with /søn²²/ quite obviously a Cantonese borrowing.)

There are a number of exceptions to final /an/ in Zhong-shan for Grades III and IV. These include such irregular finals as /yn/, in Grade III, exemplified by (95a), and /in/, in Grade IV (95b).

(95) a. /yn/ finals:

153-10	鬻	/hyn ²² /	'to offer blood in sacrifice'
154-18	乙	/yt ² /	'one'

b. /in/ finals:

153-14	必	/pit ² /	'must' (also: /pit ⁵ /)
154-8	秩	/tit ² /	'orderly'
154-17	詰	/k'it ² /	'to investigate'

Aside from preserving grade distinctions, the finals in (95) may also be traces of pre-LMC distinction between rhymes that have been lost by Late Middle Chinese. While rhymes Zhen 臻 and Yan 殷 (LMC *-in) go back to EMC *-in, the Zhen 真 rhyme (LMC *-in)

is EMC *-in. All the words in (95) belong to the Zhen rhyme, suggesting perhaps survivals of an earlier distinction that echoes what was found between the Yuan 元 and Xian 仙 rhymes in the Shan-she. (Similar distinctions are also exhibited in Fu-zhou.)

Two other exceptions have final /ing/:

- (96) 153-19 暱 /nik²/ 'familiar'
 154-4 悉 /sik⁵/ 'to comprehend'

Final /øt/ occurs in li 栗 (153-20) 'chestnut' /løt²/, and is probably a borrowing from Cantonese where [øt] is a regular final after dentals. Another Zhong-shan exception is qi 乞 (156-4) 'to beg', which has the regular reflex [hət⁵] in Cantonese, as opposed to Zhong-shan /ha:t⁵/. The Zhong-shan form may have arisen on the analogy of such alternations in the two dialects as fa 罰 (146-7) 'to punish': Cantonese [fət³], Zhong-shan [fa:t²], and wa 襪 (146-8) 'stockings': Cantonese [mət³], Zhong-shan [ma:t²], etc.

In both Zhong-shan and Cantonese, the set of correspondences for the He-kou series of the Zhen-she does not reveal a very neat, clear-cut pattern. Although the finals /øn/, /an/, /un/ and /yn/ occur in both dialects, they are not always in the same words, nor is the conditioning with respect to the historical initials always readily apparent.

Focussing first on the Grade I rhymes, the correspondent of words with the historical labial initials is /un/ or /an/ (< *-ən). The LMC Ming (*_m-) initial only occurs with the /un/ final. Examples are given in (97).

(97) a. /un/ finals:

156-11	門	/mun ⁵¹ /	'a door'
157-19	本	/pun ¹³ /	'root'
159-12	沒	/mut ² /	'to die'

b. /an/ finals:

156-6	奔	/pan ⁵⁵ /	'to run away'
157-20	笨	/pan ²² /	'stupid'
158-13	噴	/p'an ²² /	'to spurt'

After LMC dentals, Hashimoto (p.658) presents [y:n] and [ɤn] as the regular Cantonese reflexes in this set of historical finals. Although half of the words in this category have final [ɤn], for various reasons (such as readings in other grades, analogical readings, and literary readings), Hashimoto does not regard [ɤn] as one of the regular correspondents. In Zhong-shan, it would be more appropriate to propose that there are two regular correspondents after LMC dentals: /an/ and /ɤn/ (both from *-wan), with /an/ primarily in colloquial readings, and /ɤn/ in literary ones. Words exhibiting this stylistic alternation are given in (98).

(98)	156-13	墩	/tan ¹³ /C.,	/tɤn ²² /L.	'a heap'
	156-16	飽	/t'an ⁵⁵ /C.,	/tɤn ²² /L.	'dumpling'
	156-18	燉	/tan ²² /C.,	/tɤn ²² /L.	'to stew'
	158-2	沌	/tan ²² /C.,	/tɤn ²² /L.	'confused'

With regard to the dental initials, in Zhong-shan, final /yn/ as a reflex of Grade I He-kou Zhen-she are found in only three words:

- (99) 156-15 豚 /t'yn⁵¹/ 'a suckling pig'
 156-17 臀 /t'yn⁵¹/ 'buttocks'
 159-1 嫩 /nyn²²/ 'tender'

Of the three words in (99), the two words with initial /t'/ are literary words, and may have been influenced by Cantonese. Nen 嫩 /nyn²²/, however, is used in daily speech in Zhong-shan, and would therefore be more difficult to explain away in terms of dialectal borrowing of literary pronunciations.

It is with LMC dental sibilants that final /yn/ (< *-wən) is the regular Zhong-shan correspondent for Grade I He-kou Zhen-she. (The same correspondence is found in Cantonese.) Examples are:

- (100) 157-4 村 /ts'yn⁵⁵/ 'a village'
 158-6 損 /syn¹³/ 'to injure'
 159-15 猝 /ts'yt²/ 'abrupt'

The remaining LMC initials in this set are the velars and gutturals. The regular final which combines with this group of initials is /wan/ in Zhong-shan. In the case of words with the Xiao (*x-) initial, the syllable is /fan/; the labial medial *-w- had combined with the initial to form the labiodental /f/. Examples are:

- (101) a. /an/ after /f/:
 157-12 婚 /fan⁵⁵/ 'to marry a wife'
 160-4 忽 /fat⁵/ 'suddenly'
 b. /wan/ elsewhere:
 157-17 温 /wan⁵⁵/ 'warm'

158-8 網 /k'wan¹³/ 'to bind'

160-1 骨 /kwat⁵/ 'a bone'

Grade II He-kou Zhen-she, which had been merged with Grade III in the survey, is only found in two Ru-sheng words with the EMC retroflex sibilant initials: shuai 率 (163-1) 'to lead' /søt²/, and shuai 蟀 (163-2) 'a cricket' /søt²/. It should be noted, however, that it was only from the Guang-yun onwards that such words were placed in this rhyme. Both shuai 率 and shuai 蟀 were originally from the corresponding Zhen 真 rhyme, which is not represented in the dialect survey.

Grades III and IV (the latter included in the Grade III rhyme in the survey) have the following pattern in Zhong-shan (and Cantonese): final /an/ (< *-un) after LMC labiodentals, /øn/ after LMC dentals and sibilants, and /wan/ after velars and gutturals. With the exception of the labiodental-initial words, the final in the remaining words is derived from LMC *-yn. Examples are given below.

(102) a. /an/ after LMC labiodentals:

163-8 分 /fan⁵⁵/ 'to divide'

164-19 問 /man²²/ 'to ask'

b. /øn/ after LMC dentals and sibilants:

160-20 春 /ts'øn⁵⁵/ 'spring'

162-10 律 /løn²/ 'a law'

162-15 戌 /søn⁵/ 'eleventh of the Twelve Branches'

c. /wan/ after LMC velars and gutturals:

164-1 君 /kwan⁵⁵/ 'a ruler'

165-15 屈 /k'wat⁵/ 'crabbed'

Aside from the above correspondences, there are a number of exceptions with final /an/. Words with the historical Ri initial, for example, have the syllable /jan/ (e.g., run 閏 (162-9) 'extra' /jan²²/). There are three Lai-initial, Ping-sheng words from the Zhun 諄 rhyme in the survey which have final /an/, as exemplified by lun 倫 (160-6) 'constant' /lan⁵¹/. Their counterparts in the Ru-sheng have final /øt/, as in lū 律 above. Among the historical sibilant-initial words, there are also those with the exceptional /an/ final; for example, jun 竣 (160-11) 'to complete' /tsan²²/, and xun 迅 (162-2) 'quick' /san²²/. Exceptions with final [ən] are not found in Cantonese. Lun 倫, for example, is [løn²¹] in Cantonese.

3.2.2.12. Dang 宕 -she

In the Kai-kou series of the Dang-she, the Tang 唐 rhyme has Grade I rhymes only, and the Yang 陽 rhyme has Grades II, III and IV rhymes (with Grades II and IV included in Grade III in the dialect survey). Grade II is only found in those words with EMC retroflex sibilant initials.

The regular Zhong-shan (and Cantonese) correspondent of Grades I and II Kai-kou series of the Dang-she is /ong/ (< *-aŋ). Examples are:

(103)	166-13	唐	/t'ong ⁵¹ /	'name of a dynasty'
	167-1	岡	/kong ⁵⁵ /	'a mound'
	170-17	惡	/ok ² /	'evil'
	175-12	狀	/tsong ²² /	'form'

There are two regular reflexes for Grades III and IV, Kai-

kou Dang-she in Zhong-shan, conditioned by the type of historical initial. In words with the EMC palatal Ri initial, the Yí (*ɣ-) initial, and the Ying initial (all of which are from Grade III rhymes), and in words with the Grade IV Yu initial (< EMC *j-), Zhong-shan has the syllable /jong/ (< *-iaŋ). Cantonese has the syllable [qœ:ŋ] in the same environment. The regular Zhong-shan reflex after other historical initials is final /iong/ (< *-iaŋ), phonetically [øŋ]. The corresponding final in Cantonese is [œ:ŋ]. Zhong-shan examples are presented in (104).

(104) a. Syllable /jong/ with initials Ri, Ying, Yí and Yu IV:

173-1	央	/jong ⁵⁵ /	'the center'
173-4	羊	/jong ⁵¹ /	'a sheep'
176-16	若	/jok ² /	'if'
176-20	虐	/jok ² /	'cruel'

b. Final /iong/ elsewhere:

170-18	娘	/niong ⁵¹ /	'a girl'
175-21	向	/hiong ²² /	'facing towards'
176-18	脚	/kiok ² /	'foot'

Turning now to the He-kou series of the Dang-she, this series is only found in Grades I and III: the Tang 唐 rhyme in Grade I, and the Yang 陽 rhyme in Grade III. The Zhong-shan finals of the Tang 唐 rhyme are: /wong/ (< *-waŋ) as the entire syllable in words with the historical Xia or Ying initial, and /ong/ as the final (also < *-waŋ) elsewhere. In some cases of the Xiao initial (and in one instance of the Xia initial in the data), the initial had changed to /f/ in modern Zhong-shan, having absorbed the labial *-w- medial. The Zhong-shan final after /f/

is /ong/. Examples are:

(105) a. Syllable /wong/ with initials Xia and Ying:

- | | | | |
|-------|---|-----------------------|-------------|
| 177-4 | 黃 | /wong ⁵¹ / | 'yellow' |
| 178-9 | 鑊 | /wok ² / | 'a broiler' |

b. Final /ong/ elsewhere:

- | | | | |
|--------|---|-----------------------|-------------|
| 177-1 | 光 | /kong ⁵⁵ / | 'light' |
| 177-13 | 謊 | /fong ⁵⁵ / | 'to lie' |
| 178-3 | 郭 | /kok ² / | 'a surname' |

In Zhong-shan, the historical velar-initial words have lost their medial segment entirely, thus merging with their Kai-kou counterparts. The Kai-He distinction has been preserved in most cases in Cantonese (e.g., gang 岡 (in example (103)) is [kɔːŋ⁵³] versus guang 光 (in example (105) above) [kwɔːŋ⁵³]). Except for this distinction, the pattern of correspondence in Cantonese is identical to that in Zhong-shan.

In the He-kou Yang 陽 (i.e., Grade III) rhyme, the only historical initials that occur here are the LMC labiodentals, velars and gutturals. The Zhong-shan correspondents are: final /ong/ after labiodentals (< *-aŋ) and velars (< *-yaŋ), and the syllable /wong/ (< *-yaŋ) after the Ying and Yu III (< EMC *w-) initials. The Grade III rhyme has essentially merged with the Grade I rhyme in the He-kou Dang-she in Zhong-shan (and Cantonese). Examples are given in (106).

(106) a. Syllable /wong/ with initials Ying and Yu III:

- | | | | |
|--------|---|-----------------------|-----------|
| 179-5 | 王 | /wong ⁵¹ / | 'a king' |
| 179-12 | 枉 | /wong ¹³ / | 'useless' |

b. Final /ong/ elsewhere:

179-1	匡	/hong ⁵⁵ /	'to correct'
179-18	望	/mong ²² /	'to hope'
180-5	縛	/fok ² /	'to bind'

In the case of the word guang 逛 (180-1) 'to roam', Zhong-shan has a literary reading of /k'ong⁵¹/ and a colloquial one of /k'wa:ng²²/. (It is [kwa:ŋ³³] in Cantonese.)

Summarizing this rhyme group, the distinction has been maintained in the Kai-kou series of the Dang-she between Grades I and II on the one hand, and Grades III and IV on the other, while such a distinction between grades has been largely lost in the He-kou series in Zhong-shan. At the same time, the Kai-He distinction in velar-initial words, preserved in Cantonese and the majority of Chinese dialects, has been lost in Zhong-shan. From the fusion of the Xiao initial with the medial *-w- to form initial /f/ in modern Zhong-shan (e.g., huang 荒 in (105)), one can assume that the loss of medial *-w- in velar-initial words is a more recent process than that of dentilabialization in the Zhong-shan dialect.

3.2.2.13. Jiang 江 -she

The Jiang-she has only the Jiang 江 rhyme which, in turn, has Grade II rhymes occurring only in the Kai-kou series. The regular Zhong-shan correspondent for this set of finals is /ong/ (< *-ŋ), with examples presented below. (Cantonese likewise has final [ɔ̃:ŋ].)

(107)	181-2	椿	/tsong ⁵⁵ /	'a stake'
-------	-------	---	------------------------	-----------

- 183-18 朔 /sok²/ 'new moon'
 183-23 揀 /k'ok²/ 'to pick out'

In both Zhong-shan and Cantonese, there are a few exceptions involving words with LMC retroflex or retroflex sibilant initials. Instead of final /ong/, these words have final /iong/ in Zhong-shan (and final [œŋ] in Cantonese):

- (108) 181-5 窗 /ts'iong⁵⁵/ 'a window'
 181-6 雙 /siong⁵⁵/ 'a pair'
 183-7 桌 /ts'io²/ 'a table'
 183-8 卓 /ts'io²/ 'to establish'
 183-9 琢 /tiok²/ 'to cut or polish stones'
 183-10 啄 /tiok²/L. 'to peck' (/tione⁵⁵/C.)

Pulleyblank (1977:111) in fact proposes to reconstruct the Jiang-she as Early Middle Chinese *-œŋ. In that proposal, the Cantonese [œŋ] reflexes from the Jiang-she are a survival of the EMC final rather than an exception. The absence of a medial glide in Grade II rhymes would suggest that Zhong-shan /iong/ in this case is the result of the merger of this final in the Jiang-she with Grades III and IV finals in Kai-kou Dang-she, in which the regular Zhong-shan final /iong/ is derived from the LMC final *-iaŋ. Thus, the "breaking" of EMC *-œŋ in Zhong-shan to [œŋ] has been phonemicized as /iong/ based on the final in the Dang-she. By Northern Song times, the Jiang-she had merged with the Dang-she (Pulleyblank, 1971:238).

There are also a few /uk/ finals in Zhong-shan. Hashimoto (p.660;fn.12,p.675) suggests that such finals (in Cantonese) may be traces of an earlier distinction that had once existed within

the Jiang-she; that is, words with the [uk] final are mostly from the Archaic (Old) Chinese Hou 侯 rhyme, while those with other finals came mostly from the Xiao 宵 rhyme.

3.2.2.14. Zeng 曾 -she

The Zeng-she has both Kai-kou and He-kou rhymes. In Grade I of the Kai-kou rhyme, the regular Zhong-shan (and Cantonese) correspondent is /ang/ (◌ * -əŋ), as exemplified below for Zhong-shan:

(109)	184-7	簾	/t'ang ⁵¹ /	'rattan'
	185-2	肯	/hang ¹³ /	'willing'
	186-14	刻	/k'ak ⁵ /	'to engrave'

The word hei 黑 (186-16) 'black' is /ha:k⁵/ in Zhong-shan. Cantonese has [hək⁵] in the literary reading, and [hɛ:k⁵] as the colloquial counterpart. It is later in the Geng 梗-she that one encounters a regular alternation between [ɐŋ] and [ɛ:ŋ] for differences in style, reflecting different layers of the language.

Grade II Kai-kou, together with Grade IV, is incorporated into the Grade III Kai-kou rhymes in the survey. The regular Zhong-shan (and Cantonese) correspondent for Grade II, which only contains the EMC retroflex sibilant series, is /ak/ (◌ * -ək) (only Ru-sheng finals appear in the survey). There are only three words in the data that show final /ak/:

(110)	190-1	側	/ts'ak ⁵ /L.	'the side'	(/tsak ⁵ /C.)
	190-2	測	/ts'ak ⁵ /	'to fathom'	
	190-3	惻	/ts'ak ⁵ /	'to pity'	

In Cantonese, ce 測 and ce 惻 in (110) have [ɤk] and [ʌ:k] finals as alternative readings reflecting literary and colloquial readings.

Two words with the Shan 山 initial have final /ik/ in this set of rhymes in Zhong-shan (and Cantonese): se 色 (190-4) 'colour' /sik⁵/, and se 慙 (190-5) 'miserly' /sik⁵/.

The two remaining Kai-kou grades, III and IV, have /ing/ (< *-in) as the regular Zhong-shan (and Cantonese) final. Examples are:

- | | | | | |
|-------|--------|---|-----------------------|-------------|
| (111) | 187-16 | 升 | /sing ⁵⁵ / | 'to ascend' |
| | 188-2 | 應 | /ing ⁵⁵ / | 'ought' |
| | 190-22 | 柳 | /ngik ⁵ / | 'or' |

One exception in this set of rhymes is ping 憑 (187-2) 'according to' /p'ang⁵¹/ (Cantonese [p'ɛŋ²¹]). A second highly irregular correspondent here is /jan²²/ as the pronunciation of yun 孕 (189-3) 'pregnant' (Cantonese [jɛn³³]). The change of *-ŋ to *-n in yun 孕 seems to have affected a number of the Chinese dialects. In the Zi-hui (p.223), four of the dialects represented there appear to have preserved a velar nasal ending: Tai-yuan (Mandarin), Wen-zhou (Wu), Chao-zhou (Southern Min), and Fu-zhou (Northeastern Min). However, in all four of these dialects, the dental nasal ending has been lost; in Chao-zhou and Fu-zhou, for example, *-n had merged with *-ŋ. The other Min dialect represented in the Zi-hui is Xia-men, where a dental nasal ending is recorded for yun 孕 ([in³³]). Given the dental ending in Xia-men, one can be quite confident that a change to dental articulation must have also affected Chao-zhou and Fu-zhou before *-n > *-ŋ.

The He-kou series of the Zeng-she is not only limited to Grades I and III, but also to words with the historical velar or guttural initial. There are four words in the dialect survey representing the Grade I series (< *-wəŋ), and one only representing the Grade III series (< *-yk). These words are listed below.

(112) a. Grade I finals:

191-1	弘	/wəŋ ⁵¹ /	'to enlarge'
191-2	國	/kək ² /	'a nation'
191-3	或	/wa:k ² /	'perhaps'
191-4	惑	/wa:k ² /	'to mislead'

b. Grade III finals:

191-5	域	/wa:k ² /	'a frontier'
-------	---	----------------------	--------------

Cantonese has basically the same pronunciation for the above words except that guo 國 is [kwɔ:k⁴], with a labial medial, and yu 域 is [wɪk³]. Ball (p.530) gives /wɪk/ for yu 域 in Shi-qi. It is likely that the pronunciation of /wa:k²/ for the word in the present data is due to the analogical reading of huo 或 in (112).

3.2.2.15. Geng 梗-she

There are both Kai-kou and He-kou rhymes in the Geng-she. Only a few obscure words occur in Grade I Kai-kou, and none in Grade I He-kou. As a result, Grade I is not represented in the dialect survey except for the curious case of da 打 (192-17) 'to strike' /ta¹³/, which has been recorded in the dialect survey as a Grade II word. (LMC dentals only occur in Grade I.) Da 打 has the fan-qie spelling of de 德 (186-5) /tak⁵/ and leng 冷 (192-18) /laŋ¹³/L. (/la:ŋ¹³/C.). The regular reflex one would therefore

expect in Zhong-shan would be /tang¹³/ or /ta:ng¹³/. Presumably, the pronunciation is more likely to be /tang¹³/ since there is no syllable /ta:ng/ in the dialect; the syllable /tang/, on the other hand, is very common. The Zhong-shan pronunciation of da 打, however, is /ta¹³/, with no nasal ending. Cross-dialectally, the nasal has been lost in the majority of the Chinese dialects. In the Zi-hui (p.3), for example, only in the cases of Su-zhou (Wu) and Xia-men (S. Min) is there any trace of a nasal ending: [taŋ⁴¹] in Su-zhou, and [tã⁵¹] in Xia-men.

Turning now to Grade II Kai-kou rhymes, in Zhong-shan as in Cantonese, there is a clear pattern of an alternation between an /ang/ and /a:ng/ final (< *-a:ŋ) corresponding to a distinction between a literary and a colloquial layer. In most cases, only one or the other final is present in Zhong-shan. There are, nevertheless, a number of words in which the alternation between the two finals is still currently used to distinguish a literary versus a colloquial reading of the word. A list of such words can be found in Table 4 (b) in Chapter 1.4.4 on colloquial versus literary forms. A few examples will be repeated here:

- (113) 192-4 生 /sa:ng⁵⁵/C., /sang⁵⁵/L. 'raw'
 192-13 亨 /ha:ng⁵⁵/C., /hang⁵⁵/L. 'to pervade'
 192-18 冷 /la:ng¹³/C., /lang¹³/L. 'cold'

The word cheng 鎗 (192-3) 'vessel for warming wine' /tong⁵⁵/, with final /ong⁵⁵/ in Zhong-shan, may not be an exception. Final /ong/ is based on the pronunciation of the word in the Dang-she, dang 鎗, meaning 'a small gong', which is historically homophonous with dang 當 (166-8) 'ought' /tong⁵⁵/. In Zhong-shan,

the two words are likewise synchronically homophonous, both being pronounced /tong⁵⁵/.

In the case of final /ing/ in beng 送 (196-5) 'to scatter' /ping²²/, also, there is a counterpart in another rhyme on which the Zhong-shan pronunciation is based. In this case, the Zhong-shan pronunciation of beng 送 is derived from the reading added to Grade IV of the Qing 青 rhyme in the Ji-yun. No historically homophonous word in the Grade IV Qing 青 rhyme has been recorded in the survey.

In Zhong-shan, the pronunciation of peng 洪 (195-1) 'a ditch' is /pan⁵⁵/ . The source of /n/ instead of /ng/ is not clear. No pronunciation is provided for Cantonese by Hashimoto, but it is [pɔːŋ⁵³] according to the Zhong-hua Xin Zi-dian and Wong (1954).

In Grades III and IV Kai-kou, the colloquial reading has final /ia:ng/ in Zhong-shan (< *-iajŋ), except after historical gutturals, where the syllable becomes /ja:ng/. The literary counterpart is final /ing/, or syllable /ing/ after LMC gutturals. (Recall, however, that in the rising tone, syllable /ing¹³/ is phonetically [jɪŋ¹³].) Cantonese has final [ɛːŋ] for the colloquial reading and [ɪŋ] for the literary one. Syllables [jɛːŋ] (colloquial layer) and [jɪŋ] (literary layer) occur after LMC gutturals regardless of tone. Zhong-shan examples are presented below. A more extensive list of /ing/ versus /ia:ng/ finals is recorded in Table 4 (c) in Chapter 1.

- | | | | | | |
|-------|--------|---|----------------------------|-------------------------|--------------|
| (114) | 198-15 | 影 | /ja:ng ¹³ /C., | /ing ¹³ /L. | 'a shadow' |
| | 199-4 | 敬 | /kia:ng ²² /C., | /king ²² /L. | 'to respect' |
| | 203-16 | 災 | /tsia:k ² /C., | /tsik ² /L. | 'to burn' |

As with the other Kai-kou rhymes in the Geng-she, it is not the case that every word in these rhymes has both a literary and a colloquial pronunciation. The majority, in fact, have only one or the other pronunciation preserved in Zhong-shan. (The same is true of Cantonese.)

Aside from the /ing/ ~ /ia:ng/ alternation, there are three exceptions with final /ang/ in Zhong-shan:

- | | | | | |
|-------|--------|---|-----------------------|--------------|
| (115) | 197-19 | 盟 | /mang ⁵¹ / | 'an oath' |
| | 198-11 | 皿 | /mang ¹³ / | 'a vessel' |
| | 199-16 | 逆 | /ngak ² / | 'to disobey' |

Meng 盟 has a Grade II reading which would account for final /ang/, but the Grade II reading is in Qu-sheng. The Zhong-shan pronunciation of meng 盟 should then be /mang²²/, with tone /22/ as the regular reflex of the Qu-sheng. Perhaps it is a case of dialectal borrowing. In the Macao dialect recorded by Ball, and among some speakers in Ku-chong, Zhong-shan [ɪŋ] consistently corresponds to [ɛŋ] in that variety of Zhong-shan speech. Observe that ying 鶯 (195-14) 'the Chinese oriole' is recorded as /ang⁵⁵/ in the present data, although Ball (p.518) notes that it is pronounced /ing/ in Shi-qi, while /ang/ is used in Macao (and the rest of the county). The graphic variant, ying 鶯 (195-15) is recorded with both form, /ing⁵⁵/ and /ang⁵⁵/ in the present data. It is possible that the standard Zhong-shan speech once had [ɛŋ] instead of [ɪŋ], with the latter used by the educated as a result of Cantonese influence, as suggested by Ball, who notes, for instance, that in Shi-qi, there is an attempt, amongst the educated class at least, to approximate Canton pronunciation (p.510). Thus, instead of final /ang/ being

borrowed into the standard Zhong-shan dialect, perhaps it would be more correct to regard the few cases of final /ang/ instead of /ing/ as survivals of the original final in Shi-qi speech.

Before leaving the Kai-kou series of the Geng-she, it should be observed that in both Zhong-shan and Cantonese, the literary layer of the Geng-she has merged with the Zeng 曾 -she. Thus, it is in the colloquial layer that the original distinction between the two rhyme groups is preserved.

Turning now to the He-kou rhymes of the Geng-she, the regular Zhong-shan (and Cantonese) correspondent of the Grade II rhymes in the colloquial layer is /wa:ng/ (< *-wa:ŋ), with /wang/ in the literary layer. Unlike the Kai-kou rhymes, there are no words with both colloquial and literary pronunciations. Furthermore, the Grade II He-kou rhymes are restricted to words with initials descending from velars and gutturals. In the dialect survey, this grade is represented by only ten words. Examples of the two Zhong-shan finals for this set of rhymes are given in (116).

(116) a. /wa:ng/ final - Colloquial layer:

208-4	橫	/wa:ng ⁵¹ /	'crosswise'
209-5	獲	/wa:k ² /	'to take in hunting'
209-6	劃	/wa:k ² /	'to divide'

b. /wang/ final - Literary layer:

209-1	輾	/kwang ⁵⁵ /	'the rumbling of carts'
209-3	宏	/wang ⁵¹ /	'spacious'

There are a couple of exceptions. Guo 號 (208-7) 'name of an ancient feudal state' is /kwik⁵/ in Zhong-shan (also [kwik⁵] in Cantonese). Kuang 礦 (old pronunciation gong) (208-5) 'metal

ore' is /k'ong²²/ in Zhong-shan (Cantonese [k'ɔŋ⁴⁴]). Hashimoto (p.662) suggests the analogical reading of kuang 石廣 with kuang 曠 (178-2) 'a desert', from Grade I He-kou Dang 宕 -she. Kuang 石廣 and kuang 曠 are likewise homophonous in Zhong-shan, both pronounced /k'ong²²/. However, as Hashimoto notes, neither are common words. It seems doubtful that the analogical reading hypothesis is correct here. The homophonous reading of the two characters in Mandarin may be the reason for the parallel homophony in the two Yue dialects. It may be the case that the old pronunciation gong for kuang 石廣 in Mandarin was replaced by kuang as a result of analogical reading with kuang 曠, which in turn influenced Cantonese and Zhong-shan.

The Grades III and IV rhymes of He-kou Geng-she have the following correspondents in Zhong-shan: the syllable /wing/ (< *-yajŋ) after the LMC Xia and Yu III (< EMC *-w-), and the final /ing/ elsewhere. Examples are:

(117) a. Syllable /wing/ with initials Xia and Yu III:

209-9	永	/wing ¹³ /	'perpetual'
210-1	泳	/wing ²² /	'to dive'
211-7	熒	/wing ⁵⁵ /	'the dashing of waves'

b. Final /ing/ elsewhere:

209-7	兄	/hing ⁵⁵ /	'an elder brother'
210-5	傾	/k'ing ⁵⁵ /	'to overthrow'
210-7	營	/ing ⁵¹ /	'an encampment'

There are, however, a number of exceptions in Zhong-shan in which syllable /wing/ is also found in some Grade IV words with initial Yu (i.e., < EMC *-j-), for example:

- (118) 211-3 穎 /wing²²/ 'a sharp point'
 211-4 疫 /wik²/ 'pestilence'
 211-5 役 /wik²/ 'a jailor'

Conversely, there are a couple of words with the loss of /w/ in Xia and Yu III initials:

- (119) 209-8 榮 /ing⁵¹/ 'glory'
 211-6 螢 /ing⁵¹/ 'a glow-worm'

Although it is clear that the literary layer of the Geng-she in Kai-kou rhyme has merged with the Zeng-she synchronically, the paucity of data from the He-kou rhymes of the Zeng-she makes it impossible to make a similar claim in Zhong-shan with respect to the He-kou series of the Geng- and Zeng-she. Such a claim has been made by Hashimoto (p.662-3) for Cantonese, since what evidence does exist is more conclusive in Cantonese than it would be for the Zhong-shan data on hand. Nonetheless, historical evidence point to a clear merger of the Geng- and Zeng-she. Pulleyblank (1970-71:237) observes, for example, that by Northern Song, these two rhyme groups had been combined under the same table in the Si-sheng Deng-zi 四聲等子 and the Qie-yun Zhi-zhang Tu 切韻指掌圖, as well as having been combined by Shao Yong 邵雍.

3.2.2.16. Tong 通 -she

The present analysis of the Tong-she proposes that the Dong 東 and Dong 冬 rhymes occur in the Kai-kou series, while the Zhong 鍾 rhyme is only found in the He-kou series. The Kai-kou rhymes occur in all grades, whereas the He-kou counterpart occurs in Grades III and IV only.

The Grades I and II Kai-kou rhymes have /ung/ (< *-oŋ) as the regular Zhong-shan (and Cantonese) reflex. (Grade II rhymes are found only in words with the EMC palatal initials and have been recorded in the dialect survey under Grade III rhymes.) Zhong-shan examples are provided below.

- (120) 215-5 甕 /ung²²/ 'an earthen jar'
 216-7 屋 /uk⁵/ 'a room'
 219-1 崇 /sung⁵¹/ 'lofty'

There are two exceptions, as mentioned previously, in words with LMC gutturals: weng 翁 (213-20) 'an old man' /jung⁵⁵/, and wo 沃 (218-3) 'to water' /juk⁵/. In both these two words, the syllable begins with a palatal glide instead of a smooth onset.

Grades III and IV Kai-kou rhymes of the Tong-she have the syllable /jung/ (< *-ioŋ) after LMC gutturals and the Ri initial, and the final /ung/ elsewhere. (Words with LMC labiodentals have final /ung/ from *-uŋ < LMC *-ywoŋ. See Chart 10 on LMC finals. Zhong-shan reflexes of the labiodentals in this environment have initial /h/ and /m/, contrasting with [f] and [m] in Cantonese.) Zhong-shan examples are presented in (121).

(121) a. Syllable /jung/ with initials Ri, Ying and Yu IV:

- 219-13 融 /jung⁵¹/ 'to fuse'
 221-12 肉 /juk²/ 'flesh, meat'
 221-19 育 /juk²/ 'to nourish'

b. Final /ung/ elsewhere:

- 218-4 風 /hung⁵⁵/ 'wind'
 219-16 夢 /mung²²/ 'a dream'
 221-1 竹 /tsuk⁵/ 'bamboo'

Looking at the He-kou rhymes, reconstructed as *-oŋ < LMC *-yoŋ after LMC labiodentals, and from *-yoŋ elsewhere, it can be observed that there is no longer a Kai-He distinction in Zhong-shan with respect to the Tong-she. Syllable /jung/ (< *-yoŋ) occurs after the Ri initial and the guttural initials, and final /ung/ after LMC labiodentals (< *-oŋ < LMC *-yoŋ) and the remaining LMC initials (< *-yoŋ) without differentiation of Kai-He-kou rhymes. Similar changes in other Chinese dialects had resulted in the later classification of the Tong-she as entirely He-kou despite an earlier Kai-He distinction. The merger of the two types of rhymes had taken place by Southern Song.

3.3. Tones

The four traditional tones or sheng 聲, as discussed in Chapter 1 are: Ping 平 'even', Shang 上 'ascending', Qu 去 'departing', and Ru 入 'entering'. They are further dichotomized into Yin 陰 ('upper') and Yang 陽 ('lower') registers. There is a correlation between the register split and the nature of the historical initials, although the physiology behind this is still not fully understood.

In modern Zhong-shan, only the Ping- and Qu-sheng show register-split, yielding six tones in accordance to traditional enumeration: Yin-ping 陰平 /55/, Yang-ping 陽平 /51/, Shang 上 /13/, Qu 去 /22/, Yin-ru 陰入 /5/, and Yang-ru 陽入 /2/. These six tones are presented in Chart 13 (a). For comparative purposes, Cantonese correspondences to the historical tones are given in Chart 13 (b).

In Zhong-shan, one might argue that the Shang- and Qu-sheng

Chart 13 (a). Zhong-shan Correspondences to the Historical Tones.

	Ping 平	Shang 上	Qu 去	Ru 入
Yin 陰	55	13	22	5
Yang 陽	51			2

Chart 13 (b). Cantonese Correspondences to the Historical Tones.

	Ping 平	Shang 上	Qu 去	Ru 入
Yin 陰	53/55	35	44	Shang 上 5
				Zhong 中 4
Yang 陽	21/22	24	33	3

did not develop a split to Yin and Yang; or conversely, one could propose that the split had once occurred, but had since re-merged. There is no synchronic evidence to support the latter hypothesis. Historically, nevertheless, it would simplify the description of the development of register in Zhong-shan if one can assume an initial split into Yin and Yang of all four tones, and a subsequent merger of Shang and Qu in Zhong-shan.

Among the Yue dialects, Zhong-shan has the smallest number

of tones. Of the twenty-two Yue dialects surveyed by Hashimoto (pp.52-55), Zhong-shan is the only dialect with an absence of Yin-Yang categories in both Shang and Qu. It has been suggested that the paucity of tones in Zhong-shan may be due to the influence of the neighbouring Hakka dialect. The Hakka spoken in Zhong-shan county recorded by Egerod (1959), for example, has only four phonemic tones: two level, one falling, and one rising, as in the Zhong-shan dialect. Only the distribution of these four Hakka tones with respect to the historical tones differs from those found in the Zhong-shan dialect.

Given the outstanding number of tones which usually characterize the Yue dialect and the genuine possibility that the Zhong-shan dialect has been influenced by the number of tones found in Zhong-shan Hakka, spoken in the qu immediately south of Shi-qi, it is likely that at one time Zhong-shan had undergone a register split of all four historical tones, with a subsequent merger of Yin and Yang in Shang and Qu tones.

The proposal that is advanced here is that historically Zhong-shan had nine tones, similar to Cantonese, in that the Yin-Yang bifurcation yielded eight tones. A further split of the Yin-ru into Shang 上 'upper' and Zhong 中 'mid' resulted in a total of nine tones parallel to modern Cantonese, as shown on Chart 13 (b) based on Hashimoto. (The modern Cantonese tones can be used to suggest how the historical tones in Zhong-shan would have subdivided.)

The split of Yin-ru into Shang and Zhong in proto-Zhong-shan and in present-day Cantonese can be understood from the interaction of tone, the various classes of historical initials, and

the division of rhyme groups into Nei- and Wai-zhuan. It was mentioned that there is a correlation between register split and the nature of the Late Middle Chinese initials. Whether a syllable has the Yin or the Yang register in modern Cantonese is conditioned by the various historical classes of LMC initials (cf. Chart 4 naming these classes). Syllables that had a 'clear' (i.e., Qing 清 'clear' or Ci-qing 次清 'second-clear') initial contain the Yin, or upper register. Other syllables--i.e., those with the 'muddy' (or Zhuo 濁), or 'not-clear-not-muddy' (Bu-qing-bu-zhuo 不清不濁) initials--have the Yang, or lower register.

Ru-sheng words are further conditioned by the Nei 內 'inner' and Wai 外 'outer' zhuan (cf. Chart 9 for rhyme groups falling into Nei- or Wai-zhuan). With respect to the Nei-zhuan, Ru-sheng words with the 'clear' initials are in the Shang Yin-ru, while those with the non-clear initials are in the Yang-ru. In the case of the Wai-zhuan, Ru-sheng words with the 'clear' and non-clear initials are in the Zhong Yin-ru and Yang-ru respectively. In other words, the non-clear syllables have Yang-ru (Cantonese /3/) regardless of whether they belong to the Nei- or Wai-zhuan. Yin-ru, however, splits according to whether a word belongs to Nei or Wai: words in the Nei-zhuan have Shang Yin-ru (Cantonese /5/), and those in the Wai-zhuan have Zhong Yin-ru (Cantonese /4/). It would probably be more precise to use the term Xia 下 or 'lower' Yin-ru. In Cantonese, this tone /4/, being midway between /5/ and /3/, probably accounts for the choice of the term Zhong 'mid'. Chart 14 summarizes the distribution of the three Ru-sheng in Cantonese with respect to the classes of LMC initials and the Nei- and Wai-zhuan. Zhong-shan correspondences are also shown for

Chart 14. Ru-Sheng Correspondences in Cantonese and Zhong-shan.

Dialect	NEI-ZHUAN		WAI-ZHUAN	
	Clear Initials	Non-Clear Initials	Clear Initials	Non-Clear Initials
CANTONESE	Shang Yin-ru /5/	Yang-ru /3/	Zhong Yin-ru /4/	Yang-ru /3/
ZHONG-SHAN	Yin-ru /5/	Yang-ru /2/	Yang-ru /2/	

Chart 15. Tonal Correspondences in Zhong-shan (and Cantonese).

Chart 15. Tonal Correspondences in Zhong-shan (and Cantonese).

Tone (Style)	CLEAR		MUDDY	NOT-CLEAR-NOT-MUDDY
	Nei-Zhuan	Wai-Zhuan	Nei- & Wai-Zhuan	
PING	Yin-ping /55/ (53/55)		Yang-ping /51/ (21/22)	
SHANG - Colloquial - Literary	Shang /13/ (35)		Shang /13/ (24)	Shang /13/ (24)
			Qu /22 / (33)	
QU	Qu /22/ (44)		Qu /22/ (33)	
RU	Yin-ru /5/ (5)	Yang-ru /2/ (4)	Yang-ru /2/ (3)	

comparative purposes, and will be discussed in the following paragraphs.

In modern Zhong-shan, the absence of a Yin-Yang split in the Qu-sheng is echoed in the loss of a register distinction in the Ru-sheng syllables with a clear versus non-clear initial in the Wai-zhuan. In the Nei-zhuan, Zhong-shan tone /5/ is found in syllables with a clear initial, and /2/ in syllables with a muddy or not-clear-not-muddy (i.e., non-clear) initial. Hence, the correspondence of Zhong-shan /22/ in the Qu-sheng to Cantonese /44/ and /33/ is paralleled in the correspondence of Zhong-shan /2/ in the Yang-ru to Cantonese /4/ and /3/. The elimination of a mid-tone therefore affected both the Qu and Ru tones.

The absence of a register split in the Wai-zhuan in Ru-sheng words contrasted with the presence of such a split in the Nei-zhuan further supports the contention that, at one point, it would have been logical for a register split to have occurred in the Wai-zhuan in Zhong-shan Ru-sheng words. The loss of a register split in the Qu-sheng effected a similar loss in the Wai-zhuan Ru-sheng. The merger of Yin-Yang in the Shang-sheng in Zhong-shan does not affect any other tones. The loss of register split in the Shang-sheng is prevalent among Chinese dialects, and may have been a very old merger.

Having clarified the picture with regard to Zhong-shan correspondences to the historical Ru-sheng, we will proceed to an elaboration of the correspondences of the other historical tones. Chart 15 (on page 323) is drawn to facilitate discussion. (Ru-sheng is also included to complete the chart.)

In modern Zhong-shan, Ping-sheng has the reflex of /55/

(Tone 1) in syllables with a clear initial, and /51/ (Tone 2) elsewhere.

The Zhong-shan correspondence of the Shang-sheng is /13/, except in the literary layer of words with a muddy initial, in which case the reflex is /22/ (e.g., zai 在 (29-12) 'to be at' /ts'oj¹³/C. ~ /tsoj²²/L.). Thus, the tone of originally Shang-sheng words with a muddy initial in the literary layer has merged with the Qu-sheng.

The Qu-sheng simply has the correspondence of /22/ (Tone 3) in Zhong-shan, irrespective of zhuan and historical initial. The Ru-sheng has already been discussed.

There is only one other major complication to the discussion thus far, and that pertains to the effects of the merger of rhyme groups on the classification of Nei- and Wai-zhuan. As can be observed from Chart 14, whether a word belongs to the Nei- or Wai-zhuan concerns those in the Ru-sheng only. Hence, the following discussion will be restricted to those rhyme groups that contain Ru-sheng words. Two mergers involving rhyme groups have been mentioned in the previous section on finals: (1) the merger of the Jiang 江 -she with the Dang 宕 -she, and (2) the merger of the literary layer of the Geng 梗 -she with the Zeng 曾 -she. In the first case, both the Jiang and the Dang rhyme groups belong to the Wai-zhuan, and hence do not cause problems with respect to tonal correspondences.

The same cannot be said of the Geng- and Zeng-she. The Geng rhyme group originally belonged to the Wai-zhuan, while the Zeng-she belongs to the Nei-zhuan. The merger of the Geng-she with the Zeng-she only affects the literary layer, and not the

colloquial one. The result is that Ru-sheng words in the colloquial layer of the Geng-she in Zhong-shan behave similarly to those Ru-sheng words in other rhyme groups in the Wai-zhuan. The Zhong-shan correspondent in the colloquial layer is /2/ regardless of initial. The word bai 百 (194-1) 'hundred' /pa:k²/, for example, is a clear-initial word in the Wai-zhuan. It has the Yang-ru tone /2/. However, the muddy-initial word bai 白 (194-8) 'white' /pa:k²/ likewise has the Yang-ru tone /2/. The initial is irrelevant in words in the Wai-zhuan.

The Ru-sheng words in the literary layer, on the other hand, behave in congruence with Ru-sheng words in the Nei-zhuan; hence, Yin-ru /5/ occurs in words with clear initials, and Yang-ru /2/ in those with non-clear initials. Ji 積 (203-5) 'to amass' /tsik⁵/, for example, is a clear-initial word in the literary layer of the Geng-she, and thus contains the Yin-ru tone /5/. In contrast, xi 席 (203-12) 'a mat' /tsik²/, which has a muddy initial, is in the Yang-ru tone /2/.

Even after taking into consideration the change of zhuan resulting from the merger of rhyme groups, there is still a large number of apparent exceptions to the historical categories in the dialect survey for Zhong-shan correspondences of LMC tones. One large group of such exceptions in fact results from these words belonging to another historical phonological category not indicated in the survey. There are often words which occur in two or more tonal categories but only appear in one of these categories in the Fang-yan Diao-cha Zi-biao. The singular appearance of such words in the dialect survey can therefore be misleading. A number of these words which appear to have acquired an exceptional tone,

but are actually regular with respect to their pronunciation as derivatives of another tonal category, are given in Table 5. They are listed according to the tone under which they have been recorded in the survey. The alternative tonal category, which yields a regular tonal correspondence in Zhong-shan is given for each of these words. Where possible, a word which was historically, and in Zhong-shan is still, homophonous with it in the alternate tonal category is also included. Moreover, it should be emphasized that, unless specified otherwise, with the exception of tonal differences, the counterpart to the word in the alternate tonal category should be identical in its historical phonological classification to the word listed.

Table 5. Words with Alternate Historical Tonal Categories.

a. Words Listed as Ping-sheng:

<u>Number</u>	<u>Word</u>	<u>Transcription</u>	<u>Alternate Tone</u>	<u>Historically Homophonous Word in the Survey</u>
72-13	抓	/tsa:w ¹³ /	Shang	73-4 爪 /tsa:w ¹³ /
86-21	鰓	/saw ¹³ /a	Shang ^b	--
91-2	繆	/miw ²² /c	Qu	91-6 謬 /maw ²² /
157-6	蹲	/ts'yn ¹³ /	Shang ^b	--
166-4	榜	/pong ¹³ /	Shang	167-14 榜 /pong ¹³ /
166-23	髒	/tsong ²² /	Qu ^d	168-13 葬 /tsong ²² /
172-12	償	/siong ¹³ /	Shang	174-7 上 /siong ¹³ /

b. Words Listed as Shang-sheng:

<u>Number</u>	<u>Word</u>	<u>Transcription</u>	<u>Alternate Tone</u>	<u>Historically Homophonous Word in the Survey</u>
32-6	指	/ka:j ⁵⁵ /	Ping	31-13 皆 /ka:j ⁵⁵ /
38-8	擠	/tsaj ⁵⁵ /	Ping	--
41-14	悔	/huj ²² /	Qu	42-19 晦 /huj ²² /
64-7	唯	/waj ⁵¹ /	Ping	63-16 維 /waj ⁵¹ /
66-7	菲	/fi ⁵⁵ /	Ping	65-11 妃 /fi ⁵⁵ /
83-5	簞	/law ⁵⁵ / ^e	Ping	82-1 樓 /law ⁵¹ /
83-16	吼	/k'aw ²² /	Qu	85-1 寇 /k'aw ²² /
83-18	厚	/haw ²² /L. ^f	Qu	85-2 候 /haw ²² /
119-6	欄	/ka:n ²² /	Qu	119-16 間 /ka:n ²² /
130-14	趺	/ngin ⁵¹ /	Ping	129-24 研 /ngin ⁵¹ /
173-24	漲	/tsiong ²² /	Qu ^g	175-5 帳 /tsiong ²² /
177-13	謊	/fong ⁵⁵ /	Ping	177-2 荒 /fong ⁵⁵ /
213-22	蒙	/mung ⁵¹ /	Ping	212-4 蒙 /mung ⁵¹ /

c. Words Listed as Qu-sheng:

13-14	跨	/k'wa ⁵⁵ /	Ping	12-18 誇 /k'wa ⁵⁵ /
13-18	樺	/wa ⁵¹ /	Ping	13-2 華 /wa ⁵¹ /
67-4	卉	/waj ¹³ /	Shang	--
71-1	滯	/low ⁵⁵ /	Ping	68-2 撈 /low ⁵⁵ /L.
73-10	鉸	/ka:w ²² / ^h	Qu	74-8 教 /ka:w ²² /
73-20	鉋	/p'a:w ⁵¹ /	Ping	72-5 跑 /p'a:w ¹³ / ⁱ
74-5	稍	/sa:w ¹³ /	Shang ^j	--
74-6	梢	/sa:w ¹³ / ^k	Shang ^j	--

(c. Words Listed as Qu-sheng--cont'd)

<u>Number</u>	<u>Word</u>	<u>Transcription</u>	<u>Alternate Tone</u>	<u>Historically Homophonous Word in the Survey</u>
128-7	堰	/im ¹³ /	Shang	--
142-7	錠	/syn ⁵¹ /	Ping	140-8 旋 /syn ⁵¹ /
142-12	卷	/kyn ¹³ /	Shang	142-1 捲 /kyn ¹³ /
147-7	眩	/hyn ⁵¹ /	Ping	147-2 玄 /hyn ⁵¹ /
168-6	傍	/p'ong ⁵¹ / ¹	Ping	166-3 旁 /p'ong ⁵¹ /

d. Words Listed as Ru-sheng:

162-13	煖	/tsan ²² /	Qu	162-1 俊	/tsan ²² /
176-2	掠	/liong ²² /	Qu	174-19 諒	/liong ²² /

Notes to Table 5

^a Colloquially /sa:w⁵⁵/ in Zhong-shan.

^b Added to the Ji-yun rhyme dictionary.

^c It also occurs in the Yóu 尤 rhyme, Grade IV, historically homophonous with mou 謀 (95-7) /maw⁵¹/ and mao 矛 (95-8) /ma:w⁵¹/. Ball records /miu/ for what is essentially both miu 繆 (historically homophonous with miu 繆 (91-6)), and mou 繆 (historically homophonous with mou 謀 (95-7)). He records /maú/ (i.e., /ma:w/) for miào 繆 (91-2). Observe that the three-way distinction is present in modern Mandarin, as can be seen in the Pin-yin romanization.

^d This word should be in the Shang-sheng. The Ji-yun has added it

to the Qu-sheng category, thus making it homophonous with zang 葬.

- ^e Since this word is derived from the Lai initial, which is a 'not-clear-not-muddy' initial, the Zhong-shan reflex in the Ping-sheng should be Yang-ping /51/, as in lou 樓 (82-1), rather than /55/.
- ^f Also pronounced /haw¹³/C.
- ^g Historically, this word should have been recorded in the Qu-sheng.
- ^h Alternate pronunciation of /k'a:w²²/ in combination with jian 剪 for 'scissors': 鉸剪 /k'a:w²² tsin¹³/.
- ^j Shang-sheng counterpart has been added to the Ji-yun.
- ^k Alternate pronunciation of /sa:w²²/ has the regular /22/ reflex for the Qu-sheng.
- ^l Alternate pronunciation is /pong²²/, with tone /22/ as a regular correspondent of Qu-sheng.

Obviously, aside from the words listed in Table 5 with alternate tones, there still remains a number of exceptions in the Zhong-shan tonal correspondences to the historical tones. Some of these exceptions will be discussed briefly.

In Ping-sheng, there are some words in Zhong-shan derived from the non-clear initials which have Yin-ping /55/ instead of Yang-ping /51/. The following exceptions are restricted to words the initials of which in modern Zhong-shan are /l/, /m/, /n/ and /ng/. Such words should always be in the Yang register. The occurrence of these words in the Yin register is therefore easily recognized as anomalous.

(122)	3-12	魔	/mo ⁵⁵ /	'a demon'
	3-14	摩	/mo ⁵⁵ /	'to feel with hand'
	3-15	餵	/mo ⁵⁵ /	'to feed an infant by hand'
	3-20	囉	/lo ⁵⁵ /	'prattle'
	8-9	佻	/nga ⁵⁵ /	'a child (milk-teeth not shed)'
	14-8	摸	/mo ⁵⁵ /C.	'to feel for' (/mo ¹³ /L, /mo ⁵¹ /L.)
	68-2	撈	/low ⁵⁵ /L.	'to fish up' (/la:w ⁵¹ /C.)
	68-4	嘮	/low ⁵⁵ /	'to chatter'
	72-9	貓	/ma:w ⁵⁵ /C.,	'a cat'
	75-8		/miw ⁵⁵ /L.	
	156-11	捫	/mun ⁵⁵ /	'to lay the hand on'
	166-6, 178-17	芒	/mong ⁵⁵ /	'sharp-edged grass'
	166-7	茫	/mong ⁵⁵ /	'vast'

The Ru-sheng likewise has words with non-clear initials which have the Yin-ru tone /5/ instead of its Yang-ru counterpart (viz., /2/). As in (122), only words with /l/, /m/, /n/ and /ng/ initials in modern Zhong-shan are recorded in (123), based on the present data elicited from the dialect survey.

(123)	113-12	笠	/lap ⁵ /	'a bamboo rain-hat'
	113-13	粒	/nap ⁵ /	'a grain'
	189-5	匿	/nik ⁵ /	'to hide'
	190-22	抑	/ngik ⁵ /	'or'
	220-19	戳	/luk ⁵ /	'to seal, to stamp'

The Yin register in a number of the words listed in (122) and (123) is also found in Cantonese. Norman (p.c.) observes that li 笠 in (123) above is also in the Yin register in Min and Hakka.

There are also a number of colloquial, characterless words in Zhong-shan which likewise have a lateral or nasal initial occurring in the Yin register. A few examples are given below.

- (124) /ni⁵⁵ nuk⁵/ 'unsteady'
 /lam⁵⁵/ 'to shade over'
 /mang⁵⁵/ 'to pull'
 /nu⁵⁵/ 'that'
 /ngip⁵/ 'to blink; to bite (of insect)'

Observe in Chart 14 that words belonging to the Wai-zhuan have the Yang-ru tone /2/ as the regular correspondent in Zhong-shan. The occurrence of such words with Yin-ru tone /5/ would therefore be an irregular tonal development. A few words with such irregular tonal correspondence are provided in (125).

- (125) 101-7 壓 /a:t⁵/C. 'to press'
 153-14 必 /pit⁵/ 'must'
 156-14 乞 /ha:t⁵/ 'to beg'
 183-1 剝 /mok⁵/C. 'to peel'
 183-15 捉 /tsok⁵/ 'to seize'
 186-16 黑 /ha:k⁵/ 'black'

It may be noted that Wai-zhuan words have a tense, or long nuclear vowel in Zhong-shan, while corresponding Nei-zhuan words have a lax, or short nuclear vowel. Thus, the irregular tonal correspondences are easily detected; such finals as [i:t] (/it/), [y:t] (/yt/), [ɔ:p] (/op/), [a:k] (/a:k/), etc., would not normally co-occur with tone /5/.

Finally, while the words in (125) more or less exhaust the

repertoire of exceptions to words listed in the dialect survey, there are additional lexical items from the daily speech of Zhongshan that fit the above pattern of irregular correspondence, as exemplified in (126) below. Onomatopoeic syllables are not included.

- (126) /ngip⁵ si¹³/ 'stingy'
 /lit⁵/ 'a knot'
 /tyt⁵/ 'to protrude'
 /tsyt⁵/ 'to give a kiss'
 /tiok⁵/ 'to chop (e.g., in half)'
 /tia:p⁵/ 'to try a taste of'
 /lia:k⁵/ 'smart'

3.4. Concluding Remarks

Of the Yue dialects, only Cantonese has been studied to any great extent, because of its status as the standard, and because of the amount of material available resulting from that status. With the exception of Cantonese, data on the Yue dialects tend to be rather limited. Efforts toward the reconstruction of proto-Yue, for instance, would require that we have a better knowledge of the various dialects that comprise the Yue group. Thus, in providing an analysis together with a reasonably large corpus of field data, it is hoped that the present thesis will be a modest contribution to future comparative studies on Yue, and in the process, lead to further insight into the Chinese language as a whole.

Notes to Chapter 3

1. Pulleyblank brought the writer's attention to an alternative proposal by Zu-mo Zhou who thinks that Ye-xia 耶下 was the northern standard.
2. While it is true that the character readings of most non-Min dialects can be traced back to something similar to what Pulleyblank calls Late Middle Chinese, J. Norman (personal communication) thinks that this is true mainly because of the way dialect data are collected. The core of the language--the everyday lexicon--would yield much more "troublesome" data which cannot be derived so regularly from Late Middle Chinese. Norman therefore questions to what extent a list of character readings, "literary" and "colloquial", can be considered "the language". It is the writer's contention that character readings constitute at least one important dimension of the language. The reconstruction of a proto-language which encompasses data from everyday vocabulary should be the major objective of future linguistic endeavours. In the past, gathering of the real core of the language, the everyday lexicon, has been haphazard, yielding a very limited set of data. As a result, it is very difficult to conduct comparative studies. The use of the Fang-yan Ci-hui Diao-cha Shou-ce 方言詞彙調查手冊 ('Handbook of Chinese dialect vocabulary'), compiled by the Chinese Linguistics Project at Princeton University in 1972, based on the Han-yu Fang-yan Ci-hui, or portions of it for data-gathering would be a positive step towards achieving that goal.
3. Observe that the present treatment of [u] and [u:] as

allophones of the same phoneme /u/ allows for a simple description of the phonological conditioning involved in the reflex of /f/ or /h/ with respect to certain finals. In contrast, Chao's treatment, which assigns [u:] to /u/ and [u] to /o/, would necessitate two separate rules to formulate essentially the same phonological conditioning.

4. See Hashimoto (pp.158,645) for a distinction between tense and lax vowels in Cantonese and the conditioning of the Ru-sheng in Cantonese by the nature of the nuclear vowel from a synchronic perspective.
5. In Chan (forthcoming), the writer presents various arguments to support the contention that the Sino-Portuguese data reflects not Standard Cantonese, but the Zhong-shan dialect, and it is the difference in dialect base and the accompanying difference in their phonological system which invalidates Boltz' tentative conclusion on the dating of the dentilabialization process in Cantonese. Nevertheless, it is probably the case that not only has dentilabialization stabilized by mid-eighteenth century in Zhong-shan, but the same is likely true of Cantonese and other Yue dialects.
6. The present text of the Yun-jing comes from Southern Song (1127-1279), although Pulleyblank (1970-71:206) believes that this edition represents reasonably faithfully a work of the late Tang period (i.e., latter part of the eighth century A.D.).
7. In Pulleyblank (1977:65), for example, such a treatment is supported by the argument that the retroflex glide -r- plays a role after dental initials analogous to that of -j- after

velars.

8. The reconstructions that appear in the paragraph is based on a more recent theory of Pulleyblank's than that used in this thesis. The important point, however, is that the basic arguments presented are not affected by the change in the reconstructing of certain forms.
9. Hashimoto (p.648) conflicts with other Cantonese sources (e.g., Wong, 1954; Zhong-hua Xin Zi-dian, 1976) in providing [løɥ²¹] for luo 馬累 (3-17) 'a mule', while agreeing with the other sources in recording [lɔ:²¹] for luo 螺 (3-18) 'a conch'. As in the word for 'mule', Hashimoto is not in consensus with other Cantonese sources on the pronunciation of the word for 'donkey', lu 馬盧 (18-25) in the Yu 遇 -she. She has [low²¹], whereas Wong (1954) and the Zhong-hua Xin Zi-dian, for example, record [løɥ²¹] for the same word. Lu 馬盧 is pronounced /lu⁵¹/ in Zhong-shan.

CHAPTER 4. LEXICON (AS ARRANGED IN THE FANG-YAN DIAO-CHA ZI-BIAO)

In the lexicon that follows, a few words have been added to the original corpus. Where there is a word already in the survey that is historically homophonous with the word to be included, a letter is added to the number already assigned to a survey word. For example, lao 勞 is assigned the number "68-1" in the survey list. A word that is historically homophonous with it (and other words in the set) is lao 老, which is assigned the number "68-1a".

In the case of words added to the survey for which there are no historical homophones, the word receives the following type of assignment. Using a concrete example, on page 63 of the survey, a Ri-initial word, ruì 瑞, is added to the list. Following the sequence of historical initials, the Ri initial occurs after the Chan 禪 initial but before the Jian 見 initial. Thus, in front of the Jian initial, a footnote is added. The new word is assigned the number "68-10.1" following in sequence after the Chan-initial word shuì 誰 (68-10).

A few basic abbreviations are used in the survey:

C = Colloquial

L = Literary

N = Noun

V = Verb

In order to maximize easy access to the dialect survey list for comparative dialectal purposes, the original pagination of the Fang-yan Diao-cha Zi-biao is maintained. Pagination after the survey list continues as if the pages in the survey list were numbered in accordance with the thesis as a whole. That would also

facilitate the use of the index which follows the dialect survey list. The index, the present facsimile of which is from Hashimoto (1979), is a product of the Chinese Linguistics Project at Princeton.

果開一：歌	
平歌	
端透定	多 1. to ⁵⁵
	拖 2. t'o ⁵⁵
	他 3. t'a ⁵⁵
	駝 4. t'o ⁵¹
	馱拿，～起來，～背 5. t'o ⁵¹
	陀 6. t'o ⁵¹
泥來	挪 7. no ⁵¹ (Chao: /no ¹³ /)
	羅 8. lo ⁵¹
	鑼 9. lo ⁵¹
	蘿 10. lo ⁵¹
	羅 11. lo ⁵¹
精清從心邪	搓 12. ts'o ⁵⁵ (L.), ts'a:j ⁵⁵ (C.)
	娑婆～ 13. so ⁵⁵
見溪群疑	歌 14. ko ⁵⁵
	哥 15. ko ⁵⁵
	軻孟子名 16. o ⁵⁵
	蛾 17. ngo ⁵¹
	鵝 18. ngo ⁵¹
	俄 19. ngo ⁵¹
曉匣	呵 20. ho ⁵⁵
	河 21. ho ⁵¹
	何 22. ho ⁵¹
	荷～花 23. ho ⁵¹
	苛 24. k'o ⁵⁵ (Chao: also /k'o ⁵⁵ /)
影喻云喻以	阿～膠 a' ～哥 b' 25. a) o ⁵⁵ , b) a ²²

	果開一：歌 上 哥
端 透 定	舵 1. t'o ⁵¹
泥 來	哪(那)~個? 2. no ⁵¹
精 清 從 心 邪	左 3. tso ¹³
見 溪 群 疑	可 4. k'o ¹³ 我 5. ngo ¹³
曉 匣	荷爲~ 6. ho ²²

	果開一：歌 去 箇
端 透 定	大 7. ta:j ²² 馱~子 8. t'o ⁵¹ (cf. 1-5)
泥 來	那 9. no ⁵¹
精 清 從 心 邪	佐 10. tso ²² 做(作) 11. tsu ²²

見 溪 群 疑	個~人, 一~, 1. ko ²²
	餓 2. ngo ²²
曉 匣	荷薄~ (*蘭) 3. ho ⁵¹ (cf. 1-23)
	賀 4. ho ²²
果開三 : 戈 平 戈	
見 溪 群 疑	茄~子, 5. k'ø ⁵¹
果合一 : 戈 平 戈	
幫 滂	波 6. po ⁵⁵
	*菠~菜 7. po ⁵⁵ , p'o ⁵⁵
並 明	頗 8. p'o ¹³ (cf. 4-20)
	坡 9. po ⁵⁵
並 明	玻~璃 10. po ⁵⁵
	婆 11. p'o ⁵¹
並 明	魔 12. mo ⁵⁵
	磨~刀 13. mo ⁵¹
並 明	摩 14. mo ⁵⁵
	饅 (魔) 15. mo ⁵⁵ , mo ⁵¹
泥 來	摹~仿 16. mu ⁵¹
	騾 17. lo ⁵¹
泥 來	螺~螭 18. lo ⁵¹
	脧 手指文 19. wo ⁵⁵
泥 來	囉 (爾見) ~唆 20. lo ⁵⁵

精 清 從 心	姪 矮	1.	--	
	蓑	2.	so ⁵⁵	
	梭 織布~	3.	so ⁵⁵	
	唆 囉~	4.	so ⁵⁵	
	莎~草	5.	sa ⁵⁵	
邪				
見	過	6.	ko ²²	(cf. 6-10)
	鍋	7.	wo ⁵⁵	
	戈	8.	ko ⁵⁵	
溪	科	9.	fo ⁵⁵	
	窠	10.	wo ⁵⁵	
	棵 (科)	11.	lo ¹³ , ko ¹³	(/p'o ⁵⁵ / C.)
群 疑	訛	12.	ngo ²²	
曉 匣	和~氣	13.	wo ⁵¹	
	禾	14.	wo ⁵¹	
影	倭	15.	wo ⁵⁵	
	蹠~了腳	16.	wo ⁵⁵	
	窩 (過)	17.	wo ⁵⁵	
喻云 喻以				

	果合一：戈			
	上			
	果			
幫	跛~足	18.	p'o ¹³	(L.), paj ⁵⁵ (C.) (1)
	簸~一~	19.	po ²²	(cf. 5-20)
滂 並 明	頗	20.	p'o ¹³	

(1) Chen says that /p'o¹³/ is rarely used. He only gave /paj⁵⁵/ on the first elicitation.

端 透 定	朶	1.	to ¹³	(Ball: /tö/ for both Zhong-shan & Cantonese)	
	[朶]	2.	to ¹³		
	妥	3.	t'o ¹³		
	橢~圓	4.	t'o ¹³		
	惰	5.	to ²²		
	稞柴~(種)	6.	--		
	墮與墜異	7.	to ²²		
泥 來	裸~體	8.	lo ¹³		
	凜~歷	9.	--		
精 清 從 心 邪	坐	10.	ts'o ²²	(L.), ts'o ¹³ (C.) (cf. 6-9)	
	鎖	11.	so ¹³		
	瑣~碎	12.	so ¹³		
	邪				
見 溪 群 疑	果	13.	ko ¹³		
	裹	14.	ko ¹³		
	* 菓	15.	ko ¹³		
	顆一~珠	16.	lo ¹³		
曉 匣	火	17.	fo ¹³		
	夥(火)	18.	fo ¹³		
	禍	19.	wo ²²		

幫 滂 並 明	果合一：戈				
	去				
	過				
	簸~箕	20.	po ²²		
	播	21.	po ²²		
	破	22.	p'o ²²		
	薄~荷 (* 蓼)	23.	pok ²	(cf. 169-8)	
	磨~麪 _a , 石~ _b	24.	a) mo ⁵¹ , b) mo ²²	(cf. 3-13)	

端 透 定	剝	1. to ¹³ (/tiok ² C.)
	唾～液，～沫	2. t'o ²²
泥 來	✱糯～米（粳）	3. no ²²
	擻～起來	4. --
精 清	挫	5. ts'o ²²
	銼	6. ts'o ²²
從	莖～草，切碎的草	7. --
	座	8. tso ²²
心 邪	坐	9. tso ²² (L.), ts'o ¹³ (C.) (cf. 5-10)
見 溪 群 疑	過	10. ko ²²
	課	11. fo ²²
曉 匣	臥	12. ngo ²²
	貨	13. fo ²²
影 喻 云 喻 以	和～麪	14. wo ⁵¹ (cf. 4-13)
	澆弄髒，泥着物	15. --

見 溪 群 疑	果合三：戈	
	平	
曉 匣	戈	
	癩～腿	16. --
影 喻 云 喻 以	靴	17. hø ⁵⁵
	腮～膀子	18. --

	假開二：麻	
	平	
	麻	
幫	巴	1. pa ⁵⁵
	芭	2. pa ⁵⁵
	* 疤	3. pa ⁵⁵
滂	爬	4. p'a ⁵¹
並	琶 琶~	5. p'a ⁵¹
	杷 枇~	6. p'a ⁵¹
	鈹~子 (杷)	7. p'a ⁵¹
明	麻	8. ma ⁵¹
	麻	9. ma ⁵¹
	蟆 蝦~	10. mok ²
	[媽]	11. ma ⁵⁵
泥	拿 (拏)	12. na ⁵¹
來		
知		
徹	茶	13. ts'a ⁵¹
澄	捺 (塗) _a	14. ts'a ⁵¹ (but (a) is /t'u ⁵¹ /--cf. 14-14)
莊	查山~ (柎)	15. tsa ⁵⁵
	渣 (柎)	16. tsa ⁵⁵
初	叉	17. ts'a ⁵⁵
	杈 枝~	18. ts'a ⁵⁵
	差~別, ~不多	19. ts'a ⁵⁵
牀	* 茬	20. --
	[查]調~	21. ts'a ⁵¹
山	沙	22. sa ⁵⁵
	紗	23. sa ⁵⁵

見	家	1.	ka ⁵⁵
	加	2.	ka ⁵⁵
	痂	3.	ka ⁵⁵
	嘉	4.	ka ⁵⁵
	傢～具 (家)	5.	ka ⁵⁵
溪 群 疑	牙	6.	nga ⁵¹
	芽	7.	nga ⁵¹
	衙	8.	nga ⁵¹
	伢小孩子 (* 籽)	9.	nga ⁵⁵
曉	* 蝦魚～	10.	ha ⁵⁵
	* 蝦～腰	11.	ha ⁵⁵
	匣 霞	12.	ha ⁵¹
	瑕	13.	ha ⁵¹
	返	14.	ha ⁵¹
影	蝦～蟆	15.	ha ⁵⁵
	鴉	16.	a ⁵⁵
	丫～頭	17.	a ⁵⁵
	桎～杈	18.	a ⁵⁵
喻云 喻以			
假開二：麻			
上			
馬			
幫 滂 並 明	把～握，～守，一～	19.	pa ¹³
	馬	20.	ma ¹³
	碼～子 (馬)	21.	ma ¹³
莊 初 牀 山			
	灑	22.	sa ¹³

見 溪 群 疑	假真～	1. ka ¹³
	賈姓	2. ka ¹³
	雅	3. nga ¹³
曉 匣	下底～，～山	4. ha ²² , ha ¹³ (1)
	夏姓	5. ha ²² (cf. 10-13)
	廈～門	6. ha ²²
影 喻 云 喻 以	蛭	7. a ¹³

	假開二：麻	
	去 禡	
幫	霸	8. pa ²²
	櫛柄	9. pa ²²
	* 壩堤	10. pa ²²
	埧平川	11. --
	* 爸	12. pa ⁵⁵
滂	怕	13. p'a ²²
	* 帕 (帛)	14. p'a ²²
並 明	耙 整～，～地 (杷)	15. p'a ⁵¹
	罵	16. ma ²²
知 徹 澄	詫～異	17. ts'a ²²
	蛇水母	18. ts'a ²² (L.), ts'a ⁵⁵ (C.) (2)
莊	詐	19. tsa ²²
	榨～油	20. tsa ²²
	[炸]～彈	21. tsa ²²
初	岔三～路 (* 趺)	22. ts'a ²² (L.), ts'a ⁵⁵ (C.) (2)
	* 汊水歧流	23. ts'a ²²
牀 山	乍	24. tsa ²²
	* 廈偏～，前廊後～	25. ha ²²

(1) /ha¹³/ is used in e.g., /jat⁵ ha¹³/ 一下 'once', /ka⁵⁵ ha¹³/ 家下 'now'.

(2) Chen gave /tsa²²/ as the literary reading the second time.

見 溪 群 疑	假放~	1.	ka ²²	
	架	2.	ka ²²	
	駕	3.	ka ²²	
	嫁	4.	ka ²²	
	稼	5.	ka ²²	
	價	6.	ka ²²	
	落捕，捉，拿住	7.	--	
	研~平	8.	--	
	訝驚~	9.	nga ²²	
	迓迎~	10.	nga ²²	
曉 匣	嚇~一跳	11.	ha:k ²	(cf. 194-24)
	下~降，上~	12.	ha ²²	
	夏春~	13.	ha ²²	
	暇	14.	ha ²²	
影 喻云 喻以	亞	15.	a ²²	
	假開三：麻			
	平			
	麻			
精 清 從 心 邪	嗟	16.	tsia ⁵⁵	
	些	17.	sia ⁵⁵	
	邪	18.	ts'ia ⁵¹	
	斜	19.	ts'ia ⁵¹	
知 徹 澄	𪛗	20.	(This character should not occur here.)	

照 穿 神 審 禪	遮	1. tsia ⁵⁵	
	車馬~	2. ts'ia ⁵⁵	
	蛇	3. sia ⁵¹	
	奢	4. ts'ia ⁵⁵	
	賒	5. sia ⁵⁵	
	余姓(余 _a)	6. sia ⁵¹	(but (a) is /y ⁵¹ /--cf. 20-3)
影 喻云 喻以	耶	7. ja ⁵¹	
	爺	8. ja ⁵¹ , ja ⁵⁵	(1)
	椰	9. ja ⁵¹	
	假開三：麻		
	上		
	馬		
精 清 從 心 邪	姐	10. tsia ¹³	
	且	11. ts'ia ¹³	
	寫	12. sia ¹³	
照 穿 神 審 禪	者	13. tsia ¹³	
	址(掩)	14. ts'ia ¹³	
	捨	15. sia ¹³	
	社	16. sia ¹³	
日	惹	17. ja ¹³	
影 喻云 喻以	也者~, ~是	18. ja ¹³	(Ball: /ya/ and /ye/)
	野	19. ja ¹³	
	冶	20. ja ¹³	

(1) /ja⁵⁵/ is used in /pa:k² ja⁵⁵/ 伯爺 'father' (used by some).

假開三：麻	
去	
禡	
精 清 從 心	借 1. tsia ²²
	宜斜 2. ts'ia ²² (/ts'ø ²² / C.)
	藉～故 3. tsik ² (cf. 203-9)
	棉～子 4. tsia:k ²
	瀉 5. sia ²²
	卸 6. sia ²²
邪	謝 7. tsia ²²
照	蔗 8. tsia ²²
穿 神	射 9. sia ²²
	爵～香 10. sia ²²
審	赦 11. sia ²²
	舍 12. sia ²²
禪	駱母的牛馬 13. --
影	
喻云	
喻以	夜 14. ja ²²

假合二：麻	
平	
麻	
莊	髻～髻 15. --
初	
牀	
山	
見	瓜 16. kwa ⁵⁵
溪	蝸 17. wo ⁵⁵ (Chao: /o ⁵⁵ /)
	誇 18. k'wa ⁵⁵
群	
疑	〔娃〕 19. wa ⁵⁵

曉 匣	花	1.	fa ⁵⁵	
	華中～	2.	wa ⁵¹	
	鏟	3.	wa ⁵¹	
	划～船	4.	ko ⁵⁵	(/p'a ⁵¹ / C.)
影	蛙	5.	wa ⁵⁵	
	窪	6.	wa ⁵⁵	
喻云				
喻以				

	假合二：麻			
	上			
	馬			
莊 初 牀 山	傻	7.	so ⁵¹	
	[耍]	8.	sa ¹³	
見	寡	9.	kwa ¹³	
	剛	10.	—	
溪	倚 (* 垮)	11.	k'wa ⁵⁵	
	[垮]	12.	k'wa ⁵⁵	
群 疑	瓦	13.	nga ¹³	

	假合二：麻			
	去			
	禡			
見 溪 群 疑	跨	14.	k'wa ⁵⁵	
	瓦動詞	15.	nga ¹³	(cf. 13-13)
曉 匣	化	16.	fa ²²	
	華～山，姓	17.	wa ²²	
	樺～樹	18.	wa ⁵¹	

		遇合一：模	
		平	
		模	
幫 滂 並 明	通	0.	pu ⁵⁵ (Chao)]
	鋪～設	1.	p'u ⁵⁵
	蒲	2.	p'u ⁵¹
	菩～薩	3.	p'u ⁵¹
	脯(脯)胸～	4.	p'u ²² , p'u ¹³ , p'u ⁵⁵
	模～子	5.	mu ⁵¹
	模～範	6.	mu ⁵¹
	謨	7.	mu ⁵¹
	摸	8.	mo ⁵¹ (L.), mo ¹³ (L.), mo ⁵⁵ (C.)
端 透 定	都～城	9.	tu ⁵⁵
	都～是	10.	tu ⁵⁵
	徒	11.	t'u ⁵¹
	屠	12.	t'u ⁵¹
	途	13.	t'u ⁵¹
	塗	14.	t'u ⁵¹
	圖	15.	t'u ⁵¹
泥 來	奴	16.	nu ⁵¹
	帑	17.	nu ⁵¹
	盧	18.	lu ⁵¹
	爐	19.	lu ⁵¹
	蘆～葦	20.	lu ⁵¹
	鷓～鷺	21.	lu ⁵¹
	鑪	22.	lu ⁵¹
精 清 從 心 邪	租	23.	tsu ⁵⁵
	*粗(麤)	24.	ts'u ⁵⁵
	殂	24.1.	ts'u ⁵¹ (Chao)]
	蘇	25.	su ⁵⁵
	酥	26.	su ⁵⁵
	穌	27.	su ⁵⁵

見 溪 群 疑	姑	1.	ku ⁵⁵	15
	孤	2.	ku ⁵⁵	
	箍	3.	k'u ⁵⁵	
	辜	4.	ku ⁵⁵	
	枯	5.	ku ⁵⁵ (Chao: /k'u ⁵⁵ /; Ball: /ku/)	
	吳	6.	ng ⁵¹ (Ball: for all present /ng/ syllables:	
	蜈~ 蚣	7.	ng ⁵¹ /ung/ for Zhongshan, /ng/ for Cantonese)	
	吾	8.	ng ⁵¹	
	梧~ 桐	9.	ng ⁵¹	
曉 匣	呼	10.	hu ⁵⁵	
	胡	11.	hu ⁵¹	
	湖	12.	hu ⁵¹	
	狐	13.	hu ⁵¹	
	壺	14.	hu ⁵¹	
	乎	15.	hu ⁵¹ (1)	
	瓠~ 盧	16.	hu ⁵¹	
	鬍 (胡)	17.	hu ⁵¹	
	糊	18.	hu ⁵¹ , k'u ⁵¹ , u ⁵¹ (2)	
影	瑚	19.	hu ⁵¹	
	烏	20.	u ⁵⁵	
	污	21.	u ⁵⁵	
喻 云 喻 以	朽	22.	u ⁵⁵	

	遇合一：模		
	上		
	姥		
幫	補	23.	pu ¹³
	譜	24.	p'u ¹³
滂	普	25.	p'u ¹³
	浦	26.	p'u ¹³
並	部	27.	pu ²²
	簿	28.	pu ²²
明			

(1) Recorded by Ball as /wú/ for Cantonese, and /fú/ for Zhong-shan. This is the only occurrence of syllable /fu/, which normally should not be found in Zhong-shan.

(2) /k'u⁵¹/ 'paste (edible), pudding'; /u⁵¹/ 'paste, glue; to paste'.

端 透 定	堵	1.	tu ¹³	(cf. 16-7)
	賭	2.	tu ¹³	
	肚魚～ 豬～	3.	t'u ¹³	
	土	4.	t'u ¹³	
	吐～痰	5.	t'u ²²	
	杜	6.	tu ²²	
	肚腹～	7.	t'u ¹³	
泥 來	努	8.	nu ¹³	
	魯	9.	lu ¹³	
	櫓 (艫)	10.	lu ¹³	
	虜	11.	lu ¹³	
	滷	12.	lu ¹³	
	擄	13.	lu ¹³	
精	祖	14.	tsu ¹³	
	組	15.	tsu ¹³	
清從心邪				
見 溪 群 疑	古	16.	ku ¹³	
	估～計	17.	ku ¹³	
	盞～子	18.	--	
	牯	19.	ku ¹³	
	股	20.	ku ¹³	
	鼓	21.	ku ¹³	
	賈商～	22.	ku ¹³	
	沽	23.	ku ⁵⁵	
	苦	24.	hu ¹³	(Chao: /k'u ¹³ /)
	五	25.	ng ¹³	
	伍	26.	ng ¹³	
	午	27.	ng ¹³	

曉	虎	1.	hu ¹³	
	滸水~	2.	hu ¹³	
	琥	3.	hu ¹³	
匣	戶	4.	hu ²²	
	滬	5.	hu ²²	
影	塢	6.	u ⁵⁵	
喻云				
喻以				
遇合一：模				
去				
暮				
幫	布	7.	pu ²²	
	佈	8.	pu ²²	
滂	鋪店~	9.	p'u ²²	
	怖恐~	10.	pu ²²	
並	步	11.	pu ²²	
	捕	12.	pu ²²	
明	埠商~ (步 _a)	13.	faw ²² (but (a) is /pu ²² /--cf. 17-11)	
	暮	14.	mu ²²	
	慕	15.	mu ²²	
	墓	16.	mu ²²	
	募	17.	mu ²²	
端	妬	18.	tu ²²	
	蠹	19.	tu ²²	
透	吐嘔~	20.	t'u ²²	
	兔	21.	t'u ²²	
定	度	22.	tu ²²	
	渡	23.	tu ²²	
	鍍	24.	tu ²²	
泥來	怒	25.	nu ²²	
	路	26.	lu ²²	
	賂	27.	lu ²²	
	露	28.	lu ²²	
	鷺~鷺	29.	lu ²²	

精 清	*做 (作)	1.	tsu ²²	
	醋	2.	ts'u ²²	
	措~置	3.	ts'u ²²	
	錯~誤	4.	ts'o ²²	
從 心	素	5.	su ²²	
	訴	6.	su ²²	
	塑~像	7.	su ²²	
	嗦鳥~子	8.	su ²²	
邪				
見	故	9.	ku ²²	
	固	10.	ku ²²	
	鉤~露鍋	11.	ku ²²	
	雇	12.	ku ²²	
溪	顧	13.	ku ²²	
	庫	14.	k'u ²²	(L.), hu ¹³ (C.) (1)
	褲 (袴)	15.	hu ²²	
群 疑	誤	16.	ng ²²	
	悟	17.	ng ²²	
	悞	18.	ng ²²	
曉 匣	辱~水	19.	hu ²²	
	互	20.	hu ²²	
	護	21.	hu ²²	
	瓠~子, ~瓜	22.	hu ⁵¹	(cf. 15-16)
影 喻云 喻以	惡恨, 可~	23.	u ²²	

遇合三：魚
平
魚

泥 來	廬茅~, ~山	24.	lu ⁵¹	
	驢	25.	lu ⁵¹	

(1) /hu¹³/ occurs in the name of the village /hu¹³ ts'ung⁵⁵/ 庫充.

精 清	蛆生~	1.	tsy ⁵⁵ , tsu ¹³	(Ball: /ch'ü/)
	疽癰~	2.	tsy ⁵⁵	(Chao: also /tsy ⁵⁵ /)
從 心 邪	胥	3.	sy ⁵⁵	
	徐	4.	ts'y ⁵¹	
知 徹 澄	豬	5.	tsy ⁵⁵	
	除	6.	ts'y ⁵¹	
	儲~蓄	7.	sy ⁵¹	(/ts'u ¹³ / C.)
莊 初 牀 山	初	8.	ts'o ⁵⁵	
	鋤	9.	ts'o ⁵¹	(N.), tso ⁵¹ (V.)
	梳~頭	10.	so ⁵⁵	
	疏~遠	11.	so ⁵⁵	
	疏	12.	so ⁵⁵	
	諸	13.	tsy ⁵⁵	
照 穿 神 審 禪	書	14.	sy ⁵⁵	
	舒	15.	sy ⁵⁵	
	如	16.	ngy ⁵¹	
見 溪 群 疑	居	17.	k'y ⁵⁵	
	車~馬砲	18.	ky ⁵⁵	
	墟~市	19.	hy ⁵⁵	
	渠	20.	k'y ⁵¹	
	* 僦他	21.	k'y ⁵¹	
	魚	22.	ngy ⁵¹	
曉 匣	漁	23.	ngy ⁵¹	
	虛	24.	hy ⁵⁵	
	噓吹~	25.	hy ⁵⁵	

影 喻云 喻以	於~此	1.	y ⁵⁵	(1)
	淤	2.	y ⁵⁵ , u ⁵⁵	
	余	3.	y ⁵¹	
	餘	4.	y ⁵¹	
	昇 抬	5.	--	
<hr/>				
	遇合三：魚			
	上語			
泥 來	女	6.	ny ¹³	(Ball: /nü/ and /ngü/ on two separate pages.)
	呂	7.	ly ¹³	
	* 稻 野 生	8.	--	
	旅	9.	ly ¹³	
	侶	10.	ly ¹³	
精 清 從 心 邪	序	11.	tsy ²²	
	敍	12.	tsy ²²	
	緒	13.	sy ¹³	
	貯	14.	ty ¹³	
褚 姓	15.	sy ¹³		
苧~麻	16.	ty ¹³		
莊 初	阻	17.	tso ¹³	
	楚	18.	ts'o ¹³	
	礎 柱下石	19.	ts'o ¹³	
牀 山	所	20.	so ¹³	

(1) /y⁵⁵/ 'muddy', /u⁵⁵/ 'dirty'.

照穿	煮	1.	tsy ¹³	
	處相~	2.	ts'y ¹³	
	杵	3.	—	(1)
神審	暑	4.	sy ¹³	
	鼠	5.	sy ¹³	
	黍	6.	sy ¹³	
禪	墅別~	7.	sy ¹³	
日	汝	8.	ni ¹³	(Ball: /ngü/)
見	舉	9.	ky ¹³	(Chao: /ky ¹³ / and /ky ⁵⁵ /)
溪群	巨	10.	ky ²²	
	拒	11.	k'y ¹³	
	距	12.	k'y ¹³	
疑	語	13.	ngy ¹³	
曉	許	14.	hy ¹³	
匣				
影				
喻云				
喻以	與及，給~	15.	y ¹³	

	遇合三：魚			
	去			
	御			
泥來	慮	16.	ly ²²	(Ball: /lũ/ or /lôi/)
	*瀘	17.	ly ²²	(Ball: /lũ/ or /lôi/)
精清從心邪				
	絮	18.	sy ¹³	

- (1) Chen gives /ng¹³/ for the word, as in /ng¹³ tsok² low¹³/ 杵作佬 'undertaker' (alternative term: /kun⁵⁵ ts'oj⁵¹ low¹³/ 棺材佬). He gives the character 柱 for the meaning of 'to pierce or jab with a long object', and the pronunciation of /ts'y¹³/ for it.

知 徹 澄	著顯～	1.	tsy ²²	
	箸筷子	2.	tsy ²²	
莊 初 牀 山	助	3.	tso ²²	
	疏注～	4.	so ⁵⁵	(cf. 19-11) (Chao: /so ²² / (1))
照 穿 神 審 禪	處～所	5.	ts'y ²²	
	庶	6.	sy ²²	
	恕	7.	sy ²²	
	署專～，～名，公～	8.	sy ¹³	(Chao: also /sy ¹³ /)
	薯白～	9.	sy ⁵¹	
見 溪 群 疑	據	10.	ky ²²	
	鋸～子，～木頭	11.	ky ²²	(/ka:j ²² / and /kø ²² / (C.) (2))
	去來～，～皮	12.	hy ²²	
	遽	13.	ky ²²	
	御	14.	ngy ²²	
	*禦	15.	ngy ²²	
影 喻云 喻以	譽榮～	16.	y ²²	
	預	17.	y ²²	
	豫	18.	y ²²	
	與參～	19.	y ²²	

(1) /so²²/ in the word /siong²² so²²/ 上疏 'upper stream, high society'.

(2) /ka:j²²/ is used for large objects, and /kø²²/ for small ones.

遇合三：虞	
平	
虞	
非 敷 奉 微	夫 1. hu ⁵⁵
	膚 2. hu ⁵⁵
	跗~面，腳面 3. --
	敷 4. hu ⁵⁵
	俘~虜 5. hu ⁵⁵
	孵~小鷄 6. hu ⁵⁵
	麩麥~子 7. --
	符 8. hu ⁵¹
	扶 9. hu ⁵¹
	芙~蓉 10. hu ⁵¹
	無 11. mu ⁵¹
	巫 12. mu ⁵¹ (Ball: /mò/--i.e., /mow/)
	誣 13. mu ⁵¹
	母 14. mu ⁵¹
精 清 從 心	趨 15. ts'y ⁵⁵
	須 16. sy ⁵⁵
	鬚 17. su ⁵⁵
	需 18. sy ⁵⁵
	邪
知 徹 澄	誅 19. tsy ⁵⁵
	蛛 20. tsy ⁵⁵
	株 21. tsy ⁵⁵
	厨 22. ts'y ⁵¹
	莊
初 牀 山	芻 23. ts'o ⁵⁵
	雛 24. ts'o ⁵⁵

照	朱	1.	tsy ⁵⁵	
	殊	2.	tsy ⁵⁵	
	珠	3.	tsy ⁵⁵	
	樞	4.	k'y ⁵⁵	(Chao: also /k'y ⁵⁵ /)
穿神審禪	輸	5.	sy ⁵⁵	
	殊	6.	sy ⁵¹	
日	儒	7.	y ⁵¹	
見	拘	8.	k'y ⁵⁵	
	駒	9.	k'y ⁵⁵	
	俱	10.	k'y ⁵⁵	
溪	區~域	11.	k'y ⁵⁵	
	驅	12.	k'y ⁵⁵	
群疑	瞿	13.	k'y ⁵¹	
	愚	14.	ngy ⁵¹	
	虞	15.	ngy ⁵¹	
	娛	16.	ngy ⁵¹	
曉匣	吁	17.	hy ⁵⁵	
影	迂	18.	hy ⁵⁵ , y ⁵⁵	
	于	19.	y ⁵⁵	
喻云	孟	20.	y ⁵¹ (1)	
	榆	21.	y ⁵¹	
喻以	逾	22.	y ²²	
	愉	23.	y ²²	
	諛	24.	y ²²	

(1) E.g., 痰孟 /t'a:m⁵¹ y⁵¹/ 'spittoon'.

遇合三：虞	
上	
囊	
非	府 1. hu ¹³
	腑 2. hu ¹³
	俯 3. hu ¹³
	甫 4. p'u ¹³
	脯杏~ 5. p'u ¹³
	斧 6. pu ¹³
敷	撫 7. hu ¹³
	脍食上生白毛 8. --
奉	父 9. hu ²²
	釜 10. hu ¹³
	腐 11. hu ²² (Chao: /hu ¹³ /)
	輔 12. hu ²²
微	武 13. mu ¹³
	舞 14. mu ¹³
	侮 15. muj ¹³
	鵠鵠~ 16. mu ¹³
<hr/>	
泥	
	縷絲~ 17. law ¹³
<hr/>	
精	
	取 18. ts'y ¹³
清	*娶 19. tsy ²² (L.), ts'y ¹³ (C.)
	聚 20. tsy ²²
從	
心	
邪	
<hr/>	
知	拄~拐杖 21. --
徹	
	柱 22. ts'y ¹³
<hr/>	
莊	
初	
牀	
山	數動詞 23. su ¹³

照 穿 神 審 禪	主	1. tsy ¹³	
	豎	2. sy ²²	
日	乳	3. jøj ¹³	(Chao: also /jøj ¹³ /, Ball: /yü/)
	搨~進去	4. —	
見 溪 群 疑	矩規~	5. ky ¹³	
影 喻云	雨	6. y ¹³	
	宇	7. y ¹³	
	禹	8. y ¹³	
	羽	9. y ¹³	
喻以	愈~好, 病~	10. y ²²	

	遇合三：虞		
	去		
	遇		
非	付	11. hu ²²	
	賦	12. hu ²²	
敷	傳	13. hu ²²	
	赴	14. hu ²²	
奉	訃	15. hu ²²	
	附	16. hu ²²	
微	務	17. mu ²²	
	霧	18. mu ²²	
泥			
來	屢	19. luj ¹³	
精			
清	趣	20. ts'y ²²	
從			
心			
邪	* 續	21. tsuk ²	(cf. 225-17)

知 徹 澄	駐	1. tsy ²²	
	註	2. tsy ²²	
	住	3. tsy ²²	
莊 初 牀 山			
	數名詞	4. su ²²	
照	注	5. tsy ²²	
	蛀	6. tsy ²²	
	鑄	7. tsy ²²	
	註	8. tsy ²²	
穿 神 審	戍	9. sy ²²	
	輸運~	10. sy ⁵⁵	(cf. 24-5)
	樹	11. sy ²²	
(1) 見 溪 群 疑	句	12. ky ²²	
	具	13. ky ²²	
	懼	14. ky ²²	
	遇	15. ngy ²²	
	寓	16. ngy ²²	
影 喻云 喻以	芋	17. u ²²	
	羽	18. y ¹³	(cf. 26-9)
	喻	19. y ²²	(Ball: /ngü/)
	裕	20. y ²²	
	諭	21. y ²²	

27-11.1

(1) 日 initial: ㄖ ㄖ^{51} /, /y²²/ (Chao).

	蟹開一：哈	
	平	
	哈	
端	歎(嘆) 1.	ta:j ⁵⁵
透	胎 2.	t'oj ⁵⁵
	台天~, ~州, ~甫 3.	t'oj ⁵¹
定	臺 4.	t'oj ⁵¹
	苔舌~, 青~ 5.	t'oj ⁵¹
	抬(擡) 6.	t'oj ⁵¹
泥		
來	來 7.	loj ⁵¹
精	災 8.	tsoj ⁵⁵
	栽 9.	tsoj ⁵⁵
清	猜 10.	ts'a:j ⁵⁵
從	才 11.	ts'oj ⁵¹
	材 12.	ts'oj ⁵¹
	財 13.	ts'oj ⁵¹
	裁 14.	ts'oj ⁵¹
	纔 15.	—
心	腮 16.	soj ⁵⁵
	鯉 17.	soj ⁵⁵
邪		
見	該 18.	koj ⁵⁵
溪	開 19.	hoj ⁵⁵
群		
疑	呆(歎) 20.	ngo:j ⁵¹
	✱磴磨, 研 21.	—
曉		
匣	孩 22.	hoj ⁵¹ , ha:j ⁵¹
影	哀 23.	oj ⁵⁵
	埃塵~ 24.	a:j ⁵⁵ (1)
	唉 25.	a:j ⁵⁵
喻云		
喻以		

- (1) Both /a:j⁵⁵/ and /oj⁵⁵/ were given on the first reading, but /oj⁵⁵/ was subsequently rejected. /a:j⁵⁵/ occurs in the colloquial word /la:k² a:j⁵⁵/ 〇埃 'dirty'. 'Dust' is /puk² ts'an⁵¹/ 〇塵.

	蟹開一：哈		
	上		
	海		
端 透 定	* 牆打~	1.	--
	奮~子(噓)	2.	--
	待	3.	toj ²²
	怠	4.	t'oj ¹³
	殆	5.	t'oj ¹³
泥 來	乃	6.	na:j ¹³
精 清 從 心 邪 見 溪 群 疑	宰	7.	tsoj ¹³
	載年~	8.	tsoj ¹³
	彩	9.	ts'oj ¹³
	採	10.	ts'oj ¹³
	(睬)	11.	ts'oj ¹³
	在	12.	tsoj ²² (L.), ts'oj ¹³ (C.)
曉 匣	改	13.	koj ¹³
	凱	14.	oj ¹³
	愷	15.	oj ¹³
海 亥	海	16.	hoj ¹³
	亥	17.	hoj ²²

	蟹開一：哈		
	去		
	代		
端 透 定	戴	18.	ta:j ²²
	態	19.	t'a:j ²²
	貸	20.	t'a:j ²² (Chao: /t'a:j ²² /, /toj ²² /)
	代	21.	toj ²²
	袋	22.	toj ²²

泥 來	耐	1. noj ²²	
	諫	1.1. loj ²²	(Chao)]
精	再	2. tsoj ²²	
	載~重	3. tsoj ²²	
清	菜	4. ts'oj ²²	
	採橡樹	5. --	
從	載滿~	6. tsoj ²²	(cf. 30-3)
	賽	7. soj ²²	(1)
心			
邪			
見	概	8. k'oj ²²	
	漑	9. k'oj ²²	
溪	慨慷~, 感~	10. k'oj ²²	
	咳~嗽(欬)	11. k'at ⁵	
群			
疑	礙	12. ngoj ²²	
影	愛	13. oj ²²	
喻云			
喻以			

	蟹開一：泰		
	去		
	泰		
幫	貝	14. puj ²²	
	沛	15. p'uj ²²	
滂	旆	16. --	
並			
明			
端	帶	17. ta:j ²²	
	太	18. t'a:j ²²	
透	泰	19. t'a:j ²²	
	大~夫, ~黃, 藥名	20. ta:j ²²	
定			
泥	奈	21. noj ²²	
	賴	22. la:j ²²	
來	癩	23. la:j ²²	

(1) 30-7a. 塞 /soj²²/.

精 清 從 心 邪	蔡	1. ts'oj ²²	
見	蓋	2. k'oj ²² (L.), koj ²² (C.)	
	丐乞~	3. k'oj ²²	
溪	磕	4. k'oj ²²	
群 疑	艾	5. ngoj ²² (Chao: /nga:j ²² /)	
曉			
匣	害	6. hoj ²²	
影	藹和~	7. oj ¹³	
	靄	8. oj ¹³	
喻云 喻以			
蟹開二：皆			
平			
皆			
幫			
滂			
並	排	9. p'a:j ⁵¹	
明	埋	10. ma:j ⁵¹	
莊	齋	11. tsa:j ⁵⁵	
初			
牀	豺	12. ts'a:j ⁵¹	
山			
見	皆	13. ka:j ⁵⁵	
	階	14. ka:j ⁵⁵	
	楷麥~	15. ka:j ⁵⁵	
	街	16. ka:j ⁵⁵	
	偕	17. ka:j ⁵⁵	
溪	揩	18. k'a:j ⁵⁵	
群 疑			

曉 匣	諧	1. ha:j ⁵¹
	骸	2. ha:j ⁵¹ , hoj ⁵¹
影	挨～近，～住	3. a:j ⁵⁵
喻云		
喻以		

	蟹開二：皆	
	上	
	駭	
泥		
來	✱懶把～	4. —
知	✱𪗇碗上有～兒	5. —
徹		
澄		
見		
溪	楷	6. ka:j ⁵⁵ (Chao: /k'a:j ¹³ /)
群		
疑		
曉		
匣	駭驚～	7. ha:j ¹³

	蟹開二：皆	
	去	
	怪	
幫	拜	8. pa:j ²²
滂		
並	韃風箱	9. —
	憊	10. pi ²²
明		

33

見

介
界
芥
𪔐 𪔐~
疥
届
戒
誠

1. ka:j²²
 2. ka:j²²
 3. ka:j²²
 4. ka:j²²
 5. ka:j²²
 6. ka:j²²
 7. ka:j²²
 8. ka:j²²

溪
群
疑

曉
匣

械

9. ha:j²²

蟹開二：佳

平

佳

幫
滂
並

牌

10. p'a:j⁵¹

簿 筏

11. --

明
莊
初

釵

12. ts'a:j⁵⁵

差出~

13. ts'a:j⁵⁵

柴

14. ts'a:j⁵¹

篩~子(麗)

15. sa:j⁵⁵

見

佳

16. ka:j⁵⁵

街

17. ka:j⁵⁵

溪
群
疑

涯天~

18. nga:j⁵¹

崖山~

19. nga:j⁵¹

+捱~打, ~罵

20. nga:j⁵¹, nga:j⁵⁵ (1)

曉
匣

鞋

21. ha:j⁵¹

(1) /nga:j⁵⁵/ in /nga:j⁵⁵ tsi¹³/ 捱子 'very poor people living near Shi-qi'.

蟹開二：佳	
上	
蟹	
幫	擺 1. pa:j ¹³
滂	罷 2. pa ²²
並	買 3. ma:j ¹³
明	奶(孃) 4. na:j ¹³
泥	
來	
莊	
初	
牀	
山	灑 5. sa ¹³ (cf. 8-22)
見	解講~, ~開 6. ka:j ¹³
溪	
群	
疑	
曉	
匣	解姓 7. ka:j ¹³
	解曉也 8. ka:j ¹³
	蟹 9. ha:j ¹³
影	矮 10. a:j ¹³ (L.), aj ¹³ (C.)
喻云	
喻以	

蟹開二：佳	
去	
卦	
幫	派 11. p'a:j ²²
滂	稗 12. --
並	賣 13. ma:j ²²
明	債 14. tsa:j ²²
莊	
初	
牀	
山	曬 15. sa:j ²²

見 溪 群 疑	懈	1. ha:j ²²
影 喻云 喻以	隘	2. aj ²²

	蟹開二：夬 去 夬	
幫 滂 並 明	敗 邁	3. pa:j ²² 4. ma:j ²²
知 徹 澄	蝨	5. --
莊 初 牀 山	寨	6. tsa:j ²²

	蟹開三：祭 去 祭	
幫 滂 並 明	• 蔽	7. paj ²²
	• 敝	8. paj ²²
	• 弊	9. paj ²²
	• 幣	10. paj ²²
	• 斃	11. paj ²²
	• 弊	12. paj ²²

泥 來	例 厲 勵	1. laj ²² 2. laj ²² 3. laj ²²
精	祭 際 襟~子	4. tsaj ²² 5. tsaj ²² 6. tsaj ²²
清 從 心 邪		
知 徹 澄	滯停~, 積~	7. tsaj ²²
照	制 製	8. tsaj ²² 9. tsaj ²²
穿 神 審	世 勢 誓 逝	10. saj ²² 11. saj ²² 12. saj ²² 13. saj ²²
見 溪 群 疑	藝	14. ngaj ²²
	蟹開三：廢 去 廢	
見 溪 群 疑	XI	15. -- (Chao: /nga:j ²² /)

蟹開四：齊		
平		
齊		
幫 滂 並 明 端	蓖~麻	1. pi ⁵⁵
	批	2. p'aj ⁵⁵
	迷	3. maj ⁵¹
透 定	低	4. taj ⁵⁵
	堤	5. t'aj ⁵¹
	梯	6. t'aj ⁵⁵
	題	7. t'aj ⁵¹
	提	8. t'aj ⁵¹
	蹄	9. t'aj ⁵¹
	啼	10. t'aj ⁵¹
泥 來	泥	11. naj ⁵¹
	犁	12. laj ⁵¹
	黎	13. laj ⁵¹
精 清 從 心	妻	14. ts'aj ⁵⁵
	淒	15. ts'aj ⁵⁵
	悽	16. ts'aj ⁵⁵
	齊	17. ts'aj ⁵¹
	臍	18. ts'i ⁵¹
	西	19. saj ⁵⁵
	棲	20. ts'aj ⁵⁵
	犀	21. saj ⁵⁵
	撕	22. si ⁵⁵
邪 見	雞	23. kaj ⁵⁵
	稽	24. k'aj ⁵⁵
	溪	25. k'aj ⁵⁵
溪 群 疑	倪	26. ngaj ⁵¹
曉 匣	奚	27. haj ⁵¹
	兮	28. haj ⁵¹

蟹開四：齊	
上	
齊	
幫	
滂	
並	陞~下 1. paj ²²
明	米 2. maj ¹³
端	底 3. taj ¹³
	抵 4. taj ¹³
透	體 5. t'aj ¹³
定	弟 6. taj ²² , t'aj ¹³ (1)
泥	
來	禮 7. laj ¹³
精	擠 8. tsaj ⁵⁵
清	
從	薺 9. ts'aj ⁵¹ (2)
心	洗 10. saj ¹³
邪	
見	
溪	啓 11. k'aj ¹³
群	
疑	

蟹開四：齊	
去	
齊	
幫	閉 12. paj ²²
	算~子 13. paj ²²
滂	
並	*璧~刀布，把刀~~ 14. --
明	謎 15. maj ⁵¹ (Chao: /maj ²² /)

(1) /t'aj¹³/ in /a²² t'aj¹³/ 亞弟 'younger brother'—used by older generation.

(2) 38-9a. 魚薺 /ts'aj¹³/ (Chao).

端透	帝	1.	ta ^j 22	(1)
	替	2.	t'a ^j 22	
	涕鼻~	3.	t'a ^j 22	
	剃	4.	t'a ^j 22	
	屨抽~, 籠~	5.	t'i ⁵⁵	
	雍	6.	t'a ^j 22	
	第	7.	ta ^j 22	
	遞	8.	ta ^j 22	
泥來	麗美~	9.	la ^j 22	
	隸	10.	ta ^j 22	
精清從心邪	濟	11.	tsa ^j 22	
	砌	12.	ts'a ^j 22	
	劑--~藥, 麵~子	13.	tsa ^j 55	
	細	14.	sa ^j 22	
	壻女~	15.	sa ^j 22	
見	計	16.	ka ^j 22	
	繼	17.	ka ^j 22	
	繫~鞋帶	18.	ha ^j 22	(cf. 39-23)
	髻	19.	ka ^j 22	
	契~約	20.	k'a ^j 22	
溪群疑	詣	21.	nga ^j 22	
曉匣	系	22.	ha ^j 22	
	繫連~	23.	ha ^j 22	
	÷係	24.	ha ^j 22	
影	綫	25.	a ^j 22	
	瞽目~	26.	a ^j 22	
喻云 喻以				

- (1) 39-1a. 嚏 /ts'i²²/, /ts'i⁵¹/. In the present data, it occurs in the dissyllabic word /ha:t⁵¹ ts'i⁵¹/ 嚏 'a sneeze'.
 /ts'i²²/ is recorded by Chao, as well as occurring in the word /p'an²² ts'i²²/ 噴嚏 (cf. 158-13) 'to sneeze'.

	蟹合一：灰		
	平		
	灰		
幫	杯	1. pu ⁵⁵	
滂	胚～胎	2. p'i ⁵⁵	
	坯土～	3. p'i ⁵⁵ , faw ⁵⁵ (Chao: /p'u ⁵⁵ /)	
並	培	4. p'u ⁵¹	
	陪	5. p'u ⁵¹	
	賠(陪)	6. p'u ⁵¹	
	裴	7. --	
明	梅	8. mu ⁵¹	
	枚	9. mu ⁵¹	
	媒	10. mu ⁵¹	
	煤	11. mu ⁵¹	
	玫	12. mu ⁵¹	
端	堆	13. tu ⁵⁵	
透	推	14. t'u ⁵⁵	
定	頹～唐	15. t'u ⁵¹	
泥			
來	雷	16. lu ⁵¹	
精			
清	催	17. ts'u ⁵⁵	
	崔姓	18. ts'u ⁵⁵	
從			
心			
邪			
見	瑰	19. kwaj ²²	
溪	盜	20. --	
	魁	21. hu ⁵⁵	
	恢	22. hu ⁵⁵	
	詼	23. hu ⁵⁵	
群			
疑	桅船～杆	24. waj ⁵¹	

曉 匣	灰	1. hu ⁵⁵ j
	回	2. hu ⁵¹ j
	茴~香	3. hu ⁵¹ j
	廻	4. hu ⁵¹ j
影 喻云 喻以	煨	5. u ⁵⁵ j

	蟹合一：灰 上 賄	
幫 滂 並 明	✱倍	6. p'u ¹³ j
	每	7. mu ¹³ j
端 透 定	腿	8. t'u ¹³ j
泥 來	餒凍~	9. nu ¹³ j
	餓傀~	10. lu ¹³ j
精 清 從 心 邪	罪	11. tsu ²² j
見 溪 群 疑	傀~餓	12. k'wa ²² j, fa: ²² j
曉 匣	賄	13. hu ¹³ j
	悔	14. hu ²² j
	滙	15. u ²² j

	蟹合一：灰		
	去隊		
幫 滂 並 明	輩	1.	puj ²²
	背	2.	puj ²²
	配	3.	p'uj ²²
	佩	4.	p'uj ²²
	背～誦	5.	puj ²² (cf. 42-2)
	+ 焙～乾	6.	puj ²²
	悖	7.	put ²
	妹	8.	muj ²²
	昧	9.	muj ²²
端 透 定	對	10.	tuj ²²
	碓	11.	--
	退	13.	t'uj ²²
	隊	14.	tuj ²²
泥 來	內	15.	noj ²²
	累極困(傑)	16.	løj ²² (cf. 62-6)
	未	17.	--
精 清 從 心 邪			
	碎	18.	su ²² j
見 溪 群 疑			
	塊	19.	fa:j ²²
曉 匣	晦	20.	hu ²² j (Ball: /mói/)
	誨	21.	hu ²² j (Ball: /hói/)
	潰～膿	22.	k'uj ²²

蟹合一：泰	
去	
泰	
端透定精清從心邪見	蛻蛇～皮，蟬～ 1. t'uj ²² , tuj ²²
	兌 2. tuj ²²
	最 3. tsuj ²²
溪群疑	會～計 4. uj ²² (cf. 43-8)
	創 5. k'uj ²²
	檜 6. k'uj ²²
曉匣	外 7. ngoj ²²
	會開～ 8. uj ²²
	會～不～ 9. uj ²² (L.), waj ¹³ (C.) (Chao: /waj ²² / C.)
繪 10. k'uj ²²	
蟹合二：皆	
平	
皆	
見溪群疑	乖 11. kwa:j ⁵⁵
曉匣	懷 12. waj ⁵¹ (Chao: /wa:j ⁵¹ /)
	槐 13. waj ⁵¹
	淮 14. waj ⁵¹

	蟹合二：皆 去 怪	
莊 初 牀 山	* 擗拉 1. --	
見 溪	怪 2. kwa:j ²² + 塊(墳) 3. fa:j ²² 蒯 4. --	
群 疑		
曉 匣	壞 5. wa:j ²²	

	蟹合二：佳 平 佳	
曉 匣	歪(嬌) 6. wa:j ⁵⁵	
影 喻云 喻以	蛙 7. wa (cf. 13-5)	

	蟹合二：佳 上 蟹	
見 溪 群 疑	拐 8. kwa:j ¹³	

見 溪 群 疑 曉 匣	蟹合二：佳	
	去 卦	
	掛 卦	1. k'wa ²² 2. kwa ²²
曉 匣	畫	
	3. wa:k ² (V.), wa ²² (N.)	

見 溪 群 疑 曉 匣	蟹合二：夬	
	去 夬	
	快 〔快〕	4. fa:j ²² 5. k'wa:j ²²
曉 匣	話	
	6. wa ²²	

精 清 從 心 邪 知 徹 澄	蟹合三：祭	
	去 祭	
	脆	7. ts'øj ²²
知 徹 澄	歲	8. søj ²²
	慧~星	9. waj ²² (Chao: also /waj ²² /) (cf. 46-6a)
知 徹 澄	綴點~	10. tsøj ²² , tsyt ²

照 穿 神 審 禪	贅	1. tsøj ²²	
	稅	2. sɔj ²²	
	說遊～	3. sɔj ²²	
日	芮姓	4. --	
見 溪 群 疑	鰕～魚	5. --	
影 喻云 喻以	衛	6. waj ²²	(1)
	銳	7. jɔj ²²	

	蟹合三：廢		
	去		
	廢		
非	廢	8. faj ²²	
敷	肺	9. faj ²²	
奉	吠	10. faj ²²	
微			
影 喻云 喻以	穢	11. waj ²²	

	蟹合四：齊		
	平		
	齊		
見	圭	12. kwaj ⁵⁵	
	閨	13. kwaj ⁵⁵	
溪 群 疑	奎	14. huj ⁵⁵	

(1) 46-6a. 𪛗 /waj²²/.

曉 匣	攜	1.	k'waj ⁵¹
	畦菜～	2.	k'waj ⁵¹
蟹合四：齊			
去 霽			
見 溪 群 疑	桂	3.	kwaj ²²
曉 匣	惠	4.	waj ²²
	慧	5.	waj ²²
止開三：支			
平 支			
幫	碑	6.	pi ⁵⁵
	·卑	7.	pi ⁵⁵
滂 並	·裨～益	8.	pi ¹³
	·披	9.	p'i ⁵⁵
皮	疲	10.	p'i ⁵¹
	·脾	11.	p'i ⁵¹
明	·裨	12.	p'i ⁵¹
	縻～子	13.	--
縻	縻粥，～爛	14.	mi ⁵¹
	·彌	15.	ni ⁵¹
泥 來	·彌竹篾(簍)	16.	--
	離～別	17.	li ⁵¹
籬	籬	18.	li ⁵¹
	璃玻～	19.	li ⁵¹ (L.), li ⁵⁵ (C.)
麗	麗高～	20.	laj ²² (cf. 39-9)

精 清 從 心	雌	1.	ts'i ⁵⁵	
	疵吹毛求~	2.	ts'i ⁵⁵	
	斯	3.	si ⁵⁵	
	厮	4.	si ⁵⁵	
	*撕(斯)	5.	si ⁵⁵	
邪 知	知	6.	tsi ⁵⁵	
	蚰~蛛	7.	tsi ⁵⁵	
徹 澄	池	8.	ts'i ⁵¹	
	馳	9.	ts'i ⁵¹	
莊 初 牀 山	差參~	10.	ts'i ⁵⁵	
	篩(筴)~子	11.	saj ⁵⁵	
照	支	12.	tsi ⁵⁵	
	枝	13.	tsi ⁵⁵ , ki ⁵⁵	(1)
	肢	14.	tsi ⁵⁵	
	梔~子花	15.	--	
	眇~眼	16.	--	
穿 神 審 禪	施	17.	si ⁵⁵	
	匙湯~, 鑰~	18.	si ⁵¹ , ts'i ⁵¹	(2)
日	兒	19.	ngi ⁵¹	
見 溪 群	羈	20.	ki ⁵⁵	
	奇	21.	k'i ⁵¹	
	騎	22.	k'ia ⁵¹	
	·岐	23.	k'i ⁵¹	
	·祇	24.	k'i ⁵¹	
疑	儀	25.	ngi ⁵¹	
	宜	26.	ngi ⁵¹	

(1) /ki⁵⁵/ occurs in the combination /la:j²² ki⁵⁵/ 荔枝 'lychees'.

(2) /ts'i⁵¹/ occurs in the combination /ts'i⁵¹ kang⁵⁵/ 匙羹 'spoon'.

曉匣	犧	1. hi ⁵⁵
影		
喻云		
喻以	· 移	2. i ⁵¹
止開三：支		
上		
紙		
幫	彼	3. pi ¹³
	· 俾	4. pi ¹³
滂		
並	被～臥，～子	5. p'i ¹³
	· 婢	6. p'i ¹³
明	靡	7. --
	· 弭	8. ni ²²
精	紫	9. tsi ¹³
清	此	10. ts'i ¹³
從		
心	璽	11. sa:j ¹³
	徙	12. sa:j ¹³
邪		
照	紙	13. tsi ¹³
	只～有	14. tsi ¹³
穿	侈奢～	15. ts'i ¹³
神	舐以舌取物	16. laj ¹³ (L.), la:j ¹³ (C.)
審	豕	17. ts'i ¹³
禪	是	18. si ²²
	氏	19. si ²²
日	爾	20. ngi ¹³

見	· 企	1.	k'i ¹³
溪	倚立	2.	k'i ¹³
群	技	3.	ki ²²
	妓	4.	ki ²²
疑	蟻	5.	ngaj ¹³
影	倚	6.	i ¹³
喻云	椅(倚)	7.	i ¹³
喻以			

	止開三：支		
	去		
	寘		
幫	· 臂	8.	pi ²²
滂	· 譬~喻	9.	p'i ²²
並	被~打, ~迫	10.	pi ²²
	· 避	11.	pi ²²
明			
泥			
來	荔~枝	12.	la:j ²² (1)
	離~開半寸	13.	li ⁵¹ (cf. 47-17)
[精	績	13.1.	tsik ⁵ (Ball: /tsik/, tsek/) (cf. 203-5)
清	刺	14.	ts'i ²² , ts'ia:k ² (cf. 203-7.1)
[從	漬	14.1.	(Ball: /tsiek/) (2)]
心	賜	15.	ts'i ²²
邪			
知	智	16.	tsi ²²
徹			
澄			
照			
穿			
神			
審	翅	17.	ts'i ²²
禪	鼓豆~	18.	si ²²

(1) The combination 荔枝 is pronounced /la:j²² ki⁵⁵/ (cf. 48-13).

(2) Zi 漬 'to soak, to dye' is recorded by Ball as /tsiek/ when it means 'spots', suggesting a possible parallel with ci 刺 (50-14) and ji 漬 (50-13.1), both of which have a Ru-sheng counterpart in the Geng-she.

見 溪 群 疑	寄	1. ki ²²
	誼	2. ngi ⁵¹
	義	3. ngi ²²
	議	4. ngi ¹³
曉 匣	戲	5. hi ²²
影 喻云 喻以	· 易難~	6. i ²²

	止開三：脂	
	平	
	脂	
幫	悲	7. pi ⁵⁵
滂	丕	8. p'i ⁵⁵
並	· 琵琶~	9. p'i ⁵¹
	· 枇杷~	10. p'i ⁵¹
明	眉	11. mi ⁵¹
	楣	12. mi ⁵¹
	徽	13. mi ⁵¹
泥	尼	14. naj ⁵¹ (Chao: /ni ⁵¹ /)
	呢	15. ni ⁵⁵
來	梨	16. li ⁵¹
精	資	17. tsi ⁵⁵
	姿	18. tsi ⁵⁵
	咨	19. tsi ⁵⁵
清	瓷~器	20. ts'i ⁵¹
從	資~巴	21. --
心	私	22. si ⁵⁵
邪		

知			
徹			
澄	遲	1. ts'i ⁵¹	
莊			
初			
牀			
山	師	2. si ⁵⁵	
	獅	3. si ⁵⁵	
	節	4. saj ⁵⁵	
照	脂	5. tsi ⁵⁵	
穿	鴿~鴉	6. --	
神			
審	尸	7. si ⁵⁵	
	屍	8. si ⁵⁵	
禪			
見	飢~餓	9. ki ⁵⁵	
	肌	10. ki ⁵⁵	
溪			
群	耆	11. k'i ⁵¹	
	祁	12. k'i ⁵¹	
	鰭	13. k'i ⁵¹	
疑			
影	。伊	14. i ⁵⁵	
喻云			
喻以	。夷	15. i ⁵¹	
	。姨	16. i ⁵¹ , i ⁵⁵ (1)	
	。胰	17. i ⁵¹	

(1) /i⁵⁵/ in e.g., /a²² i⁵⁵/ 亞姨 'mother's younger sister'.

	上開三：脂 上 旨	
幫	鄙 1. p'i ¹³ (1) 。比～較 2. pi ¹³ 秕～子，～穀 3. pi ¹³	
滂 並 明	。牝 4. p'an ¹³ (cf. 151-7) 美 5. mi ¹³	
泥		
來	履 6. ly ¹³	
精	姊 7. tsi ¹³	
清		
從		
心	死 8. si ¹³	
邪		
知		
徹		
澄	雉～鷄 9. ts'i ²² , ts'i ⁵¹ (2)	
照	旨 10. tsi ¹³ 指 11. tsi ¹³	
穿		
神		
審	矢 12. ts'i ¹³ 屎 13. si ¹³	
禪		
見	几茶～ 14. ki ⁵⁵	
溪		
群		
疑		

(1) 53-1a. 痞 /maw⁵⁵/ in the combination /ti²² maw⁵⁵/ 地痞 'ruffians, bullies' (Chao). It also occurs as the Grade III counterpart of pin 牝 (53-4). Also pronounced as /p'i¹³/.

(2) Chen gave /ts'i⁵⁵/ and /ts'i⁵¹/ the second time.

止開三：脂	
去	
至	
幫 滂 並 明	祕 1. pi ²²
	泌 2. pi ²²
	嚮 3. --
	· 庇 4. pi ²²
	· 痺麻~ 5. pi ²²
	· 屁 6. p'i ²²
	備 7. pi ²²
	· 鼻 8. pi ²² , pat ² (1)
	· 篋(枇) 9. pi ²²
	媚 10. mi ²²
	· 寐 11. mi ²²
端 透 定 泥 來	地 12. ti ²²
	膩 13. ni ²² (L.), naj ²² (C.)
	利 14. li ²²
	痢 15. li ²²
精 清 從 心 邪	次 16. ts'i ²²
	自 17. tsi ²²
	四 18. si ²²
	肆 19. si ²²
知 徹 澄	致 20. tsi ²²
	稚幼~ 21. tsi ²²

(1) /pat²/ 'elephant's trunk'.

照穿神	至	1. tsi ²²
	示	2. si ²²
	謚	3. --
審禪	視	4. si ²²
	嗜	5. si ²²
日	二	6. ngi ²²
	貳~心	7. ngi ²²
見溪	冀	8. k'i ²²
	器	9. hi ²²
	• 棄	10. hi ²²
群疑		
影	懿司馬~	11. i ²²
喻云		
喻以	• 肆~業	12. i ²²

	止開三：之	
	平	
	之	
泥來	釐	13. li ⁵¹
	狸野貓	14. li ⁵¹
精	茲	15. tsi ⁵⁵
	滋	16. tsi ⁵⁵
	孳	17. tsi ⁵⁵
清從	慈	18. ts'i ⁵¹
	磁~石	19. ts'i ⁵¹
	司	20. si ⁵⁵
心	絲	21. si ⁵⁵
	思	22. si ⁵⁵
	辭	23. ts'i ⁵¹
邪	詞	24. ts'i ⁵¹
	祠	25. ts'i ⁵¹

知 徹 澄 莊 初 牀 山	癡	1.	ts'i ⁵⁵
	持	2.	ts'i ⁵¹
	輜~重	3.	tsi ⁵⁵
照 穿 神 審 禪	之	4.	tsi ⁵⁵
	芝	5.	tsi ⁵⁵
	嗤~笑	6.	ts'i ⁵⁵
	詩	7.	si ⁵⁵
	時	8.	si ⁵¹
	鱗	9.	si ⁵¹
日	而	10.	ngi ⁵¹
見 溪 群	基	11.	ki ⁵⁵
	姬	12.	ki ⁵⁵
	箕	13.	ki ⁵⁵
	欺	14.	hi ⁵⁵
	其	15.	k'i ⁵¹
	棋	16.	k'i ⁵¹
	期時~	17.	k'i ⁵¹
	旗	18.	k'i ⁵¹
	麒	19.	k'i ⁵¹
	疑	20.	ngi ⁵¹
曉	嬉	21.	hi ⁵⁵
	熙	22.	hi ⁵⁵
	禧	23.	hi ⁵⁵
	嘻	24.	hi ⁵⁵
匣			
影 喻云 喻以	醫	25.	i ⁵⁵
	· 飴高粱~	26.	i ⁵¹
	· 怡	27.	i ⁵¹
	· 貽	28.	i ⁵¹

	止開三：之		
	上		
	止		
泥	你	1. ni ¹³	
來	李	2. li ¹³	
	里	3. li ¹³	
	裏	4. li ¹³	
	理	5. li ¹³	
	鯉	6. li ¹³	
精	子	7. tsi ¹³	
	梓	8. tsi ¹³	
清			
從			
心			
邪	似	9. ts'i ¹³	
	祀祭~	10. tsi ²²	
	巳辰~	11. tsi ²²	
知			
徹	恥	12. ts'i ¹³	
澄	痔	13. tsi ²²	
	峙對~	14. tsi ²²	
莊	滓	15. tsoj ¹³	(1)
初			
牀	士	16. si ²²	
	仕	17. si ²²	
	柿	18. ts'i ¹³	
	俟	19. si ²²	
山	使	20. si ¹³	
	史	21. si ¹³	
	駛	22. saj ¹³	

(1) Chen gave /tsoj¹³/ on two separate occasions.

照	止	1. tsi ¹³
	趾	2. tsi ¹³
	址	3. tsi ¹³
	齒	4. ts'i ¹³
穿 神 審 禪	始	5. ts'i ¹³
	市	6. si ¹³
	恃	7. ts'i ⁵¹
日	耳	8. ngi ¹³
見	己	9. ki ¹³
	紀~律, 世~, 年~	10. ki ¹³
溪	起	11. hi ¹³
	杞	12. ki ¹³
群 疑	擬	13. ngi ¹³
曉	喜	14. hi ¹³
	蟾~子	15. hi ¹³
匣		
影 喻云 喻以	矣	16. i ¹³
	已	17. i ¹³
	以	18. i ¹³

	上開三：之	
	去	
	志	
泥 來	吏	19. li ²²
精 清 從	字	20. tsi ²²
	孖牝牛	21. tsi ²²
心	伺	22. si ²² , ts'i ²²
	思	23. si ⁵⁵ (cf. 55-22)
邪	寺	24. tsi ²²
	嗣	25. tsi ²²
	飼	26. ts'i ²²

知 徹 澄	置	1. tsi ²²
	治	2. tsi ²²
	值	3. tsik ² (cf. 189-17)
莊 初 牀 山	廁~所, 茅~	4. ts'i ²²
	事	5. si ²²
照	志	6. tsi ²²
	誌	7. tsi ²²
	痣	8. tsi ²²
穿 神 審	試	9. si ²²
	弒	10. si ²²
	侍	11. si ²²
禪		
日	餌	12. ni ²²
見 [溪 群 疑	記	13. ki ²²
	忌	13.1. k'i ²²]
	忌	14. ki ²²
影 喻云 喻以	意	15. i ²²
	· 異	16. i ²²

	止開三：微	
	平	
	微	
見	幾~乎	17. ki ⁵⁵
	機	18. ki ⁵⁵
	譏	19. ki ⁵⁵
	饑~荒	20. ki ⁵⁵
溪 群 疑	祈	21. k'i ⁵¹
	沂~河	22. --

曉 匣	希	1. hi ⁵⁵
	稀	2. hi ⁵⁵
影	衣	3. i ⁵⁵
	依	4. i ⁵⁵
喻云		
喻以		

止開三：微
上
尾

見 溪 群 疑	幾～個	5. ki ¹³
	豈	6. hi ¹³

上開三：微
去
未

見 溪 群 疑	既	7. ki ²²
	氣	8. hi ²²
	+ 汽(氣)	9. hi ²²
	毅	10. ngaj ²²

止合三：支
平
支

清 清 從 心 邪		
	隨	11. ts'øj ⁵¹

照			
穿	吹	1. ts'øj ⁵⁵	
	炊	2. ts'øj ⁵⁵	
神			
審			
禪	垂	3. søj ⁵¹	
見	・規	4. k'waj ⁵⁵	
溪	虧	5. k'waj ⁵⁵	
	・窺	6. k'waj ⁵⁵	
群			
疑	危	7. ngaj ⁵¹	
曉	麾	8. faj ⁵⁵	
匣			
影	萎氣～，買賣～	9. waj ¹³	
喻云	爲作～	10. waj ⁵¹	
喻以			

	止合三：支		
	上		
	紙		
泥			
來	累～積	11. løj ¹³	
精	嘴	12. tsøj ¹³	
清			
從			
心	髓	13. ts'øj ¹³	
邪			
莊			
初	揣～度	14. ts'yn ¹³	
牀			
山			
日	藥	15. jøj ¹³	

見 溪 群 疑	詭	1. kwaj ¹³
	跪	2. kwaj ²²
曉	毀	3. waj ¹³
	燬	4. waj ¹³
匣		
影	委	5. waj ¹³
喻云		
喻以		
止合三：支		
去		
寘		
泥		
來	累連～	6. løj ²²
照		
穿		
神		
審		
禪	睡	7. søj ²²
	瑞	8. søj ²²
見		
溪		
群		
疑	僞	9. ngaj ²²
影	餒	10. waj ²²
喻云	爲～什麼	11. waj ²²
喻以		

	止合三：脂 平 脂	
精 清 從 心 邪	雖 1. sɔj ⁵⁵ 綏 2. sy ⁵⁵ (1)	
知 徹 澄	追 3. tsɔj ⁵⁵ 槌 4. ts'ɔj ⁵¹ 錘 (鎚) 5. ts'ɔj ⁵¹ 縋 6. --	
莊 初 牀 山	衰 7. sɔj ⁵⁵ 〔摔〕 8. sɔt ⁵ , ts'yt ²	
照 穿 神 審 禪	錐 9. tsɔj ⁵⁵ 誰 10. sɔj ⁵¹	
(2) 見 溪 群	龜 11. kwaj ⁵⁵ 遠 12. k'waj ⁵¹ · 葵 13. k'waj ⁵¹ 夔 14. k'waj ⁵¹	
疑		
影 喻云 喻以	帷 15. waj ⁵¹ · 維 16. waj ⁵¹ (Chao: /naj ⁵¹ /) · 惟 17. waj ⁵¹ (Chao: /naj ⁵¹ /) · 遺 18. waj ⁵¹ (Chao: /waj ⁵¹ /, /i ⁵¹ /)	

(1) Chen gave /sy⁵⁵/ on two separate occasions.

(2) 日 initial: 63-10.1. 敬生 /jɔj⁵⁵/ (Chao).

	止合三：脂 上 旨		
泥 來	壘	1. luj ¹³	(Chao: /luj ¹³ /; Ball: /lũ/)
照 穿 神 審 禪	水	2. sɔj ¹³	
見	軌	3. kwaj ¹³	
	晷	4. --	
	• 癸	5. k'waj ⁵¹ , kwaj ²²	
溪 群 疑	• 揆	6. k'waj ⁵¹	(Chao: /k'waj ¹³ /)
影 喻云 喻以	唯	7. waj ⁵¹	

	止合三：脂 去 至		
泥 來	類	8. lɔj ²²	
	淚	9. lɔj ²²	
精	醉	10. tsɔj ²²	
清	翠	11. ts'ɔj ²²	
從	悴 憊~	12. sɔj ²²	(Chao: /suj ²² /)
心	粹 純~	13. sɔj ²² , suj ²²	(Chao: /suj ²² /)
邪	遂	14. sɔj ²²	
	隧~道	15. sɔj ²²	
	穗	16. sɔj ²²	
	慧	17. waj ²²	(Chao: also /waj ²² /) (cf. 46-6a)
知 徹 澄	墜與墮異	18. tsɔj ²²	

莊 初 牀 山	帥	1. sɔj ²²	
	率統~	2. sɔt ⁵⁵	(Chao: also /sɔt ⁵ /)
見	愧	3. k'waj ²²	
	• 季	4. kwaj ²²	
溪	櫃	5. kwaj ²²	
群	饋	6. kwaj ²²	
	餽	7. kwaj ²²	
疑			
影			
喻云	位	8. waj ²²	
喻以			

	止合三：微		
	平		
	微		
非	非	9. fi ⁵⁵	
	飛	10. fi ⁵⁵	
敷	妃	11. fi ⁵⁵	
奉	肥	12. fi ⁵¹	
微	微	13. mi ⁵¹	
	微	14. mi ⁵¹	
見	歸	15. kwaj ⁵⁵	
溪			
群			
疑	巍	16. ngaj ⁵¹	
曉	揮	17. faj ⁵⁵	
	輝	18. faj ⁵⁵	
	徽	19. faj ⁵⁵	
匣			

影 喻云	威	1. waj ⁵⁵
	違	2. waj ⁵¹
	圍	3. waj ⁵¹
	闖	4. waj ⁵¹
喻以		

	止合三：微	
	上	
	尾	
非	匪	5. fi ¹³
	樅～子	6. --
	菲～薄	7. fi ⁵⁵
敷 奉 微	尾	8. mi ¹³
見 溪 群 疑	鬼	9. kwaj ¹³
影		
喻云	偉	10. waj ¹³
	葦 蘆～	11. waj ¹³
喻以		

	止合三：微	
	去	
	未	
非	沸～子	12. faj ²²
	沸	13. faj ²²
敷 奉 微	費～用	14. faj ²²
	翡～翠	15. fi ¹³
	未	16. mi ²²
	味	17. mi ²²

見 溪 群 疑	貴	1. kwaj ²²
	魏	2. ngaj ²²
曉	諱	3. waj ¹³
	卉	4. waj ¹³
匣		
影	畏	5. waj ²²
	慰	6. waj ²²
喻云	緯	7. waj ¹³
	胃	8. waj ²²
	謂	9. waj ²²
	蝟	10. waj ²²
	彙	11. uj ²²
喻以		

	效開一：豪	
	平	
	豪	
幫 滂 並 明	褒~獎	12. paw ⁵⁵ (Chao: also /paw ⁵⁵ /)
	袍	13. p'ow ⁵¹
端	毛	14. mow ⁵¹
	刀	15. tow ⁵⁵
透	叨嘮~ (* 𪛗)	16. t'ow ⁵⁵ (cf. 67-19)
	滔	17. t'ow ⁵⁵
定	* 掏~出來 (搯)	18. t'ow ⁵¹ (cf. 67-26)
	叨	19. t'ow ⁵⁵
	桃	20. t'ow ⁵¹
	逃	21. t'ow ⁵¹
	淘~米 (* 𪛗)	22. t'ow ⁵¹
	陶	23. t'ow ⁵¹
	萄	24. t'ow ⁵¹
	濤	25. t'ow ⁵¹
	掏	26. t'ow ⁵¹

泥 來	勞	1.	low ⁵¹	(1)
	撈	2.	low ⁵⁵ , la:w ⁵¹	
	牢	3.	low ⁵¹	
	嘮~叨 (* 嘮)	4.	low ⁵⁵	
精	遭	5.	tsow ⁵⁵	
	糟	6.	tsow ⁵⁵	
清 從	操~作, ~演	7.	ts'ow ⁵⁵	
	曹	8.	ts'ow ⁵¹	
心	槽馬~	9.	ts'ow ⁵¹	
	駝	10.	sow ⁵⁵	
邪	臊~氣	11.	ts'ow ²²	
	搔	12.	sow ⁵⁵	
見	高	13.	kow ⁵⁵	
	膏	14.	kow ⁵⁵	
	篙進船竿	15.	kow ⁵⁵	
	羔	16.	kow ⁵⁵	
	糕	17.	kow ⁵⁵	
	熬	18.	ngow ⁵¹	
曉	蒿蓬~	19.	how ⁵⁵	
	鋤除田草也	20.	--	
匣	豪	21.	how ⁵¹	
	壕	22.	how ⁵¹	
	毫	23.	how ⁵¹	
	號呼~	24.	how ²² (cf. 71-18), how ⁵⁵	
影 喻云 喻以	爇~白菜	25.	--	

(1) 68-1a. 虫^勞 /lo⁵¹/, in /k'am⁵¹ lo⁵¹/ 虫^勞 'spider'.

效開一：豪		
上		
皓		
幫	保	1. pow ¹³
	堡	2. pow ¹³
	寶	3. pow ¹³
滂		
	抱	4. p'ow ¹³
並		
明		
端	禱	5. t'ow ¹³
	島	6. to ¹³
	倒打~, 顛~	7. tow ¹³
	擣	8. --
透	討	9. t'ow ¹³
	道	10. tow ²²
定	稻	11. tow ²²
泥	腦	12. now ¹³
	惱	13. now ¹³
	瑙 (礪)	14. now ¹³
	老	15. low ¹³
來		
精	早	16. tsow ¹³
	聚	17. tsow ¹³
	蚤	18. tsow ¹³
	澡	19. ts'ow ²²
清	草	20. ts'ow ¹³
	驛	21. --
從	皂	22. tsow ²²
	造建~	23. ts'ow ²² , tsow ²² (cf. 71-7)
心	掃~地	24. sow ²² (cf. 71-8)
	嫂	25. sow ¹³
邪		

見 溪 群 疑	稿	1. kow ¹³	
	考	2. ha:w ¹³	
	烤 (燥)	3. ha:w ¹³	
曉 匣	好~壞	4. how ¹³	
	浩	5. how ²²	
	昊	6. how ²²	
	皓	7. how ²²	
影	襖	8. ow ²²	(Chao: /ow ¹³ /)
	懊~惱	9. ow ¹³	
喻云			
喻以			

	效開一：豪		
	去		
	號		
幫 滂 並	報	10. pow ²²	
	暴	11. pow ²²	
明	花~小鷄	12. --	
	曝	13. pow ²²	
	瀑	14. pow ²²	
	冒	15. mow ²²	
	帽	16. mow ²²	
端	到	17. tow ²²	
	倒~水	18. tow ¹³ , tow ²² (1)	
透 定	*套	19. t'ow ²²	
	盜	20. tow ²²	
	導	21. tow ²²	

(1) /tow²²/ in e.g., /tow²² tiw²² nga:n¹³/ 倒掉眼 'cross-eyed'.

泥 來	潑旱～	1.	low ⁵⁵	
	癆	2.	low ⁵¹	
精	躁	3.	ts'ow ²²	
	竈	4.	tsow ²²	
清	糙粗～，～米	5.	ts'ow ²²	
	操	6.	ts'ow ⁵⁵	
從 心 邪	造	7.	tsow ²² , ts'ow ²²	
	掃～帚	8.	sow ²²	
見	告	9.	kow ²²	
	膏～車，～油	10.	kow ⁵⁵	(cf. 68-14)
溪	誥	11.	kow ²²	
	靠	12.	k'a:w ²²	(L.), how ²² (C.)
群 疑	犒	13.	--	
	傲	14.	ngow ²²	
	熬烙餅用具	15.	--	
曉	好喜～	16.	how ²²	
	耗	17.	mow ²²	(1)
匣	號～數	18.	how ²²	
影	奧	19.	ow ²²	
	懊～悔	20.	ow ²²	
	澳	21.	ow ²²	
喻云				
喻以				

(1) Chen gave /mow²²/ on two separate occasions.

	效開二：肴		
	平		
	肴		
幫	包	1. pa:w ⁵⁵	
	胞	2. pa:w ⁵⁵	
滂	泡	3. p'a:w ²²	
	拋	4. p'a:w ⁵⁵	
並	跑	5. p'a:w ¹³	
	* 刨~地	6. p'a:w ⁵¹	
	* 魔	7. --	
明	茅	8. ma:w ⁵¹	
	貓	9. miw ⁵⁵ (L.), ma:w ⁵⁵ (C.) (cf. 75-8)	
	[錨]	10. na:w ⁵¹	
泥	饒	11. -- (Chao: /na:w ⁵¹ /)	
	* 撓	12. -- (Chao: /na:w ¹³ /) (cf. 73-3.1)	
來			
(1)	莊	抓	13. tsa:w ¹³
	初	抄略取, ~寫	14. ts'a:w ⁵⁵
		鈔錢~	15. ts'a:w ⁵⁵
	牀	巢	16. ts'a:w ⁵¹
	山	梢樹~	17. sa:w ⁵⁵
		捎~帶	18. --
見	交	19. ka:w ⁵⁵	
	郊	20. ka:w ⁵⁵	
	膠	21. ka:w ⁵⁵	
	教~書	22. ka:w ²² (cf. 74-8)	
溪	敲	23. k'a:w ⁵⁵	
群			
疑			
[曉	哮	23.1. ha:w ⁵⁵ (Chao)]	
匣	肴	24. nga:w ⁵¹	
	淆	25. nga:w ⁵¹	
影	拗 山~	26. a:w ²² (Chao: /a:w ⁵⁵ /)	
喻 云			
喻 以			

(1) 知 initial: 72-12.1. 朝 /tsa:w⁵⁵/ (Chao).

效開二：肴	
上	
巧	
幫	飽 1. pa:w ¹³
滂	鮑姓 _a ~ 魚 _b 2. a) pa:w ¹³ , b) pa:w ⁵⁵ (Chao: /pa:w ²² /)
並	卯 3. ma:w ¹³
明	爪~牙, ~子 4. tsa:w ¹³
(1) 莊	[找] 5. tsa:w ¹³
初	炒 6. ts'a:w ¹³
	吵 7. ts'a:w ¹³
牀	
山	
見	絞 8. ka:w ¹³
	狡 9. ka:w ¹³
	鉸 10. ka:w ²² , k'a:w ²² (2)
	攪 11. ka:w ¹³
	搞(攪) 12. ka:w ¹³
溪	巧 13. k'a:w ¹³
群	
疑	*咬(齧) 14. nga:w ¹³
影	拗~斷, 脾氣~ 15. a:w ²² (L.), a:w ¹³ (C.)
喻云	
喻以	

效開二：肴	
去	
效	
幫	豹 16. pa:w ²²
	爆 17. pa:w ²²
滂	炮槍~(礮) 18. p'a:w ²²
	泡~在水裡(*滂) 19. p'a:w ²²
並	鉋 20. p'a:w ⁵¹
明	貌 21. ma:w ²²

(1) 娘 initial: 73-3.1. 撓 /na:w¹³/ (Chao).

(2) /k'a:w²²/ used in /k'a:w²² tsin¹³/ 鉸剪 'scissors'.

泥來	鬧	1. na:w ²²	
	罩	2. tsa:w ²²	
知徹澄	櫂槳	3. --	
	筊~籬	4. --	
[莊 初 牀 山	鈔	4.1. ts'a:w ²²	(Chao)]
	稍	5. sa:w ¹³	
	湘豬食	6. sa:w ¹³ , sa:w ²² , sa:m ¹³	
	湘~雨	7. --	
	見	教~育, ~他去	8. ka:w ²²
溪群疑	校~對	9. ka:w ²²	
	較	10. ka:w ²²	
	醇	11. ha:w ⁵⁵	
	窖	12. ka:w ²² , kow ²²	
	覺睡	13. ka:w ²²	
	曉	14. ha:w ²²	
	匣	15. ha:w ²²	
影喻云喻以	校學~	16. ha:w ²²	
	校上~	17. ka:w ²²	(cf. 74-9)
	鞣幼靴~	18. --	

	效開三：宵		
	平		
	宵		
幫	臙肥～	1. piw ⁵⁵	
	・標	2. piw ⁵⁵	
滂	・飄	3. p'iw ⁵⁵	
並	・瓢	4. p'iw ⁵¹	
	・〔嫖〕～賭	5. p'iw ⁵¹	
明	苗	6. miw ⁵¹	
	描	7. miw ⁵¹	
	貓	8. miw ⁵⁵ (L.), ma:w ⁵⁵ (C.) (cf. 72-9)	
泥			
來	燎	9. liw ⁵¹	
精	焦	10. tsiw ⁵⁵	
	蕉芭～, 香～	11. tsiw ⁵⁵	
	椒	12. tsiw ⁵⁵	
清	鋤	13. ts'iw ⁵⁵	
	*綵～邊	14. —	
從	樵	15. ts'iw ⁵¹	
	〔瞧〕	16. ts'iw ⁵¹	
心	消	17. siw ⁵⁵	
	宵	18. siw ⁵⁵	
	霄	19. siw ⁵⁵	
	硝	20. siw ⁵⁵	
	銷	21. siw ⁵⁵	
	逍	22. siw ²²	
邪			
知	朝今～	23. tsiw ⁵⁵	
徹	超	24. ts'iw ⁵⁵	
澄	朝～代	25. ts'iw ⁵¹	
	潮	26. ts'iw ⁵¹	

照	昭	1.	ts'iw ⁵⁵
	招	2.	tsiw ⁵⁵
穿			
神			
審	燒	3.	siw ⁵⁵
	韶~關	4.	siw ⁵¹
禪			
日	饒	5.	ngiw ⁵¹
	橈槳	6.	--
見			
溪	驕	7.	kiw ⁵⁵
	嬌	8.	kiw ⁵⁵
群			
	喬	9.	k'iw ⁵¹
	僑	10.	k'iw ⁵¹
	橋	11.	k'iw ⁵¹
	蕎	12.	k'iw ⁵¹
疑			
曉	枵	13.	--
	囀	14.	hiw ⁵⁵
匣			
影	妖	15.	iw ⁵⁵
	·邀	16.	iw ¹³ , iw ⁵⁵
	·腰	17.	iw ⁵⁵
	·要~求	18.	iw ⁵⁵
喻云	鴉	19.	-- (1)
	搖	20.	iw ⁵¹
喻以	謠	21.	iw ⁵¹
	審	22.	iw ⁵¹
	姚	23.	iw ⁵¹ (Ball: /ngiw/; or /iw/ by scholars)
	遙	25.	iw ⁵¹

- (1) The colloquial word is /ma:w⁵⁵ t'aw⁵¹ ing⁵⁵/ 貓頭鷹 'owl' (literally, cat-headed eagle).

	效開三：宵 上 小	
幫	表 1. piw ¹³ 錶 2. piw ⁵⁵ 。標 3. piw ⁵⁵ (cf. 75-2) 。✦漂 4. p'iw ⁵⁵ , p'iw ²² 。鰲 5. -- 。藐 6. miw ¹³ 。渺 7. miw ¹³ 。秒 8. miw ¹³	
泥 來	燎火～眉毛 9. liw ⁵¹ (cf. 75-9)	
精 清 從 心 邪	剿 10. tsiw ¹³ 悄靜～～ 11. ts'iw ¹³ 小 12. siw ¹³	
知 徹 澄	趙 13. tsiw ²² 兆 14. ts'iw ²² 肇 15. siw ²²	
照 穿 神 審 禪	沼池～，～氣 16. tsiw ¹³ 少多～ 17. siw ¹³ 紹 18. siw ²²	
日	擾 19. ngiw ¹³ 繞圍～ 20. ngiw ¹³	

見 溪 群 疑	矯~詐 1. kiw ¹³
影 喻云	夭~壽 2. iw ¹³
喻以	昏~水 3. --
效開三：宵 去 笑	
幫 滂	裱 4. piw ¹³ 〔票〕車~ 5. p'iw ²² (L.), piw ⁵⁵ (C.) 〔漂〕~亮 6. p'iw ²²
並 明	廟 7. miw ²² ·妙 8. miw ²²
泥 來	療 9. liw ⁵¹
精 清	醺打~, 再~ 10. tsiw ²² 俏 11. ts'iw ²² 俶 優 12. --
從 心	瞧牛倒~ 13. -- 笑 14. siw ²² 鞘刀~ 15. siw ⁵⁵
邪	
知 徹 澄	召 16. tsiw ²²
照	照 17. tsiw ²² 詔 18. tsiw ²²
穿 神 審 禪	少~年 19. siw ²² 邵 20. siw ²²

日	繞~線	1. ngiw ¹³ (cf. 77-20)
見		
溪		
群	轎	2. kiw ²²
疑		
影	· 要想~, 重~	3. iw ²²
喻云		
喻以	耀	4. iw ²²
	鷓~鷹	5. iw ⁵¹ (L.), iw ²² (C.) (1)
效開四：蕭		
平		
蕭		
端	刁	6. tiw ⁵⁵
	貂	7. tiw ⁵⁵
	雕	8. tiw ⁵⁵ (L.), t'iw ⁵⁵ (C.)
	凋	9. tiw ⁵⁵
	鵬	10. tiw ⁵⁵
透	挑	11. t'iw ⁵⁵
定	條	12. t'iw ⁵¹
	調~和	13. t'iw ⁵¹
	跳	14. t'iw ²² (cf. 81-3)
泥		
來	聊	15. liw ⁵¹
	遼	16. liw ⁵¹
	撩~起來, ~袖	17. liw ⁵¹
	寥	18. liw ⁵¹
	僚	19. liw ⁵¹
	廖姓	20. liw ²²
精		
清		
從		
心	蕭	21. siw ⁵⁵
	簫	22. siw ⁵⁵
邪		

(1) /iw²²/ in e.g., /tsi¹³ iw²²/ 紙鷂 'kite'.

見	澆	1. hiw ⁵⁵
	梟	2. hiw ⁵⁵
溪群疑	堯	3. ngiw ⁵¹
影	么~二三	4. iw ⁵⁵
	*么~喝	5. --
喻云		
喻以		

	效開四：蕭	
	上	
	篠	
端	鳥	6. niw ¹³ (Ball: /niú/, sometimes /liú/) (1)
透	𪗇	6.1. t'iw ¹³ (Chao)]
定		
泥		
來	了~結	7. liw ¹³ (2)
	瞭	8. liw ⁵¹
見	繳上~	9. kiw ¹³
	僥~倖	10. hiw ⁵⁵
溪群疑		
曉匣	曉	11. hiw ¹³
影	杳~無音信	12. miw ¹³
喻云		
喻以		

(1) 80-6a. 𪗇 (Ball: /niú/, sometimes /liú/).

(2) Ball: } and words which are pronounced /liu/ in Cantonese are transcribed as /liú/ for Zhong-shan.

效開四：蕭	
去	
嘯	
端 透 定	釣 1. tiw ²²
	弔 2. tiw ²²
	跳(趙) 3. t'iw ²²
	糴 4. --
	掉 5. tiw ²²
	調音~ 6. tiw ²²
	調~動 7. tiw ²²
	糶灰~榮 8. --
泥 來	尿 9. niw ²²
	料 10. liw ²²
	杓馬~甌子 11. --
精 清 從 心 邪	
	嘯 12. siw ²²
見 溪 群 疑	叫 13. kiw ²²
	窳 14. k'iw ²²

流開一：侯	
平	
侯	
端 透 定	兜 15. taw ⁵⁵
	偷 16. t'aw ⁵⁵
	頭 17. t'aw ⁵¹
	投 18. t'aw ⁵¹

泥 來	樓	1.	law ⁵¹
	樓~取	2.	law ¹³
	樓播種用的農具	3.	--
	體	4.	law ¹³
見	勾	5.	ngaw ⁵⁵
	鉤	6.	ngaw ⁵⁵
	溝	7.	kaw ⁵⁵
	摳	8.	--
溪	+ 軀 眼~(曉)	9.	--
群 疑			
曉 匣	侯	10.	haw ⁵¹
	喉	11.	haw ⁵¹
	猴	12.	haw ⁵¹
	猴~子	13.	haw ⁵¹
影	歐	14.	aw ⁵⁵
	甌	15.	aw ⁵⁵
	謳	16.	aw ¹³
	區姓	17.	aw ⁵⁵
喻云 喻以			

流開一：侯

上

厚

幫 滂 並 明	剖	18.	p'aw ¹³
	某	19.	maw ¹³
	畝	20.	maw ¹³
	牡	21.	maw ¹³
	母	22.	mu ¹³
	拇	23.	--

透 定	斗	1.	taw ¹³	(1)
	抖	2.	taw ¹³	
	陡	3.	taw ¹³	
	敵展開, ~氣	4.	--	
泥 來	簍	5.	law ⁵⁵	
	[摟]抱	6.	law ¹³	
精 清 從 心 邪	走	7.	tsaw ¹³	
	叟	8.	saw ¹³	
見	狗	9.	kaw ¹³	
	苟	10.	kaw ¹³	
溪	垢	11.	kaw ²²	
	口	12.	haw ¹³	
群 疑	叩~頭	13.	k'aw ²²	
	藕	14.	ngaw ¹³	
	偶配~, 匹~	15.	ngaw ¹³	
曉 匣	吼	16.	k'aw ²² (Ball: /hau/, /k'au/)	
	後	17.	haw ²²	
	厚	18.	haw ²² (L.), haw ¹³ (C.)	
	后	19.	haw ²²	
影	嘔~吐	20.	aw ¹³	
	毆	21.	aw ¹³	
喻云				
喻以				

(1) Chao used 抖 to record /t'aw¹³/ 'to rest'.

	流開一：侯 去 侯	
幫 滂 並 明	戊 1. mu ²² (Ball: /mò/) 茂 2. maw ²² 貿 3. maw ²²	
端 透 定	鬥 4. taw ²² 透 5. t'aw ²² 豆 6. taw ²² 逗 7. taw ²² 荳～蔻 8. taw ²²	
泥 來	耨 9. naw ²² 漏 10. law ²² 陋 11. law ²²	
精 清 從 心 邪	奏 12. tsaw ²² 湊 13. tsaw ²² , ts'aw ²² 嗽咳～ 14. saw ²²	
見	穀往～ 15. -- 夠(穀) 16. kaw ²² 構 17. kaw ²² 購 18. kaw ²² 勾 19. ngaw ⁵⁵ 媾 20. kaw ²² 扣～住 21. k'aw ²² 寇 22. k'aw ²² 釳 23. k'aw ²²	
溪		
群 疑	偶～然 24. ngaw ¹³ (cf. 83-15)	

曉 匣	蕊 荳~	1. k'aw ²²
	候	2. haw ²²
影 喻云 喻以	漚久浸水中	3. aw ²²
	〔樞〕~氣	4. --

	流開三：尤	
	平	
	尤	
非 敷 奉 微	浮	5. faw ⁵¹ (L.), p'u ⁵¹ (C.)
	眸	6. maw ⁵¹
	謀	7. maw ⁵¹
	矛	8. ma:w ⁵¹
端 透 定	美	9. (This character should not be here at all.)
泥 來	流	10. law ⁵¹
	劉	11. law ⁵¹
	留	12. law ⁵¹
	榴石~	13. law ⁵¹
	硫~黃	14. law ⁵¹
	琉~璃(瑠)	15. law ⁵¹

精 清	摯 一把～住	1.	--
	髻 梳個～兒	2.	-- ⁵⁵
	秋～天	3.	ts'aw ⁵⁵
	秋～千	4.	ts'aw ⁵⁵
	鞦 牛～	5.	ts'aw ⁵⁵
從 心	修	6.	saw ⁵⁵
	羞	7.	saw ⁵⁵
	脩	8.	saw ⁵⁵
邪	囚	9.	ts'aw ⁵¹
	汭 游水	10.	ts'aw ⁵¹
知 徹 澄	抽	11.	ts'aw ⁵⁵
	綢	12.	ts'aw ⁵¹
	稠	13.	ts'aw ⁵¹
	籌	14.	ts'aw ⁵¹
	紬	15.	ts'aw ⁵⁵
莊 初 牀 山	鄒	16.	tsaw ⁵⁵
	*振 望上～	17.	--
	攬～起來	18.	tsaw ²²
	愁	19.	saw ⁵¹
	搜	20.	saw ¹³
	颺	21.	saw ¹³ (/sa:w ⁵⁵ / C.)
	餵飯～了	22.	saw ¹³ (/suk ⁵ / C.)
	蒐～集	23.	saw ¹³
照	周	24.	tsaw ⁵⁵
	舟	25.	tsaw ⁵⁵
	州	26.	tsaw ⁵⁵
	洲	27.	tsaw ⁵⁵
穿 神 審 禪	收	28.	saw ⁵⁵
	仇(讎)	29.	ts'aw ⁵¹
	酬	30.	ts'aw ⁵¹

日	柔	1.	jaw ⁵¹	
	揉	2.	jaw ⁵¹	
見	鳩	3.	kaw ⁵⁵	
	闌拈~	4.	k'aw ⁵⁵	(Chao: also /k'aw ⁵⁵ /)
溪	糾~纏(乚)	5.	taw ¹³	(cf. 91-5)
	丘	6.	jaw ⁵⁵	(1)
群	求	7.	k'aw ⁵¹	
	球	8.	k'aw ⁵¹	
	仇姓	9.	--	
	裘	10.	k'aw ⁵¹	
疑	毬	11.	k'aw ⁵¹	
	牛	12.	ngaw ⁵¹	
曉	休	13.	jaw ⁵⁵	
匣				
影	憂	14.	jaw ⁵⁵	
	優	15.	jaw ⁵⁵	
喻云	尤	16.	jaw ⁵¹	
	郵	17.	jaw ⁵¹	
喻以	由	18.	jaw ⁵¹	
	油	19.	jaw ⁵¹	
	游	20.	jaw ⁵¹	
	猶	21.	jaw ⁵¹	
	悠~~	22.	jaw ⁵¹	

	流開三：尤			
	上			
非	有			
	否	23.	faw ¹³	
敷				
	婦	24.	hu ²² , p'u ¹³	(2)
奉	負	25.	hu ²²	
	阜	26.	faw ²²	
微				

(1) 87-6a. 邱 /hia:w⁵⁵/ 'surname'.

(2) /p'u¹³/ used in /san⁵⁵ p'u¹³/ ([səm⁵⁵ p'u:¹³]) 新婦
'daughter-in-law'.

泥 來	紐	1. naw ¹³	
	鈕	2. naw ¹³	
	扭	3. naw ¹³	
	柳	4. law ¹³	
精	酒	5. tsaw ¹³	
清			
從			
心			
邪			
知	肘	6. tsa:w ¹³	
徹	丑	7. ts'aw ¹³	
澄	紂桀~	8. tsaw ²²	
莊			
初	〔睇〕	9. --	
牀			
山			
照	帚	10. tsiw ¹³	(/sow ²² / C.)
穿	醜	11. ts'aw ¹³	
神			
審	手	12. saw ¹³	
	首	13. saw ¹³	
	守	14. saw ¹³	
禪	受	15. saw ²²	
見	九	16. kaw ¹³	
	久	17. kaw ¹³	
	韭	18. kaw ¹³	
	灸針~	19. kaw ²²	
溪	糗麵煮~了	20. ts'aw ²²	
群	臼	21. kaw ²²	
	舅	22. k'aw ¹³	
	咎	23. kaw ²²	
疑			

曉匣	朽	1. k'a:w ¹³ , ha:w ¹³
影		
喻云	有	2. jaw ¹³
	友	3. jaw ¹³
喻以	酉	4. jaw ¹³
	莠	5. jaw ¹³
	誘	6. jaw ¹³
流開三：尤		
	去	
	宥	
非	富	7. hu ²²
敷	副	8. hu ²²
奉	復～興	9. huk ² (cf. 220-13)
微		
泥		
來	溜	10. law ⁵¹
	餹	11. law ⁵¹
	廖姓	12. liw ²² (cf. 79-20)
精		
清		
從	就	13. tsaw ²²
心	秀	14. saw ²²
	繡	15. saw ²²
	宿星～	16. suk ⁵ (cf. 220-21)
	✦ 銹鐵～	17. saw ²²
邪	袖	18. tsaw ²²
知	晝	19. tsaw ²²
徹		
澄	宙	20. tsaw ²²

莊 初 牀 山	皺	1.	tsaw ²²	
	縐	2.	tsaw ²² (/ts'a:w ⁵¹ / C.)	
	驟	3.	tsa:w ²²	
	瘦	4.	saw ²²	
	漱~口	5.	saw ²²	
照 穿 神 審 禪	咒	6.	tsaw ²²	
	臭香~	7.	ts'aw ²²	
	獸	8.	saw ²²	
	壽	9.	saw ²²	
	授	10.	saw ²²	
	售	11.	saw ²²	
見 溪 群 疑	救	12.	kaw ²²	(1)
	究	13.	kaw ²²	
	舊	14.	kaw ²²	
	柩	15.	kaw ²²	
曉 匣	嗅用鼻~	16.	ts'aw ²²	
影 喻云 喻以	又	17.	jaw ²²	
	右	18.	jaw ²²	
	祐	19.	jaw ²²	
	宥	20.	jaw ²²	
	柚	21.	jaw ⁵¹	
	鼬黃~	22.	--	
	* 釉	23.	--	

(1) 90-12a. 灸 /kaw²²/.

	流開 ^四 𠵹: 幽 平 幽	
幫 滂 並 明	彪 1. piw ⁵⁵	
端	繆 2. miw ²²	
透 定	〔丟〕 3. tiw ⁵⁵	
影 喻云 喻以	幽 4. jaw ⁵⁵	

	流開 ^四 𠵹: 幽 上 黝	
見 溪 群 疑	糾~正, ~察 5. taw ¹³	

	流開 ^四 𠵹: 幽 去 幼	
幫 滂 並 明	繆 6. maw ²²	
影 喻云 喻以	幼 7. jaw ²²	

咸開一：覃合	
平	
覃	
端透定	耽 1. ta:m ⁵⁵
	貪 2. t'a:m ⁵⁵
	潭 3. t'a:m ⁵¹
	譚 4. t'a:m ⁵¹
泥來	南 5. na:m ⁵¹
	男 6. na:m ⁵¹
	婪貪~ 7. la:m ⁵¹
精清從心邪	簪 8. tsa:m ⁵⁵
	參 9. ts'a:m ⁵⁵
	蠶 10. ts'a:m ⁵¹
見溪群疑	堪 11. k'am ⁵⁵ (L.), k'am ⁵⁵ (C.)
	龔 12. om ⁵⁵
曉匣	含 13. hom ⁵¹
	函 14. hom ⁵¹
	涵 15. hom ⁵¹
影喻云喻以	庵 16. om ⁵⁵
	諳 17. om ²²

泥 來 精 清 從 心 邪 見 溪 群 疑 曉 匣 影 喻云 喻以	咸開一：覃合 上 感
	淒～柿子，～菜 1. --
	慘 2. ts'a:m ¹³
	感 3. kom ¹³ (Ball: /kyam/)
	坎 4. k'a:m ¹³
	〔砍〕 5. k'a:m ¹³
曉 匣	撼 6. kom ¹³ (Chao: /hom ¹³ /)
	揞手覆，～住 7. om ²² (L.), am ¹³ (C.)

端 透 定 見 溪 群 疑	咸開一：覃合 去 勘
	* 探試～，偵～(擲) 8. t'a:m ²²
	[淦 8.1. /kom ²² / (Chao)] 勘～誤，～探 9. hom ²²

曉匣	憾	1. hom ²²	
影	暗	2. om ²²	(Chao: /om ²² /, /om ¹³ /)
喻云			
喻以			
咸開一：覃合			
	入		
	合		
端	答	3. ta:p ²	
	搭	4. ta:p ²	
透	踏脚~, 踏~	5. ta:p ²	
	搨~本	6. t'a:p ²	
定	查一~紙	7. t'a:p ²	
泥	納	8. na:p ²	
來	拉	9. la:j ⁵⁵	(Chao: /la:j ⁵⁵ /, /la ⁵⁵ /)
精			
清			
從	雜	10. tsa:p ²	
心			
邪			
見	合十~-升	11. hop ²	(cf. 94-15)
	蛤~蜊	12. kop ²	
	鴿	13. kop ²	
溪			
群			
疑			
曉匣	喝~酒(飲)	14. hot ²	(cf. 118-7), ha:p ² (C.)
	合	15. hop ²	
	盒烟~	16. hop ²	

	咸開一：談盍
	平
	談
端	擔～任 1. ta:m ⁵⁵
透	埤～下來(埤) 2. --
定	談 3. t'a:m ⁵¹
	痰 4. t'a:m ⁵¹
泥	
來	藍 5. la:m ⁵¹
	籃 6. la:m ⁵¹
精	
清	
從	慚 7. ts'a:m ⁵¹
心	三 8. sa:m ⁵⁵
邪	
見	甘 9. kom ⁵⁵
	柑 10. kom ⁵⁵
	泔～水 11. kom ⁵⁵
溪	
群	
疑	
曉	蚶～子 12. --
	愁癡 13. -- (/ngong ²² / C.)
匣	酣 14. hom ⁵⁵
	邯 15. hon ⁵¹

	咸開一：談盍
	上
	敢
端	膽 16. ta:m ¹³
透	毯 17. -- (/tsin ⁵⁵ / C.)
定	淡 18. ta:m ²² (L.), t'a:m ¹³ (C.) (cf. 96-9)

泥 來	覽	1. la:m ¹³
	攪	2. la:m ¹³
	攪 橄~	3. la:m ¹³
見	敢	4. kom ¹³
	橄~攪	5. kom ²²
溪 群 疑		
曉 匣	喊	6. hom ²² (L.), ha:m ²² (C.)
影 喻云 喻以	掩 坑	7. --

咸開一：談盞

去
闕

端 透 定 泥 來	擔 挑~	8. ta:m ⁵⁵ (cf. 95-1) (Chao: /ta:m ²² /)
	淡	9. ta:m ²² (L.), t'a:m ¹³ (C.) (cf. 95-18)
	濫	10. la:m ²²
	纜	11. la:m ²²
精 清 從		
[心 邪	暫	12. tsa:m ²²
	暫~花	13. --
	三	13.1. sa:m ²² (Chao)]
見 溪 群 疑	瞰 鳥~	14. hom ²²

	咸開一：談盍
	入
	盍
端透	塔 1. t'a:p ² 榻 2. t'a:p ² 塌 3. t'a:p ² 盪汗～濕了 4. --
定泥來	臘 5. la:p ² 蠟 6. la:p ² 鐵錫～ 7. la:p ²
精清從心邪	卅 8. sa ⁵¹
見溪群疑	磕 9. k'oj ²² (1) (Chao: /k'op ² /)
曉匣	盍何不 10. -- (1)

	咸開二：咸洽
	平
	咸
莊初牀	讒 11. ts'a:m ⁵¹ 饒 12. ts'a:m ⁵¹
山	杉 13. ts'a:m ²²

- (1) Chen gave /k'oj²²/ for 磕 on two separate occasions, but gave /k'oj²²/ for 盍 on the first reading, and nothing on the second elicitation of the word.

見 溪 群 疑	臙~桷(𣎵)	1. ka:m ⁵⁵
	鷓鴣鳥啄物	2. --
曉 匣	咸	3. hom ⁵¹ (Ball: /ham/, /hám/)
	鹹	4. ha:m ⁵¹

莊 初 牀 山	咸開二：咸洽	
	上	
見 溪 群 疑	斬	5. tsa:m ¹³
	減	6. ka:m ¹³
曉 匣	𣎵	7. ka:n ¹³
	喊	8. hom ²² (L.), ha:m ²² (C.)

知 徹 澄	咸開二：咸洽	
	去	
陷	站立	9. tsa:m ²²
	賺(賺)	10. tsa:n ²²
	〔站〕車~	11. tsa:m ²²

莊	蘸～醬油 1. tsa:m ²²
初	
牀	
山	
曉	
匣	陷 2. ha:m ²² 餡(✱賺✱餡) 3. hom ²²
	咸開二：咸洽 入 洽
知	割用針～，～記 4. --
徹	
澄	
莊	眨～眼 5. tsa ⁵⁵
初	插 6. ts'a:p ²
牀	闌(牀) 7. tsa:p ²
	炸用油～(碟) 8. tsa ²²
山	霎～時間 9. sa:p ²
見	夾 10. ka:p ²
	袂～衣 11. ka:p ²
	袷 12. --
溪	恰 13. hap ⁵
	招 14. --
群	
疑	
曉	
匣	狹 15. ha:p ² 峽 16. ha:p ² 洽 17. k'ap ⁵

	咸開二：銜狎
	平
	銜
莊	
初	撓 1. ts'a:m ⁵¹
牀	衫 2. sa:m ⁵⁵
山	
見	監～察，～視，～牢 3. ka:m ⁵⁵
溪	嵌 4. k'a:m ¹³
群	嚴 5. nga:m ⁵¹
疑	
曉	
匣	銜 6. ha:m ⁵¹
<hr/>	
	咸開二：銜狎
	上
	檻
曉	
匣	鑑 7. la:m ²²
<hr/>	
	咸開二：銜狎
	去
	鑑
莊	
初	饑～悔 8. ts'im ⁵⁵
牀	鈗大鎌 9. --
山	
見	鑑 10. ka:m ²²
溪	監國子～ 11. ka:m ²²
群	
疑	

咸開二：銜狎	
入狎	
見	甲 1. ka:p ²
	狎 2. ka:p ²
溪群疑	
曉匣	[𠵹 2.1. ha:p ²]
	匣箱~ 3. ka:p ²
	狎 4. ha:p ²
影	鴨 5. a:p ²
	狎 6. a:t ²
	壓 7. a:t ² (L.), a:t ⁵ (C.), a:p ² (1)
	聞 8. tsa:p ² (cf. 99-7)
喻云 喻以	

咸開三：鹽葉	
平鹽	
泥來	黏~米 _a , ~起來 9. nim ⁵¹ , nim ⁵⁵ ; (a) tsim ⁵⁵
	廉 10. lim ⁵¹
	鐮 11. lim ⁵¹
	簾 12. lim ⁵¹
	匳 13. lim ⁵¹
精	尖 14. tsim ⁵⁵
	殲~滅 15. ts'im ⁵⁵
清	籤 16. ts'im ⁵⁵
	簽(幟) 17. ts'im ⁵⁵
從	僉 18. --
	潛 19. ts'im ⁵¹
心	暹 20. ts'im ²²
	纖 21. ts'im ⁵⁵
邪	

(1) /a:p²/ 'to force, to coerce'.

知	* 沾 (霑)	1. tsim ⁵⁵	
	[粘] ~ 貼	2. tsim ⁵⁵	
徹			
澄			
照	瞻	3. tsim ⁵⁵	
	占 ~ 卜	4. tsim ⁵⁵	
穿			
神			
審			
禪	蟾 ~ 酥	5. sim ⁵¹	
見			
溪			
群	鉗	6. k'im ⁵¹	
疑			
影	淹	7. im ¹³	(Chao: /im ⁵⁵ /, /im ¹³ / (1))
	閤	8. im ⁵⁵	
喻云	炎	9. im ⁵¹	
	鹽	10. im ⁵¹	
喻以	閤	11. ngim ⁵¹	
	簷	12. sim ⁵¹	

	咸開三：鹽葉		
	上		
幫	琰		
	貶	13. pin ¹³	
滂			
並			
明			
泥			
來	斂	14. lim ¹³	

- (1) /im⁵⁵/ occurs in e.g., /im⁵⁵ law⁵¹/ 淹留 'to tarry long', and /im¹³/ in e.g., /im¹³ mut²/ 淹沒 'to drown'.

精	漸	1. tsim ²²
清		
從		
心		
邪		
知	諂	2. -- (Chao: /ts'im ¹³ /)
徹		
澄		
照		
穿		
神	陝~西	3. sim ¹³
審	閃	4. sim ¹³
禪		
日	染	5. ngim ¹³
	冉	6. ngim ¹³
見	檢	7. kim ¹³
	+ 臉	8. lim ¹³
溪		
群	儉	9. kim ²²
疑		
曉	險	10. him ¹³
匣		
影	掩	11. im ¹³
	• 覓	12. --
喻云		
喻以		

咸開三：鹽葉

去

豔

泥		
來	斂	13. lim ¹³ (cf. 102-14) (Chao: /lim ²² /)
	殮	14. lim ²²

[清 斬 14.1. ts'im²² (Chao)]

照 穿 神 審 禪	佔(占)	1. tsim ²²	
	贍~養	2. tsim ⁵⁵	
見 溪 群 疑	驗	3. ngim ²²	
	· 厭	4. im ²²	
影 喻云 喻以	豔	5. im ²²	
	焰	6. im ²²	
	鹽醃	7. im ⁵¹	(cf. 102-10) (/ip ² / C.)
	咸開三：鹽葉		
	入		
	葉		
泥	聶姓	8. sip ²	(Ball: /nip/ for Zhong-shan and Cantonese)
	鐸~子	9. nip ²	
	躡~腳走	10. nip ² , sip ²	
來	獵	11. lip ²	
精 清 從 心 邪	接	12. tsip ²	
	妾	13. ts'ip ²	
	捷	14. tsip ²	
知 徹 澄	輒	15. ts'ip ²	

照	摺~疊	1. tsip ²	
	褶~子, 縐紋(褶)	2. tsip ²	
穿 神 審 禪	攝	3. sip ²	
	涉	4. sip ²	
影	· 鑿酒~	5. --	
喻云			
喻以	葉	6. ip ²	
	頁(葉)	7. ip ² , hip ²	(Ball: /hip/)

咸開三：嚴業
平
嚴

見 溪 群 疑	嚴	8. ngim ⁵¹	
	杓鉞屬	9. —	
曉 匣			
影 喻云 喻以	醺	10. im ⁵⁵	(/ip ² / C.--cf. 106-8)

咸開三：嚴業
上
儼

見 溪 群 疑	儼~然, ~若,	11. ngim ⁵¹	(1)

(1) Chen gave the same pronunciation on two separate occasions.

咸開三：嚴業	
去	
醒	
見 溪 群 疑	劍 1. kim ²²
	欠 2. him ²²
	醒～茶 3. --

咸開三：嚴業	
入	
業	
見 溪 群 疑	劫 4. kip ²
	怯畏～ 5. hip ²
	業 6. ngip ²
	曉 7. hip ²
匣 影 喻云 喻以	脛 8. ip ²

咸開四：添帖	
平	
添	
端 透 定	掂～掇(占) 9. tim ²²
	添 10. t'im ⁵⁵
	甜 11. t'im ⁵¹
泥 來	貼～魚 12. --
	拈～起來 13. nim ⁵⁵

見 溪 群 疑	兼	1. kim ⁵⁵
	*謙 ~ 菜	2. kim ⁵⁵
	謙	3. him ⁵⁵
曉 匣	嫌	4. him ⁵¹

咸開四：添帖		
上		
忝		
端 透	點	5. tim ¹³
	舔以舌取物	6. t'im ¹³
	忝	7. t'im ¹³
定	簞席	8. --
見 溪 群 疑	歉	9. hip ²

咸開四：添帖		
去		
忝		
端 透 定	店	10. tin ²² (Chao: /tim ²² /)
	塾	11. --
	忝 ~ 筆	12. t'im ¹³
泥 來	念	13. nim ²²
精 清 從 心 邪	僭	14. tsim ²²

見 溪 群 疑	* 歎 1. hip ²	
	咸開四：添帖	
端 透 定	入 帖	
	跌(貼)	2. tit ² (cf. 132-10)
	帖碑~, 請~	3. t'ip ²
	貼	4. t'ip ²
	疊	5. tip ²
	碟(疊)	6. tip ²
	牒	7. tip ²
	蝶	8. tip ²
	諜	9. tip ²
泥	不發茶	10. --
	捻	11. --
來		
	* 挾~ _a 12. kip ² ; a) ka:p ²	
見 溪 群 疑		
曉 匣	協	13. hip ²
	俠	14. hip ² , ha:p ²
	挾~制	15. hip ²

非 敷 奉 微	咸合三：凡乏	
	平	
	凡	
	凡	1. fa:n ⁵¹
	帆	2. fa:n ⁵¹

非 敷 奉 微	咸合三：凡乏	
	上	
	范	
	范	3. fa:n ²²
	範	4. fa:n ²²
	犯	5. fa:n ²²

非 敷 奉 微	咸合三：凡乏	
	去	
	梵	
	泛	6. fa:n ²²
	梵	7. fa:n ⁵¹

非 敷 奉 微	咸合三：凡乏	
	入	
	乏	
	法方~, ~子	8. fa:t ²
	乏	9. fa:t

	深開三：侵緝		
	平		
	侵		
泥	林	1. lam ⁵¹	
來	淋～漓，～濕	2. lam ⁵¹	
	臨	3. lam ⁵¹	
	霖	4. lam ⁵¹	
精	侵	5. ts'am ⁵⁵	
清			
從	心	6. sam ⁵⁵	
心	尋	7. ts'am ⁵¹	
邪			
知	琛	8. sam ⁵⁵	
徹	沉	9. ts'am ⁵¹	
澄			
莊	簪	10. tsa:m ⁵⁵ (cf. 92-8)	
初	參～差	11. ts'a:m ⁵⁵ (cf. 92-9)	
牀	岑	12. sam ¹³ (Chao: /sam ⁵¹ /)	
山	森	13. sam ⁵⁵	
	參人～	14. sam ⁵⁵	
照	針	15. tsam ⁵⁵	
	斟	16. tsam ⁵⁵	
穿			
神	深	17. sam ⁵⁵	
審			
禪			
日	壬	18. jam ⁵¹	
	任姓	19. jam ²² (cf. 113-2) (Chao: /jam ⁵¹ /)	

見 溪 群 疑 曉 匣 影 喻云 喻以	今	1.	kam ⁵⁵	
	金	2.	kam ⁵⁵	
	禁~不住	3.	kam ²²	(cf. 113-5)
	襟	4.	k'am ⁵⁵	
	欽	5.	k'am ⁵⁵	
	衾	6.	k'am ⁵⁵	
	琴	7.	k'am ⁵¹	
	禽	8.	k'am ⁵¹	
	擒	9.	k'am ⁵¹	
	吟	10.	jam ⁵¹ , ngam ⁵¹	(1)
	歌	11.	—	
	音	12.	jam ⁵⁵	
	陰	13.	jam ⁵⁵	
	淫	14.	jam ⁵¹	

深開三：侵緝				
上				
寢				
幫 滂 並 明	稟	15.	pan ¹³	
	品	16.	p'an ¹³	
泥 來	櫟	17.	lam ¹³	
	凜	18.	lam ¹³	
	廩~生	19.	lam ¹³	
精 清 從 心 邪	寢	20.	ts'am ¹³	
	葦	21.	—	

(1) /ngam⁵¹/ 'to grumble'.

(1)	知			
	徹			
	登	朕	1. tsam ²²	
	照	枕	2. tsam ¹³	
	穿			
	神	甚桑~	3. --	
	審	沈	4. sam ¹³	
		審	5. sam ¹³	
		*嬌	6. sam ¹³	
	禪	甚	7. sam ²²	
	見	錦	8. kam ¹³	
	溪			
	群			
	疑			
	影	飲~酒	9. jam ¹³	
		飲米湯	10. jam ¹³	
	喻云			
	喻以			

[深開三：侵緝		
		去		
		沁		
	泥	賃租~	11. jam ²²	
	來	臨	11.1. lam ²²	(Chao)]
	精	浸	12. tsam ²²	
	清	叱貓~	13. --	
	從			
	心			
	邪			
[莊			
	初	識	13.1. ts'am ²²	(Chao)]
	牀			
	山	滲水~透	14. sam ²²	

(1) 日 initial: 112-7.1. 捻 /nam¹³/ (Chao).

照穿神審禪	枕動詞 1. tsam ²²
日	任貴~ 2. jam ²² 紅縫~ 3. jam ²² 妊 4. jam ²²
見溪群疑	禁~止 5. kam ²² 揷按(+檢) 6. kam ²² *姪舅母 7. k'am ¹³
影	蔭屋子很~ 8. jam ⁵⁵ (Chao: /jam ²² /) (1) 窖地~子 9. -- (2) 飲~馬 10. jam ¹³ (cf. 112-9/10)
喻云 喻以	

	深開三：侵緝 入 緝
泥來	立 11. lap ² 笠 12. lap ⁵ 粒 13. nap ⁵
精清從 心邪	緝~鞋口，偵~ 14. ts'ap ⁵ 集 15. tsap ² 輯編~ 16. ts'ap ⁵ (Chao: /ts'ap ² /) 習 17. tsap ² 襲 18. tsa:p ²

(1) /jam⁵⁵/ is colloquial.

(2) Chen gave /am²²/ the first time, and nothing on the second reading.

知				
徹				
澄	蟄驚～	1.	tsik ²	
莊				
初				
牀				
山	澀	2.	--	
	濇	3.	--	
照	執	4.	tsap ⁵	
	汁	5.	tsap ⁵	
穿				
神				
審	濕	6.	sap ⁵	
禪	十	7.	sap ²	
	什～物	8.	sap ²	
	拾～起來	9.	sap ²	
日	入	10.	jap ²	(1)
見	急	11.	kap ⁵	
	級	12.	k'ap ⁵	
	給～你，供～	13.	k'ap ⁵	
	汲	14.	k'ap ⁵	
溪	泣	15.	jap ⁵	
	囁	16.	--	
群	及	17.	kap ²	
[疑	岌	17.1.	k'ap ²	(Chao)]
曉	吸	18.	k'ap ⁵	(Chao: /k'ap ⁵ /, ngap ⁵ /) (2)
匣				
影	邑	19.	jap ⁵	
	• 揖作～	20.	jap ⁵	
喻云				
喻以				

(1) 114-10a. 廿 /ngap²/ 'twenty'.

(2) 114-18a. 介 /hap⁵/ (Chao).

山開一：寒曷		
平		
寒		
端 透 定	丹	1. ta:n ⁵⁵
	單～獨	2. ta:n ⁵⁵
	灘	3. t'a:n ⁵⁵
	攤	4. t'a:n ⁵⁵
	檀	5. t'a:n ⁵¹
	壇	6. t'a:n ⁵¹
	彈～琴	7. t'a:n ⁵¹
泥 來	難～易	8. na:n ⁵¹
	蘭	9. la:n ⁵¹
	攔	10. la:n ⁵¹
	欄	11. la:n ⁵¹
精 清 從 心 邪	餐	12. ts'a:n ⁵⁵
	殘	13. ts'a:n ⁵¹
	珊	14. sa:n ⁵⁵
見 溪 群 疑	干	15. kon ⁵⁵
	肝	16. kon ⁵⁵
	竿竹～	17. kon ⁵⁵
	乾～濕	18. kon ⁵⁵
	奸	19. ka:n ⁵⁵
	看～守	20. hon ⁵⁵
	刊	21. ha:n ⁵⁵
曉 匣	鼾睡時～聲	22. hon ²² (L.), hon ⁵¹ (C.)
	寒	23. hon ⁵¹
	韓	24. hon ⁵¹
影	安	25. on ⁵⁵
	鞍	26. on ⁵⁵
喻云		
喻以		

山開一：寒曷	
上	
旱	
端 透 定	揮鷄毛～子(担) 1. --
	坦 2. t'a:n ¹³
	誕 3. ta:n ²²
	袒 4. t'a:n ¹³
泥 來	懶 5. la:n ¹³
精 清 從 心	散鞋帶～了 6. sa:n ¹³
	傘 7. sa:n ²²
邪	
見	桿(簪) 8. hon ¹³
	桿稻～ 9. kon ¹³
	*拌～麵 10. --
	[趕] 11. kon ¹³
	侃 12. ha:n ¹³
溪 群 疑	
曉 匣	罕 13. ha:n ¹³ (Chao: also /ha:n ¹³ /)
	旱 14. hon ¹³

山開一：寒曷	
去	
翰	
端 透 定	旦 15. ta:n ²²
	炭 16. t'a:n ²²
	歎 17. t'a:n ²²
	但 18. ta:n ²²
	彈子～ 19. ta:n ²²
	蛋(彈) 20. ta:n ²²
	憚 21. --

泥 來	難患～	1. na:n ²²
	爛	2. la:n ²²
精	贊	3. tsa:n ²²
	潛發	4. tsa:n ²²
清 從 心 邪	燦	5. ts'a:n ²²
	散分～	6. sa:n ²²
見	幹	7. kon ²²
	看～見	8. hon ²²
溪 群 疑	岸	9. ngon ²²
	漢	10. hon ²²
曉 匣	汗	11. hon ²²
	鐸～鐵壺	12. hon ²²
影	翰	13. hon ²²
	按	14. on ²²
喻云 喻以	案	15. on ²²

端 透 定 泥 來	山開一：寒曷 入 曷	
	樹 瀨水～	16. -- (1)
泥 來	達	17. ta:t ²
	捺撇～	18. na:t ²
泥 來	辣	19. la:t ²
	＋痢（癩）	20. --

(1) 117-16a. 捷 /t'a:t²/ (Chao).

精			
清	擦 (擦)	1.	ts'a:t ²
從			
心	* 撒 ~ 手, ~ 種 (𦵏)	2.	sa:t ²
	薩	3.	sa:t ²
邪			
見	割	4.	kot ²
	葛	5.	kot ²
溪	渴	6.	hot ²
群			
疑			
曉	喝 ~ 采, 𠵼 ~	7.	hot ²
匣	曷	8.	hot ²

	山開二：山黠		
	平		
	山		
莊			
初			
牀	潺 水聲	9.	sa:n ⁵¹
山	山	10.	sa:n ⁵⁵
見	艱	11.	ka:n ⁵⁵
	間 空 ~, 中 ~	12.	ka:n ⁵⁵
溪			
群			
疑			
曉			
匣	閑	13.	ha:n ⁵¹
	閒	14.	ha:n ⁵¹

	山開二：山黠	
	上	
	產	
莊	盞	1. tsa:n ¹³
初	鏟	2. ts'a:n ¹³
牀	棧	3. tsa:n ²² (cf. 121-9)
山	產	4. tsa:n ¹³
見	簡	5. ka:n ¹³
	欄	6. ka:n ²²
	柬	7. ka:n ¹³
	揀	8. ka:n ¹³
溪		
群		
疑	眼	9. nga:n ¹³
曉		
匣	限	10. ha:n ²²

	山開二：山黠	
	去	
	欄	
幫	扮	11. pa:n ²²
滂	盼	12. p'a:n ²²
並	瓣	13. fa:n ²²
	辦	14. pa:n ²²
明		
知		
徹		
澄	綻破～	15. tsa:n ²²
見	間～斷，～或	16. ka:n ²²
溪		
群		
疑		
曉		
匣	覓～榮	17. ha:n ²² , hin ²²

	山開二：山黠	
	入	
	黠	
幫	八	1. pa:t ²
滂	拔	2. pa:t ²
並	抹～布，～桌子（*摸）	3. ma:t ² , mut ² (cf. 136-23) (Chao: /mat ² /)
明		
莊	札	4. tsa:t ²
	紮	5. tsa:t ²
	扎	6. tsa:t ²
初	察	7. ts'a:t ²
牀		
山	殺	8. sa:t ²
見		
溪	搗用刀刮	9. --
群		
疑		
影	軋被車～，～棉花	10. tsa:t ²
喻云		
喻以		

	山開二：刪鎋	
	平	
	刪	
幫	班	11. pa:n ⁵⁵
	斑	12. pa:n ⁵⁵
	頒	13. pa:n ⁵⁵
	扳	14. p'a:n ⁵⁵ (cf. 120-16)
滂	攀	15. p'a:n ⁵⁵
	扳	16. p'a:n ⁵⁵
並	片（*盼）	17. ts'iong ⁵¹
明	蠻	18. ma:n ⁵¹

莊			
初			
牀			
山	刪	1. sa:n ⁵⁵	
見	姦	2. ka:n ⁵⁵	
	姦	3. ka:n ⁵⁵	
溪			
群			
疑	顏	4. nga:n ⁵¹	

山開二：刪 鎋

上

潛

幫

板 5. pa:n¹³

版 6. pa:n¹³

滂

並

明

(1)

山開二：刪 鎋

去

諫

幫

滂

並

明

莊

初

牀

山

樗紐~ 7. --

慢 8. ma:n²²

棧 9. tsa:n²²

疝~氣 10. sa:n²²

(1) 娘 initial: 121-6.1. 報 /na:n¹³/ (Chao).

見	諫	1. ka:n ²²
	潤	2. ka:n ²²
	鐫車～	3. ka:n ²²
溪		
群		
疑	雁	4. nga:n ²²
影	晏晚也	5. a:n ²²
喻云		
喻以		

	山開二：刪 鎋
	入
	鎋
莊	
初	刹 6. sa:t ²
牀	鋤～刀 (鋤) 7. --
山	
曉	瞎 8. hat ²
匣	轄管～ 9. hat ²

	山開三：仙 薛
	平
	仙
幫	• 鞭 10. pin ⁵⁵
	• 編 11. p'in ⁵⁵
滂	• 篇 12. p'in ⁵⁵
	• 偏 13. p'in ⁵⁵
並	• 便～宜 14. pin ²² (cf. 125-6)
明	• 綿 15. min ⁵¹
	• 棉 16. min ⁵¹
泥	
來	連 17. lin ⁵¹
	聯 18. lyn ⁵¹
	鏈 19. lin ⁵¹

精	煎	1.	tsin ⁵⁵	
清	遷	2.	ts'in ⁵⁵	
	韃	3.	ts'in ⁵⁵	
從	錢	4.	ts'in ⁵¹	
心	仙	5.	sin ⁵⁵	
	鮮新~	6.	sin ⁵⁵	
邪	涎	7.	in ⁵¹ (/sa:n ⁵¹ / C.)	
知				
徹	纏			
澄	纏	8.	ts'in ⁵¹	
照	氍	9.	tsin ⁵⁵	
	旃	10.	--	
穿				
神	羶	11.	tsin ⁵⁵	
審	搨 (扇)	12.	sin ²² (cf. 125-17)	
	煽	13.	sin ²² (cf. 125-18)	
禪	蟬	14.	sim ⁵¹	
	禪~宗	15.	sim ⁵¹	
日	然	16.	in ⁵¹	
	燃	17.	in ⁵¹	
見				
溪				
群	乾~坤	18.	k'in ⁵¹	
	虔	19.	k'in ⁵¹	
	掬 (勸)	20.	kin ⁵⁵ (1)	
	犍~爲縣	21.	--	
疑				
影	薦食物不新鮮	22.	--	
喻云	焉心不在~	23.	in ⁵¹	
喻以	延	24.	in ⁵¹ (Ball: /ngin/)	
	筵	25.	in ⁵¹	

(1) Chen gave the same pronunciation on two separate readings.

山開三：仙薛	
上	
彌	
幫 滂 並 明	辨 1. pin ²²
	辯 2. pin ²²
	免 3. min ¹³
	勉 4. min ¹³
	婉分~ 5. min ¹³
	・緬 6. min ¹³
	・澗~池 7. --
	晃 8. min ¹³
泥 來	碾 9. tsin ¹³
	輦 10. --
精 清 從 心	剪 11. tsin ¹³
	淺 12. ts'in ¹³
	踐 13. ts'in ¹³
	鮮~少 14. sin ⁵⁵ (cf. 123-6) (Chao: /sin ¹³ /)
	癢 15. sin ¹³
邪	
知	展 16. tsin ¹³
徹	
澄	
照	
穿	
神	
審	
禪	善 17. sin ²²
	繕 18. sin ²²
見	・因 19. --
溪	・遣 20. hin ¹³
群	件 21. kin ²²
疑	

影
喻云
喻以

演 1. in¹³

	山開三：仙薛
	去
	線
幫	變 2. pin ²²
滂	騙～馬 3. p'in ²²
	〔騙〕欺～ 4. p'in ²²
並	汴 5. pin ²²
	· 便方～ 6. pin ²²
明	· 面 7. min ²²
泥	碾 8. tsin ¹³ (cf. 124-9)
來	
精	箭 9. tsin ²²
	濺～一身水 10. tsin ²² , tsin ⁵⁵ , tsa:n ²² (C.)
清	
從	賤 11. tsin ²²
	餞～行 12. tsin ²²
心	線 13. sin ²²
邪	羨 14. sin ²²
照	戰 15. tsin ²²
	顫 16. tsin ⁵⁵ (1)
穿	
神	
審	扇 17. sin ²²
	煽 18. sin ²²
禪	膳 19. sin ²²
	單姓 20. sin ²²
	禪～讓 21. sim ⁵¹ (cf. 123-15)
	擅 22. sin ²²

(1) /tsin⁵⁵/ in e.g., /tsin⁵⁵ hon⁵¹ tsin⁵⁵ la:ng¹³/ 顫寒顫冷
'shivering cold, to have the chills'.

見 溪 群 疑	諺	1. ngin ²²	
	山開三：仙薛		
	入		
	薛		
幫	別區～	2. pit ²	
	• 鼈	3. pit ²	
	• 慙	4. --	
滂	別離～	5. pit ²	
並	• 滅	6. mit ²	
明			
泥			
來	列	7. lit ²	
	烈	8. lit ²	
	裂	9. lit ²	
精			
清			
從			
心	薛	10. sit ²	
	泄～漏	11. sit ²	
	褻	12. tsi ²²	(1)
邪			
知	哲	13. tsit ²	
	蜚 蠅子～人	14. --	
徹	徹	15. ts'it ²	
	撤	16. ts'it ²	
澄	轍	17. ts'it ²	
	澈	18. ts'it ²	

- (1) Chen reconfirmed the pronunciation of /tsi²²/ on the second reading of the word.

照	折~斷	1.	tsit ²
	浙	2.	tsit ²
穿	掣	3.	tsaj ²
神	舌	4.	sit ²
審	設	5.	ts'it ²
禪	折弄~了	6.	tsit ²
日	熱	7.	ngit ²
見	• 子	8.	k'it ²
溪			
群	傑	9.	kit ²
疑	孽	10.	ngit ² (Chao: /ngit ⁵ /)
影			
喻云			
喻以	拽拖	11.	--

	山開三：元月		
	平		
	元		
見	健~子	12.	--
溪			
群			
疑	言	13.	ngyn ⁵¹ (Ball: /ngün/ or /ngín/; Chao: /ngin ⁵¹ /)
曉	軒	14.	hin ⁵⁵
	掀	15.	hin ⁵⁵ (Chao: /hin ⁵⁵ /, /hyn ⁵⁵ /) (1)
匣			
影	薦花葵	16.	--
喻云			
喻以			

(1) Chen gave /hun⁵⁵/ the first time, and /hin⁵⁵/ the second time.

見 溪 群 疑	山開三：元月 上 阮
	鍵 1. kyn ²²

見 溪 群 疑	山開三：元月 去 願
	建 2. kyn ²²
疑 曉	健 3. kyn ²²
	腿 4. --
匣 影	憲 5. hin ²²
	獻 6. hyn ²²
喻云 喻以	堰 7. im ¹³

見 溪 群 疑	山開三：元月 入 月
	揭 8. k'it ² (L.), hit ² (C.)
	竭 9. k'it ²

曉	歇	1. hit ²	
	蠍	2. k'it ²	
匣			
影	謁	3. k'it ²	(Ball: also /k'it/)
喻云			
喻以			

山開四：先屑			
平			
先			
幫	邊	4. pin ⁵⁵	
	編	5. p'in ⁵⁵	
滂			
	駢～體文	6. p'in ⁵¹	
並	眠	7. min ⁵¹	
端	顛	8. tin ⁵⁵	
	癲	9. tin ⁵⁵	
透	天	10. t'in ⁵⁵	
	田	11. t'in ⁵¹	
定	填	12. t'in ⁵¹	
	滇	13. t'in ⁵¹	
泥	年	14. nin ⁵¹	
	憐	15. lin ⁵¹	
來	蓮	16. lin ⁵¹	
精	箋	17. tsin ⁵⁵	
	千	18. ts'in ⁵⁵	
清	前	19. ts'in ⁵¹	
	先	20. sin ⁵⁵	
從			
心			
邪			
見	肩	21. kin ⁵⁵	
	堅	22. kin ⁵⁵	
溪	牽	23. hin ⁵⁵	
群			
疑	研	24. ngin ⁵¹	

曉匣	賢	1.	hin ⁵¹
	弦	2.	hyn ⁵¹
	絃	3.	hyn ⁵¹
影	煙(烟)	4.	in ⁵⁵
	燕~京, 姓	5.	in ⁵⁵
喻云			
喻以			
山開四：先屑			
	上		
	銑		
幫	扁	6.	pin ¹³
	匾	7.	pin ¹³
滂			
並	辦	8.	pin ⁵⁵
明			
端	典	9.	tin ¹³
	腆~肚子	10.	tin ¹³
透			
定			
泥	撚以指~碎	11.	nan ¹³ (C.)
	攢(蹠)	12.	--
來			
見	繭	13.	kin ¹³ (Chao: also /kin ¹³ /)
	趺	14.	ngin ⁵¹
	筧以竹通水	15.	--
溪			
群			
疑			
曉匣	顯	16.	hin ¹³

山開四：先屑		
去		
霰		
幫	遍～	1. p'in ²²
	遍～地	2. p'in ²²
	偏	3. p'in ⁵⁵ , p'in ²²
	片	4. p'in ²²
	麪	5. min ²²
滂		
並		
明		
端		
透		
定	電	6. tin ²²
	殿	7. tin ²²
	奠	8. tin ²²
	佃	9. tin ²² , t'in ⁵¹
	墊～錢(填)	10. tsin ²² (1)
泥		
來	練	11. lin ²²
	鍊	12. lin ²²
	棟～樹	13. --
精		
清		
從		
心		
邪		
見	見	15. kin ²² (Ball: /ngin/)
溪		
群		
疑		
曉		
匣		
	現	17. hin ²² (Ball: /ngin/)

(1) Chen gave /tsin²²/ on two separate occasions.

影	燕~子	1.	in ²²
	嚙	2.	it ²
	宴	3.	in ²²
喻云			
喻以			
<hr/>			
	山開四：先屑		
	入		
	屑		
<hr/>			
幫	慙 (閉)	4.	—
滂	撇~捺，~開	5.	p'it ²
	瞥	6.	p'it ²
並			
明	篋竹~	7.	mit ²
<hr/>			
端			
透	鐵	8.	t'it ²
定	迭	9.	tit ²
	跌	10.	tit ²
<hr/>			
泥	捏	11.	nip ² (Chao: also /nip ² /)
來			
<hr/>			
精	節	12.	tsit ²
清	切~開	13.	ts'it ²
	沕	14.	--
	竊	15.	ts'ip ² (1)
從	截	16.	tsit ²
心	屑不~，米~	17.	sit ²
	屑木~	18.	sit ²
	楔~子，~橛子	19.	sit ²
邪			

(1) The same pronunciation was given on two separate occasions.

見	結	1.	kit ²	
	潔	2.	kit ²	
	鏢 鏢刀	3.	--	
溪				
群				
疑	臬	4.	--	(1)
影	噎~住了	5.	it ²	
喻云				
喻以				

	山合一：桓末			
	平			
	桓			
幫	般	6.	p'un ⁵⁵	
	搬 (般)	7.	pun ⁵⁵	
滂	潘	8.	p'un ⁵⁵	
	拚~命	9.	p'un ¹³ , p'ing ²²	
	盤	10.	p'un ⁵¹	
	磐	11.	p'un ⁵¹	
	瘢	12.	pa:n ⁵⁵	
明	瞞 (謾)	13.	mun ⁵¹	
	餵	14.	ma:n ²²	
端	端	15.	tyn ⁵⁵	
透				
定	團	16.	t'yn ⁵¹	
	* 糰	17.	t'yn ⁵¹	
泥				
來	鸞	18.	lyn ⁵¹ (Ball: /nün/)	
	鑾	19.	lyn ⁵¹ (Ball: /nün/)	
精	鑽動詞, ~洞	20.	tsyn ²² (L.) (cf. 136-2), tsyn ⁵⁵ (C.)	
清	朶~丸子 (* 爨)	21.	--	
從				
心	酸	22.	syn ⁵⁵	
邪				

(1) 133-4a. 𪛗 /ngit²/ (Chao).

見 溪 群 疑	官	1.	kun ⁵⁵
	棺	2.	kun ⁵⁵
	觀參~	3.	kun ⁵⁵
	冠衣~	4.	kun ⁵⁵
	寬	5.	hun ⁵⁵
曉 匣	歡	6.	hun ⁵⁵
	桓	7.	hun ⁵¹
	完	8.	yn ⁵¹
	丸肉~, 彈~	9.	yn ⁵¹
	紈~袴	10.	yn ⁵¹
影	豌~豆	11.	un ¹³
	剗	12.	--
喻云			
喻以			

	山合一, 桓末
	上
	緩
幫	
滂	
並	伴 13. p'un ²² (L.), p'un ¹³ (C.) (1)
	拌 (+ 拌) 14. p'un ²²
明	滿 15. mun ¹³
端	短 16. tyn ¹³
透	瞳 17. --
定	斷~絕, ~續 18. tyn ²² (L.), t'yn ¹³ (C.)
泥	暖 19. nyn ¹³
來	卵 20. lɔn ¹³

(1) /p'un¹³/ occurs in e.g., /jaw¹³ p'un¹³/ 有伴 'companionable'.

精	纂編~ 1. --
清	攢積~ (價) 2. tsyn ²² (1)
從	
心	
邪	
見	管 3. kun ¹³
	*館 4. kun ¹³
溪	款 5. k'un ¹³
群	
疑	
曉	
匣	緩 6. hun ²²
	皖安徽 (皖) 7. k'un ¹³
影	碗 (碗, 盪) 8. un ¹³
喻云	
喻以	

	山合一：桓末
	去換
幫	半 9. pun ²²
	絆 10. p'un ²²
滂	判 11. p'un ²²
	泮 12. p'un ²²
	胖 13. p'un ²²
並	叛 14. p'un ²²
明	漫 15. ma:n ²²
	幔 16. ma:n ²²
端	斷決~ 17. tyn ²²
	鍛~鍊 18. tyn ²²
透	
定	段 19. tyn ²²
	緞 (段) 20. tyn ²²
	榦 21. tyn ²²

(1) /tsa:n²²/ was given by Chen on the first reading, and /tsyn²²/ on the second.

泥	亂	1. lyn ²²
來	鑽木工用具，金鋼～	2. tsyn ²²
精	鼠	3. ts'yn ¹³
清		
從		
心	*算(筭)	4. syn ²²
	蒜	5. syn ²²
邪		
見	貫	6. kun ²²
	灌	7. kun ²²
	*罐(罐)	8. kun ²²
	觀寺～	9. kun ²²
	冠～軍	10. kun ²²
溪		
群		
疑	玩古～，遊～	11. ngun ²²
曉	喚	12. hun ²²
	煥	13. hun ²²
匣	換	14. un ²²
影	腕	15. un ¹³ , yn ¹³
喻云		
喻以		

	山合一：桓末	
	入	
	末	
幫	鉢	16. put ²
	撥	17. put ²
滂	潑	18. p'ut ²
並	鉢	19. pa:t ²
	跋	20. pa:t ²
明	末	21. mut ²
	沫	22. mut ²
	抹	23. mut ² , ma:t ² (cf. 120-3) (Chao: /mat ² /)

端	掇拾~, 兩手~起	1. tsyt ² , tsøj ²²
透	掇拈~ (效)	2. tsyt ² , tsøj ²²
定	脫	3. t'yt ²
	奪	4. tyt ²
泥		
來	捋~袖	5. lyt ² (/la:p ² / C.)
精		
清	撮一~米	6. ts'yt ²
從		
心		
邪		
見	括包~	7. k'ut ²
	聒~耳朵	8. kwa:t ²
溪	闊	9. hut ²
群		
疑		
曉	豁~然, ~嘴, ~口	10. k'ut ²
匣	活	11. ut ²
影	幹~旋	12. k'un ¹³
喻云		
喻以		

	山合二：山黠	
	平	
	山	
見	鰥	13. kwa:n ⁵⁵
溪		
群		
疑	頑~皮, ~固	14. nga:n ⁵¹ (Chao: /ngwa:n ⁵¹ /)

	山合二：山黠	
	去 禡	
曉 匣	幻	1. wa:n ²²
	山合二：山黠	
	入 黠	
曉 匣	滑	2. wa:t ²
	猾狡～	3. wa:t ²
影 喻云 喻以	挖(挖)	4. wa:t ²
	山合二：刪鐸	
	平 刪	
莊 初 牀 山	門(機)	5. sa:n ⁵⁵
	拴(*栓)	6. ts'yn ⁵¹ (cf. 140-4)
見 溪 群 疑	關	7. kwa:n ⁵⁵
	頑～皮, ~固	8. nga:n ⁵¹ (Chao: /ngwa:n ⁵¹ /)
曉 匣	還～原	9. wa:n ⁵¹
	還～有	10. wa:n ⁵¹ (1)
	環	11. wa:n ⁵¹

- (1) 還 is used colloquially in Zhong-shan, as opposed to Cantonese which uses 重 [tsUŋ³³] for 'still, yet'.

影	彎	1. wa:n ⁵⁵
	灣	2. wa:n ⁵⁵

喻云
喻以

山合二：刪 鎋

上

潛

莊
初
牀
山

撰 3. tsa:n²²

山合二：刪 鎋

去

諫

莊
初
牀
山

纂 4. sa:n²²

涮~洗 5. ts'a:t²

見

慣 6. kwa:n²²

串 7. ts'yn²² (cf. 142-10)

溪
群
疑

曉
匣

患 8. wa:n²²

宦 9. wa:n²²

	山合二：刪鐺 入 鐺
莊 初 牀 山	刷 1. ts'a:t ²
見 溪 群 疑	刮 2. kwa:t ²

	山合三：仙薛 平 仙
(1) 精 清 從 心 邪	瘡 3. ts'yn ⁵¹ 拴 4. ts'yn ⁵¹ 全 5. ts'yn ⁵¹ 泉 6. ts'yn ⁵¹ 宣 7. syn ⁵⁵ 旋 8. syn ⁵¹
知 徹 澄	傳達 ~ 9. ts'yn ⁵¹ 橡 10. yn ⁵¹
照 穿 神 審 禪	專 11. tsyn ⁵⁵ 磚 (甄) 12. tsyn ⁵⁵ 膊雞 ~ 13. sɔn ⁵¹ 川 14. ts'yn ⁵⁵ 穿 15. ts'yn ⁵⁵ 船 16. syn ⁵¹ 篙盛穀具 17. --

(1) 來 initial: 140-2.1. 孃 /lyn⁵⁵/ (Chao).

見溪群	* 圈圓 ~ (捲) 1. hyn ⁵⁵	
	拳	2. k'yn ⁵¹
	權	3. k'yn ⁵¹
	顴 ~ 骨	4. k'yn ⁵¹
	鬆	5. k'yn ⁵¹
疑		
影喻云	圓	6. yn ⁵¹
	員	7. yn ⁵¹
	緣	8. yn ⁵¹
	沿	9. yn ⁵¹
	鉛	10. yn ⁵¹
	捐	11. kyn ⁵⁵
精清從心邪	山合三：仙薛	
	上獮	
知徹澄	選	12. syn ¹³
	轉 ~ 眼 , ~ 送	13. tsyn ¹³
照穿	篆	14. syn ²²
	喘	15. ts'yn ¹³
神審禪	舛 ~ 誤	16. —
	軟	17. ngyn ¹³

見 溪 群 疑	捲～起	1. kyn ¹³	
	圈豬～	2. hyn ⁵⁵	
影			
喻云			
喻以	充	3. --	
	山合三：仙薛		
	去		
	線		
泥 來	戀	4. lyn ¹³	
	穗～糊 (+ 梅)	5. --	
精 清 從 心 邪			
	旋～吃～做	6. syn ⁵¹	(cf. 140-8)
	鏟～牀	7. syn ⁵¹	
知 徹 澄	轉～螺絲，～圓圈	8. tsyn ²²	
	傳～記	9. tsyn ²²	
照 穿	串 (穿)	10. ts'yn ²²	
	釧	11. ts'yn ⁵⁵	
神 審 禪			
見 溪 群 疑	脊	12. kyn ²²	
	卷	13. kyn ¹³	(1)
	・絹	14. kyn ²²	
	倦	15. kyn ²²	

(1) Also used as a classifier for books in Zhong-shan. An alternate pronunciation is /kun¹³/.

影 喻云 喻以	院	1. yn ²²
	山合三：仙薛 入 薛	
泥 來	劣	2. lyt ²
精 清 從 心 邪	勢～斷	3. tsyt ²
	絕	4. tsyt ²
	雪	5. syt ²
知 徹 澄	輟不～	6. tsyt ²
照 穿 神 審 禪	拙	7. tsyt ²
	說～話	8. syt ²
影 喻云 喻以	悅 閱	9. yt ² 10. yt ²

	山合三：元月		
	平		
	元		
非	藩	1. fa:n ⁵¹	(cf. 144-6)
敷	翻	2. fa:n ⁵⁵	
	番 幾～	3. fa:n ⁵⁵	
	繙	4. fa:n ⁵⁵	
奉	煩	5. fa:n ⁵¹	
	藩	6. fa:n ⁵¹	
	礬	7. fa:n ⁵¹	
	繁	8. fa:n ⁵¹	
微			
見			
溪			
群			
疑	元	9. ngyn ⁵¹	
	原	10. ngyn ⁵¹	
	源	11. ngyn ⁵¹	
曉	喧	12. hyn ⁵⁵	
匣			
影	冤	13. yn ⁵⁵	
喻云	袁	14. yn ⁵¹	
	轅	15. yn ⁵¹	
	園	16. yn ⁵¹	
	援～救	17. yn ⁵¹	
	垣	18. hun ⁵¹	
喻以			

山合三：元月	
上 阮	
非 敷 奉 微	反 1. fa:n ¹³
	晚 2. ma:n ¹³
	挽 3. wa:n ¹³
見 溪 群 疑	
影	阮 4. ngyn ¹³
	宛 5. un ¹³
	苑 6. yn ²²
	婉 7. un ¹³
喻云 喻以	遠 8. yn ¹³

山合三：元月	
去 願	
非 敷 奉 微	販 9. fa:n ²²
	𪔐鳥下蛋 10. --
	𪔐 11. fa:n ²²
	萬 12. ma:n ²²
	蔓瓜～子 13. ma:n ²²
見 溪 群 疑	
勸	券 14. hyn ²²
	券 15. hyn ²²
群 疑	願 16. ngyn ²²

曉匣	棺鞋～	1. hyn ²²	
影	怨	2. yn ²²	
喻云			
喻以			
	山合三：元月		
	入月		
非	髮	3. fa:t ²	
	發	4. fa:t ²	
敷			
奉	伐	5. fa:t ²	
	筏	6. fa:t ²	
	罰	7. fa:t ²	
微	襍	8. ma:t ²	
見	厥	9. k'yt ²	
	歷脾氣～(歷)	10. --	
	子子～	11. k'yt ²	
溪	闕宮～	12. k'yt ²	
群	掘	13. kwat ²	(cf. 165-14)
	概～子	14. --	
疑	月	15. ngyt ²	
影	噦乾～	16. --	
喻云	越	17. yt ²	
	日	18. yt ²	
	粵	19. yt ²	
	鎮	20. --	
喻以			

	山合四：先屑 平 先
見 溪 群 疑	涓～滴 1. kyn ⁵⁵
曉 匣	玄 2. hyn ⁵¹ 懸 3. hyn ⁵¹
影 喻云 喻以	淵 4. yn ⁵⁵

	山合四：先屑 上 銑
見 溪 群 疑	犬 5. k'yn ¹³

	山合四：先屑 去 霰
曉 匣	縣 6. yn ²² 眩 7. hyn ⁵¹ (Chao: /hyn ¹³ /)

山合四：先屑	
入屑	
見 溪 群 疑	決 1. k'yt ² (Chao: /k'yt ² /, /k'yt ² / (1))
	訣 2. k'yt ²
	缺 3. k'yt ²
曉 匣	血 4. hyt ²
	穴 5. yt ²
臻開一：痕	
平痕	
端 透 定	吞 6. t'an ⁵⁵
見 溪 群 疑	跟 7. kan ⁵⁵
	根 8. kan ⁵⁵
曉 匣	痕 9. han ⁵¹ (/ha:j ⁵¹ / C.)
影 喻云 喻以	恩 10. jan ⁵⁵

- (1) Chao: /k'yt²/ occurs in e.g., /k'yt² tyn²²/ 決斷 'to decide',
and /k'yt²/ in /k'yt² haw¹³/ 決口 'a rupture'.

	臻開一：痕 上 很
見 溪	懇 1. han ¹³ 壑 2. han ¹³ 齷老鼠～ 3. ngan ⁵¹ (cf. 155-5.1)
群 疑	
曉 匣	很 (狠) 4. han ¹³

	臻開一：痕 去 恨
見 溪 群 疑	艮 5. ngan ⁵¹
曉 匣	恨 6. han ²²

	臻開三：眞 (臻) 質 (櫛) 平 眞 (臻)
幫	彬 7. pan ⁵⁵ ・賓 8. pan ⁵⁵ ・櫛～櫛 9. pan ⁵⁵ ・濱 10. pan ⁵⁵
滂 並	貧 11. p'an ⁵¹ ・頻～繁 12. p'an ⁵¹
明	閩～越 13. man ¹³ ・民 14. man ⁵¹

泥 來	鄰	1.	lan ⁵¹	
	鱗	2.	lan ⁵¹	
	燐	3.	lan ⁵¹	
	麟	4.	lan ⁵¹	
精 清 從 心	津	5.	tsɔŋ ⁵⁵	
	親	6.	ts'an ⁵⁵	
	秦	7.	ts'ɔŋ ⁵¹	
	辛	8.	san ⁵⁵	
	新	9.	san ⁵⁵	
	薪	10.	san ⁵⁵	
邪 知 徹 澄	珍	11.	tsan ⁵⁵	
	陳	12.	ts'an ⁵¹	
	塵	13.	ts'an ⁵¹	
莊	榛	14.	--	
	臻	15.	tsɔŋ ⁵⁵	
初 牀 山 照 穿 神 審	眞	16.	tsan ⁵⁵	
	神	17.	san ⁵¹	
	身	18.	san ⁵⁵	
	申	19.	san ⁵⁵	
	伸	20.	san ⁵⁵	
	娠	21.	tsan ²²	(cf. 153-4)
	紳	22.	san ⁵⁵	
	辰	23.	san ⁵¹	
	晨	24.	san ⁵¹	
	臣	25.	san ⁵¹	
日	人	26.	jan ⁵¹	
	仁	27.	jan ⁵¹	

見 溪 群 疑 影 喻云 喻以	巾	1. kan ⁵⁵
	銀	2. ngan ⁵¹
	• 因	3. jan ⁵⁵
	• 姻	4. jan ⁵⁵
	• * 涸(湮)	5. jan ⁵⁵
	• 寅	6. jan ⁵¹
臻開三：眞(臻)質(櫛)		
上 軫		
幫 滂 並 明	• 牝	7. p'an ¹³
	憫	8. man ¹³
	敏	9. man ¹³
	• 泯(* 昏)	10. man ¹³
	• 泯~滅	11. man ¹³
	儘~前(盡)	12. tsan ²²
精 清 從 心 邪	盡	13. tsan ²²
照	診	14. ts'an ¹³
	疹	15. ts'an ¹³
穿 神 審 禪 日	晒	15.1. ts'an ¹³ (Chao)]
	腎	16. san ²² (L.), san ¹³ (C.)
	忍	17. jan ¹³ (L.), ngan ¹³ (C.)

見 溪 群 疑 影	• 緊	1. kan ¹³
喻云 喻以	• 引	2. jan ¹³
臻開三：真（臻）質（櫛） 去 震		
幫	• 殯	3. pan ²²
滂 並 明	• 鬢	4. pan ²²
泥	各～箇	5. lan ²²
來	進	6. tsan ²²
精	晉	7. tsan ²²
清	親～家	8. ts'an ⁵⁵ (L.) (cf. 150-6), ts'an ²² (C.)
從	信	9. san ²² (Chao: /san ²² /, sɒn ²² /)
心	訊	10. san ²²
[邪	火盞	10.1. tsan ¹³ (Chao)]
知	鎮	11. tsan ²²
徹	趁	12. ts'an ²²
澄	陣	13. tsan ²²
莊 初 牀 山	襯	14. ts'an ²²

照	振	1. tsan ²²	(Chao: /tsan ¹³ /)
	震	2. tsan ²²	
	賑	3. tsan ²²	
	娠	4. tsan ²²	
穿 神 審 禪	慎	5. san ²²	(2)
	刃	6. jan ²²	
日	認	7. jan ²²	(/nging ²² / C.)
	靱	8. ngan ²²	
見 溪 群 疑	僅	9. kan ¹³	
	髒挑~	10. hyn ²²	(3)
曉 匣	· 印	11. jan ²²	
	喻云 喻以		

臻開三：眞 (臻) 質 (櫛)			
入			
質 (櫛)			
幫	筆	12. pat ⁵	
	· 畢	13. pat ⁵	
	· 必	14. pit ⁵ , pit ²	
	· 匹—~布, —~馬	15. p'at ⁵	
滂 並 明	弼	16. pat ²	
	密	17. mat ²	
	· 蜜	18. mat ²	
泥 來	暱	19. nik ²	
	栗	20. lət ²	

(1) Chen gave /tsan¹³/ the second time.

(2) Chen gave /søn²²/ the first time.

(3) Given by Chen on two separate occasions.

精 清 從 心 邪	七	1.	ts'at ⁵	
	漆	2.	ts'at ⁵	
	疾	3.	tsat ²	
	悉	4.	sik ⁵	
	膝	5.	sat ⁵	
知 徹 澄	窒~礙	6.	tsat ²	
	姪	7.	tsat ²	
	秩	8.	tit ²	
莊 初 牀 山	瑟	9.	sek ⁵	(1)
	蝨	10.	sat ⁵	
照 穿 神 審 禪	質	11.	tsat ⁵	
	實	12.	sat ²	
	失	13.	sat ⁵	
	室	14.	sat ⁵	
日	日	15.	jat ²	
見 溪 群 疑	·吉	16.	kat ⁵	
	·詰~問	17.	k'it ²	
影	乙	18.	yt ²	
	·一	19.	jat ⁵	
喻云 喻以	·逸	20.	jat ²	

(1) Same pronunciation given by Chen and Yang.

臻開三：殷迄

平
殷

見 溪 群	斤	1. kan ⁵⁵	
	筋	2. kan ⁵⁵	
	勤	3. k'an ⁵¹	
	芹	4. k'an ⁵¹	
	勸	5. k'an ⁵¹	
[疑		5.1. ngan ⁵¹]	
曉 匣	欣	6. hyn ⁵⁵ , jan ⁵⁵	(1)
影	殷	7. jan ⁵⁵	
	慇	8. jan ⁵⁵	
喻云 喻以			

臻開三：殷迄

上
隱

見 溪 群 疑	謹	9. kan ¹³	
	近	10. kan ²² (L.), k'an ¹³ (C.)	
影	隱	11. jan ¹³	
	癮	12. jan ¹³	
喻云 喻以			

(1) /hun⁵⁵/ was given the first time by Chen.

見 溪 群 疑	臻開三：殷迄
	去 焮
見 溪 群 疑	勁有~(𪛗) 1. king ²² (cf. 202-13)
	近 2. kan ²² (L.), k'an ¹³ (C.) (cf. 155-10)

見 溪 群 疑	臻開三：殷迄
	入 迄
見 溪 群 疑	訖 3. ngat ⁵
	乞 4. ha:t ⁵ (Chao: also /ha:t ⁵ /)
曉 匣	迄 5. ngat ²

幫 滂 並 明	臻合一：魂沒
	平 魂
幫 滂 並 明	奔 6. pan ⁵⁵
	* 鏹 7. pan ⁵⁵
幫 滂 並 明	噴~水 8. p'an ²² (cf. 158-13)
	盆 9. p'un ⁵¹
端 透 定	門 10. mun ⁵¹
	捫 11. mun ⁵⁵
端 透 定	敦~厚 12. tøn ⁵⁵ (Chao: /tan ⁵⁵ /)
	墩 13. tøn ⁵⁵ (L.), tan ¹³ (C.)
端 透 定	屯 14. tan ¹³ (Chao: /t'yn ⁵¹ /)
	豚 15. t'yn ⁵¹
端 透 定	鈍 (ㄉㄨㄣˋ) 16. tøn ²² , a) t'an ⁵⁵
	臀 17. t'yn ⁵¹
端 透 定	燉 18. tøn ²² (L.), tan ²² (C.)

來	論~語	1.	lan ²²	(cf. 159-2)	(Chao: /lan ⁵¹ /, /lan ⁵⁵ /) (1)
	齋	2.	lan ⁵¹		
精 清 從	尊	3.	tsyn ⁵⁵		
	村	4.	ts'yn ⁵⁵		
	存	5.	ts'yn ⁵¹		
	蹲	6.	ts'yn ¹³	(2)	
	孫	7.	syn ⁵⁵		
見	昆	8.	k'wan ⁵⁵		
	崑	9.	k'wan ⁵⁵		
	坤	10.	k'wan ⁵⁵		
溪 群 疑 曉	昏	11.	fan ⁵⁵		
	婚	12.	fan ⁵⁵		
	惛	13.	fan ⁵⁵		
	魂	14.	wan ⁵¹		
	鯤~鈍	15.	wan ²²	(L.), wan ⁵¹ (C.)	
	渾~濁	16.	wan ²²	(cf. 158-10)	
影	溫	17.	wan ⁵⁵		
	*瘟	18.	wan ⁵⁵		
喻云					
喻以					

臻合一：魂沒

上

混

幫 滂 並 明	本	19.	pun ¹³		
	笨	20.	pan ²²		

(1) /lan⁵⁵/ occurs in the expression, /lan⁵⁵ siong²² lan²² lok²/ 論上論落 'to chatter incessantly'.

(2) The same pronunciation was given on two separate occasions.

端 透 定	圉	1. tan ¹³
	沌	2. tɔ̃n ²² (L.), tan ²² (C.)
	盾矛~, 趙~	3. t'ɔ̃n ¹³ (Chao: /tɔ̃n ¹³ /)
精 清 從 心 邪	擗	4. --
	忖	5. ts'yn ¹³
	損	6. syn ¹³
見 溪 群 疑	𡗗滾	7. kwan ¹³
	綑(綑)	8. k'wan ¹³
曉 匣	混相~, ~沌	9. wan ²²
	渾~濁	10. wan ²²
影 喻云 喻以	穩	11. wan ¹³

臻合一：魂沒		
去恩		
幫 滂 並 明	遶(奔)	12. pan ⁵⁵ (cf. 156-6)
	噴~香, ~嚏	13. p'an ²
端	悶	14. mun ²²
	頓	15. tɔ̃n ²²
透 定	鈍	16. --
	〔褪〕	17. t'uj ²²
	鈍	18. tɔ̃n ²²
	遁	19. tɔ̃n ²²

泥 來	嫩	1. nyn ²²	
	論議~	2. lan ²²	(Chao: also /lan ²² / here---cf. 157-1)
精			
清	寸	3. ts'yn ²²	
從			
心	遜	4. san ²²	
邪			
見	〔棍〕	5. kwan ²²	
溪	困	6. k'wan ²²	
群			
疑			

臻合一：魂沒

入
沒

幫 滂 並	〔不〕	7. pat ⁵	
	勃	8. put ²	
	埤~土	9. put ²	
	餽麵~	10. --	
	脖頸~	11. put ²	
明	沒沉~, ~有	12. mut ²	

端
透
定

突 13. tat² (/tyt⁵/ C.)

精	卒兵~	14. tsøt ⁵	
清	猝倉~	15. ts'yt ²	
從	猝	15.1. ts'yt ² (L.), ts'øt ² (C.)	(cf. 162-14.1)]
心			
邪			

見 溪 群 疑	骨筋~, ~頭	1. kwat ⁵
	窟~窿	2. kwat ² (/fat ⁵ / C.)
	杌~子, ~凳	3. ngat ² , ngat ⁵
曉 匣	忽	4. fat ⁵
	*核 (欄)	5. hat ² (L.), wat ² (C.)

	臻合三：諄術	
	平	
	諄	
泥 來	倫	6. lan ⁵¹
	淪	7. lan ⁵¹
	輪	8. lan ⁵¹
精 清	遵	9. tsøn ⁵⁵
	皺臉~	10. --
	竣~工	11. tsan ²²
從 心	荀	12. søn ⁵¹
	詢咨~	13. søn ⁵⁵
	旬	14. søn ⁵¹
邪	循	15. søn ⁵¹
	巡	16. ts'øn ⁵¹
知 徹 澄	椿~樹	17. --
	肫~肝	18. søn ⁵¹
	諄	19. søn ⁵¹
穿 神 審 禪	春	20. ts'øn ⁵⁵
	脣	21. søn ⁵¹
	純	22. søn ⁵¹
	純~菜	23. søn ⁵¹
	醇酒味~	24. søn ⁵¹

見	· 均	1. k'wan ⁵⁵
	· 鈞	2. k'wan ⁵⁵
溪		
群		
疑		
影		
喻云		
喻以	· 勻	3. wan ⁵¹
臻合三：諄術		
上		
準		
精		
清		
從		
心	筍	4. san ¹³
	· 樺～頭	5. san ¹³
邪		
照	準	6. tsøn ¹³
	淮	7. tsøn ¹³
穿	蠢	8. ts'øn ¹³
神	盾 矛～	9. t'øn ¹³ (Chao: /tøn ¹³ /) (cf. 158-3)
審		
禪		
見		
溪		
群	窘	10. k'wan ²²
	菌	11. k'wan ¹³
疑		
影		
喻云	隕	12. wan ¹³
	殞	13. wan ¹³
喻以	· 允	14. wan ¹³
	· 尹	15. wan ¹³

	臻合三：諄術 去 禪	
精	俊	1. tsan ²²
清		
從	迅	2. san ²²
心	濬～河	3. tsan ²²
邪	殉	4. sɔn ⁵¹ , sɔn ⁵⁵
照		
穿		
神	順	5. sɔn ²²
審	舜	6. sɔn ²²
	瞬	7. sɔn ¹³
禪		
日	潤	8. jan ²²
	閏	9. jan ²²

	臻合三：諄術 入 術	
泥		
來	律	10. lɔt ²
	* 率速～	11. lɔt ²
精	卒	12. tsɔt ⁵
清	煖火～手了	13. tsan ²²
	* 黠～黑	14. tsan ²²
[從	梓	14.1. ts'yt ² (L.) (cf. 159-15.1), ts'ɔt ² (C.)]
心	戍	15. sɔt ⁵
	恤	16. sɔt ⁵
邪		
知	紕	17. tsyt ²
徹		
澄	尤白～，蒼～	18. sɔt ²

莊 初 牀 山	率~領 蜂	1. sɔt ⁵ 2. sɔt ⁵
照 穿 神	出 術 述 紬	3. ts'ɔt ⁵ 4. sɔt ² 5. sɔt ² 6. sɔt ²
審 禪		
見 溪 群 疑	· 橘	7. kwat ⁵

	臻合三：文物	
	平	
	文	
非	分~開	8. fan ⁵⁵
敷	芬	9. fan ⁵⁵
	紛	10. fan ⁵⁵
奉	焚	11. fan ⁵¹
	墳	12. fan ⁵¹
	殯 牡豕	13. —
微	文	14. man ⁵¹
	紋	15. man ⁵¹
	蚊	16. man ⁵⁵
	聞	17. man ⁵¹

見 溪 群 疑 曉	君	1. kwan ⁵⁵	
	軍	2. kwan ⁵⁵	
	群	3. k'wan ⁵¹	
	裙	4. k'wan ⁵¹	
匣 影 喻云 喻以	熏	5. fan ⁵⁶	
	勳	6. fan ⁵⁵	
	薰	7. fan ⁵⁵	
	葷	8. wan ⁵¹ , fan ⁵⁵ (1)	(Chao: /fan ⁵⁵ /)
	云	9. wan ⁵¹	
	雲	10. wan ⁵¹	

臻合三：文物			
上			
吻			
非 敷 奉 微	粉	11. fan ¹³	
	憤	12. fan ¹³	
	* 忿	13. fan ¹³	
	吻	14. man ¹³	
	勿	15. man ¹³	

臻合三：文物			
去			
問			
非 敷 奉 微	糞	16. fan ²²	
	奮	17. fan ¹³	
	份(分)一 ~兩~	18. fan ²²	
	問	19. man ²²	
	豐裂~	20. --	

(1) /fan⁵⁵/ occurs in e.g., /fan⁵⁵ ts'oj²²/ 葷菜 'a meat diet'.

見 溪 群 疑 曉 匣 影 喻云 喻以	郡	1. kwan ²²
	訓	2. k'wan ²²
	熨 (* 熨)	3. -- (/t'ong ²² / C.)
	韻	4. wan ²²
	運	5. wan ²²
	暈	6. wan ⁵¹ (Chao: /wang ²² /)
臻合三：文物		
入 物		
非 敷 奉 微	弗	7. fat ⁵
	拂 彷彿	8. fat ⁵
	拂	9. fat ⁵
	佛	10. fat ²
	物	11. mat ²
	勿	12. mat ²
見 溪 群 疑	屈	13. wat ⁵ (Chao: /k'wat ⁵ /, /wat ⁵ /)
	掘	14. kwat ²
	掘 ~ 強	15. k'wat ⁵
影 喻云 喻以	鬱	16. wat ⁵

右開一：唐鐸	
平	
唐	
幫	幫 1. pong ⁵⁵
滂	滂～沱 2. p'ong ⁵¹
並	旁 3. p'ong ⁵¹
	螃蟹 4. pong ¹³
明	忙 5. mong ⁵¹
	芒 6. mong ⁵⁵ (see also: 178-17)
	茫 7. mong ⁵⁵ (Chao: also /mong ⁵⁵ /)
端	當～時，應～ 8. tong ⁵⁵
透	湯 9. t'ong ⁵⁵
定	堂 10. t'ong ⁵¹
	棠 11. t'ong ⁵¹
	螳～螂 12. t'ong ⁵¹
	唐 13. t'ong ⁵¹
	糖 14. t'ong ⁵¹
	塘 (隄) 15. t'ong ⁵¹
泥	囊 16. nong ⁵¹
來	郎 17. long ⁵¹
	廊 18. long ⁵¹
	狼 19. long ⁵¹
	螂 20. long ⁵¹
	榔 21. long ⁵¹
精	臟 22. tsong ⁵⁵
	[麟] 不乾淨，骯～ 23. tsong ²²
	臧 24. tsong ⁵⁵
清	倉 25. ts'ong ⁵⁵
	蒼 26. ts'ong ⁵⁵
從	藏隱～ 27. ts'ong ⁵¹
心	桑 28. song ⁵⁵
	喪婚～ 29. song ⁵⁵
邪	

見 溪 群 疑	岡	1. kong ⁵⁵
	崗	2. kong ⁵⁵
	剛	3. kong ⁵⁵
	綱	4. kong ⁵⁵
	鋼	5. kong ⁵⁵
	缸 (甌)	6. kong ⁵⁵
	康	7. hong ⁵⁵
	糠	8. hong ⁵⁵
	昂	9. ngong ⁵¹
曉 匣	行~列, 鐵~	10. hong ⁵¹
	航	11. hong ⁵¹
	杭	12. hong ⁵¹
影 喻云 喻以	〔飢〕~解	13. k'ong ²²

宕開一：唐鐸		
上 蕩		
幫 滂 並 明	榜	14. pong ¹³
	莽	15. mong ¹³
	蟒	16. mong ¹³
端 透 定	黨	17. tong ¹³
	〔擋〕阻~	18. tong ¹³
	*倘~使	19. t'ong ¹³
	躺 (*踢)	20. t'ong ¹³
泥 來	蕩放~	21. tong ²²
	曩	22. -- (Chao: /nong ¹³ /)
	朗	23. long ¹³

精 清 從 心	礫 枉下石	1. --
	* 噪	2. song ⁵⁵
	* 操	3. --
邪 見 溪 群 疑	慷～慨	4. k'ong ¹³
宕開一：唐鐸		
幫 滂 並	去 宕	
	謗	5. p'ong ²²
	傍 謗	6. pong ²² , p'ong ⁵¹ 7. --
明 端 透 定 泥 來	當～作，典～ 燙（湯） 〔趟〕～ 宕延～	8. tong ²² 9. t'ong ²² 10. t'ong ²² 11. --
精 清 從 心 邪	浪	12. long ²²
	葬	13. tsong ²²
	藏西～ * 臟 喪～失	14. tsong ²² 15. tsong ²² 16. song ²²

見 溪 群 疑	鋼刀鈍了，～～	1. kong ²²
	〔扛〕	2. --
	抗	3. k'ong ²²
	炕	4. k'ong ²²
	* 園 藏	5. --

宕開一：唐鐸		
入		
鐸		
幫 滂 並 明	博	6. pok ²
	泊 (灤) 梁山～	7. pa:k ² (1)
	薄	8. pok ²
	泊	9. pok ² , p'ok ² , p'a:k ² (cf. also 169-7)
	莫	10. mok ²
	膜	11. mok ²
	幕	12. mok ²
	寞	13. mok ²
	摸	14. mo ¹³ (L.), mo ⁵¹ (L.), mo ⁵⁵ (C.) (cf. 14-8)
端 透 定	託	15. t'ok ²
	托 (拓) 手承物	16. t'ok ²
	鐸	17. tok ²
	踱	18. tok ²
	度 揣～	19. tok ²
泥 來	諾	20. nok ²
	落	21. lok ²
	烙	22. lok ²
	駱	23. lok ²
	酪	24. lok ²
	洛	25. lok ²
	絡	26. lok ²
	樂	27. lok ²

(1) 169-7a. 膊 /pok²/, /fok²/.

精 清 從	作~坊, 工~	1.	tsok ²
	錯~雜	2.	ts'ok ²
	鑿	3.	tsok ²
	昨	4.	tsok ² , tsiok ² (1)
	柞橡~	5.	tsa ²²
心 邪 見	索繩~, ~取, ~性	6.	sok ²
溪 群 疑	各	7.	kok ²
	閣	8.	kok ²
	擱 (閣)	9.	kok ²
	胎~臂	10.	kok ²
曉	鄂	11.	ngok ²
	鰐	12.	ngok ²
匣 影 喻云 喻以	郝姓	13.	--
	蕞蜂~人	14.	--
	壑	15.	k'ok ²
匣 影 喻云 喻以	鶴	16.	hok ² (2)
	惡善~	17.	ok ²

宕開三：陽 藥			
平			
陽			
泥	娘	18.	niong ⁵¹
	孃	19.	jong ²²
來	良	20.	liong ⁵¹
	涼	21.	liong ⁵¹
	量~長短	22.	liong ⁵¹
	糧	23.	liong ⁵¹
	梁	24.	liong ⁵¹
	梁	25.	liong ⁵¹

(1) /tsiok²/ occurs in the word /tsiok² jat^{2,5}/ 昨日 'yesterday'.

(2) 170-16a. 絡 (Ball: /lok/).

精	將~來	1.	tsiong ⁵⁵
	漿	2.	tsiong ⁵⁵
清	槍	3.	ts'iong ⁵⁵
	戕	4.	ts'iong ⁵¹
從	牆	5.	ts'iong ⁵¹
	相互~	6.	siong ⁵⁵
心	箱	7.	siong ⁵⁵
	廂	8.	siong ⁵⁵
	湘	9.	siong ⁵⁵
	襄	10.	siong ⁵⁵
	鑲	11.	siong ⁵⁵
	詳	12.	ts'iong ⁵¹
邪	祥	13.	ts'iong ⁵¹
知	張	14.	tsiong ⁵⁵
	長~短	15.	ts'iong ⁵¹
徹	腸	16.	ts'iong ⁵¹
	場	17.	ts'iong ⁵¹
莊	莊	18.	tsong ⁵⁵
	裝	19.	tsong ⁵⁵
	妝	20.	tsong ⁵⁵
	瘡	21.	ts'ong ⁵⁵
初	牀	22.	ts'ong ⁵¹
	霜	23.	siong ⁵⁵
山	孀	24.	siong ⁵⁵

照	章	1.	tsiong ⁵⁵
	樟	2.	tsiong ⁵⁵
	彰	3.	tsiong ⁵⁵
穿	昌	4.	ts'iong ⁵⁵
	菖~蒲	5.	ts'iong ⁵⁵
	倡~優	6.	ts'iong ⁵⁵
神 審 禪	商	7.	siong ⁵⁵
	傷	8.	siong ⁵⁵
	常	9.	siong ⁵¹
	嘗	10.	siong ⁵¹
	裳衣~	11.	siong ⁵¹
	償	12.	siong ¹³
日	瓢瓜~	13.	jong ²² (L.), nong ⁵¹ (C.)
	穰禾莖	14.	--
見	疆	15.	kiong ⁵⁵
	僵	16.	kiong ⁵⁵
	薑	17.	kiong ⁵⁵
	疆~石	18.	kiong ⁵⁵
	纒~繩	19.	kiong ⁵⁵
	姜	20.	kiong ⁵⁵
	羌	21.	kiong ⁵⁵
	强	22.	k'iong ⁵¹
溪 群 疑	香	23.	hiong ⁵⁵
	鄉	24.	hiong ⁵⁵
匣			

影	央	1.	jong ⁵⁵
	秧	2.	jong ⁵⁵
	殃	3.	jong ⁵⁵
喻云			
喻以	羊	4.	jong ⁵¹
	洋	5.	jong ⁵¹
	烱融化	6.	jong ⁵¹
	楊	7.	jong ⁵¹
	陽	8.	jong ⁵¹
	揚	9.	jong ⁵¹
	瘍潰~	10.	tong ²² (1)
	伴	11.	ts'iong ⁵¹

宕開三：陽藥

上

養

泥 來	兩~個	12.	niong ¹³
	兩幾~幾錢	13.	liong ¹³
精	蔣	14.	tsiong ¹³
	獎	15.	tsiong ¹³
	槳	16.	tsiong ¹³
清 從	搶	17.	ts'iong ¹³
	想	18.	siong ¹³
心	養	19.	--
	象	20.	tsiong ²²
邪	像	21.	tsiong ²²
	橡~樹	22.	tsiong ²²
知	長生~	23.	tsiong ¹³
	*張(長)	24.	tsiong ²²
徹 澄	丈	25.	tsiong ²²
	仗	26.	tsiong ²²
	杖	27.	tsiong ²²

(1) The same pronunciation was given on two separate occasions.

莊 初 牀 山 照 穿 神 審 禪 日	闖 (搶) a	1. ts'ong ¹³	((a) is /ts'iong ¹³ /--cf. 173-17))
	爽	2. song ¹³	
	掌	3. tsiong ¹³	
	廠	4. ts'ong ¹³	
	賞	5. siong ¹³	
	晌 (餉) ~ 午	6. hiong ¹³	
	上 ~ 山	7. siong ¹³	
	壤土 ~	8. jong ²²	
	攘	9. jong ²²	
	嚷 (攘)	10. jong ²²	
見 溪 群 疑 曉	强 (強) 勉 ~, 佃 ~	11. k'iong ¹³	
	仰	12. jong ¹³	
	享	13. hiong ¹³	
	響	14. hiong ¹³	
匣 影 喻云 喻以	養	15. jong ¹³	
	癢	16. jong ¹³	

泥 來	宕開三：陽藥		
	去		
	漾		
	釀	17. jong ²²	
	亮	18. liong ²²	
	諒	19. liong ²²	
	輶 (兩)	20. liong ¹³	(cf. 173-13)
	量數 ~	21. liong ²²	

精	醬	1.	tsiong ²²	
	將大~	2.	tsiong ²²	
清 從 心	匠	3.	tsiong ²²	
	相~貌	4.	siong ²²	
邪				
知	帳	5.	tsiong ²²	
	賬(帳)	6.	tsiong ²²	
徹	賬	7.	tsiong ²²	
	暢	8.	t'iong ²²	(1)
澄	悵	9.	tsiong ²²	
莊	壯	10.	tsong ²²	
	創	11.	ts'iong ²²	(Chao: /ts'ong ¹³ /)
初	狀	12.	tsong ²²	
牀				
山				
照	障保~	13.	tsiong ²²	
	瘴~氣	14.	tsiong ²²	
穿	唱	15.	ts'iong ²²	
	倡提~	16.	ts'iong ⁵⁵	(cf. 172-6)
神				
審	餉	17.	hiong ¹³	
	尙	18.	siong ²²	
禪	上~面, 在~	19.	siong ²²	
日	讓	20.	jong ²²	
曉	向	21.	hiong ²²	
匣				
影				
喻云				
喻以	樣	22.	jong ²²	
	恙	23.	jong ²²	
	漾	24.	jong ²²	

- (1) Chen not only gave the same pronunciation the second time, but he also tried to explain its usage and definition.

	宕開三：陽藥
	入藥
泥來	略 1. liok ²
	掠 2. liong ²²
精	爵 3. tsiok ²
	雀麻～ 4. tsiok ²
清	鵲喜～ 5. tsiok ²
從	嚼 6. tsiok ²
心	削 7. siok ²
邪	
知	着(著)～衣 8. tsiok ²
徹	
澄	着(著)睡～，附～ 9. tsiok ²
照	酌 10. tsiok ²
穿	綽寬～ 11. ts'io ²
	✦戟～起棍子 12. --
	[焯]把菜放在水裏～～ 13. ts'io ²
神	
審	
禪	勺～子 14. ts'io ²
	芍～藥花 15. ts'io ²
日	若 16. jok ²
	弱 17. jok ²
見	脚 18. kiok ²
溪	却 19. kiok ²
群	
疑	虐 20. jok ²
	瘡～疾，發～子 21. jok ²
影	約 22. jok ²
喻云	
喻以	藥 23. jok ²
	鑰～匙 24. --
	躍 25. jok ²

	宕合一：唐鐸	
	平	
	唐	
見 溪 群 疑	光	1. kong ⁵⁵
曉	荒	2. fong ⁵⁵
	✦ 慌	3. fong ⁵⁵
匣	黃	4. wong ⁵¹
	簧鎖～	5. wong ⁵¹
	皇	6. wong ⁵¹
	蝗	7. wong ⁵¹
	惶	8. wong ⁵¹
	煌	9. wong ⁵¹
	遑	10. wong ⁵¹
影 喻云 喻以	汪～水	11. wong ⁵⁵

	宕合一：唐鐸	
	上	
	蕩	
見 溪 群 疑	廣	12. kong ¹³
曉	誑(誑)說～	13. fong ⁵⁵
	恍	14. fong ¹³
匣	晃～眼	15. fong ¹³

見 溪 群 疑	宕合一：唐鐸		
	去		
	宕		
	桃	1. --	(1)
	曠	2. k'ong ²²	

見 溪 群 疑	宕合一：唐鐸		
	入		
	鐸		
	郭	3. kok ²	
	廓	4. kok ²	
	✦擴(張)~充	5. k'ong ²²	
曉	霍	6. k'ok ²	
	霍~香	7. k'ok ²	
	剗用刀~開	8. --	
	鑊鍋	9. wok ²	

非 敷 奉 微	宕合三：陽藥		
	平		
	陽		
	方	10. fong ⁵⁵	
	肪脂~	11. fong ⁵⁵	
	芳	12. fong ⁵⁵	
	妨~害	13. fong ⁵¹	
	房	14. fong ⁵¹	
	防	15. fong ⁵¹	
	亡	16. mong ⁵¹	
	芒麥~見	17. mong ⁵⁵	(2)
	忘	18. mong ⁵¹	

(1) Chen gave /kong¹³/ and /kong²²/; he did not know which was the correct pronunciation and stated so.

(2) 芒 is used for fuel in the cooking stoves. (稗 /kon¹³/ is also used for the same purpose.)

見 溪	匡	1. hong ⁵⁵
	筐	2. hong ⁵⁵
	眶眼~	3. hong ⁵⁵
	狂	4. k'ong ⁵¹
群 疑		
影		
喻云	王	5. wong ⁵¹
喻以		

	宕合三：陽藥	
	上	
	養	
非 敷	倣~效	6. fong ¹³
	紡	7. fong ¹³
	仿相似	8. fong ¹³
	彷彿	9. fong ¹³
奉 微	網	10. mong ¹³
	輜車~	11. mong ¹³
影	枉	12. wong ¹³
	往	13. wong ¹³
喻云		
喻以		

	宕合三：陽藥	
	去	
	漾	
非 敷	放	14. fong ²²
	訪	15. fong ¹³
奉 微	忘	16. mong ⁵¹ (cf. 178-18)
	妄	17. mong ²²
	望	18. mong ²²

見	逛 (徃) 1. k'ong ⁵¹ (L.), k'wa:ng ²² (C.)
溪	誑 2. k'ong ⁵¹
群	
疑	
曉	況 3. fong ²² (Ball: /k'ong/)
匣	
影	
喻云	旺興~, 火~ 4. wong ²²
喻以	

	宕合三：陽藥
	入
	藥
非	
敷	
奉	縛 5. fok ² (Chao: also /fok ² /; Ball: /pok/)
微	
見	鏹~頭, 大鋤 6. -- (1)
溪	
群	
疑	
影	
喻云	鑷收絲器 7. k'ok ²
喻以	

	江開二：江覺
	平
	江
幫	邦 8. pong ⁵⁵
滂	胖 (臍) 腫 9. p'un ²² (cf. 182-5 and 135-13)
並	龐 10. p'ong ⁵¹
明	朧 11. --

(1) 180-6a. 雙 (Ball: /fok/, /k'ok/).

180-6b. 攞 (Ball: /fok/).

泥 來 知 徹 澄	瀧	1. lung ⁵¹
	椿	2. tsong ⁵⁵
	噏	3. --
	撞	4. tsong ²² (L.), ts'ong ²² (C.)
莊 初 牀 山	窗	5. ts'iong ⁵⁵
	雙	6. siong ⁵⁵
見 溪 群 疑	江	7. kong ⁵⁵
	扛	8. kong ⁵⁵ (Chao: /k'ong ⁵⁵ /)
	缸~豆	9. --
	肛	10. kong ⁵⁵
	腔	11. hong ⁵⁵
曉 匣	夯 (* 輦) 打~	12. --
	降~伏, 投~	13. hong ⁵¹
	缸	14. kong ⁵⁵
江開二：江覺		
上 講		
幫 滂 並	〔綁〕	15. pong ¹³
	棒	16. pong ¹³ , p'a:ng ¹³
	蚌	17. pong ¹³
明		
泥 來	攪 (* 攪) 用刀子	18. --

見	講	1. kong ¹³
	港~口, 香~	2. kong ¹³
	耨~地	3. --
溪 群 疑		
曉 匣	項	4. k'ong ²² , hong ²² (1)
	江開二：江覺 去 絳	
幫 滂 並 明	胖(肸)	5. p'un ²² (cf. 135-13)
知 徹 澄	撞	6. tsong ²² (L.), ts'ong ²² (C.)
莊 初 牀 山	* 雙~生	7. siong ⁵⁵ (cf. 181-6)
見	降下~	8. kong ²²
溪 群 疑	虹天上的~	9. hung ⁵¹ (cf. 213-19) (Chao: /p'ung ⁵¹ /)
曉 匣	巷	10. hong ²²

- (1) /k'ong²²/ occurs in e.g., /ts'o¹³ k'ong²² y¹³/ 楚項羽 '(name of an emperor, and /hong²²/ in e.g., /kaj⁵⁵ hong²²/ 鷄項 'young chicken'. /k'ong²²/ has the wider distribution.

江開二：江覺		
入		
覺		
幫	剝	1. p'ok ² (L.), mok ⁵ (C.), mok ² (C.) (Chao: /luk ⁵ /) (1)
	駁	2. pok ²
滂	樸	3. p'ok ²
	朴	4. p'ok ²
	璞	5. puk ² (2)
並	電	6. pa:w ²²
明		
知	桌	7. ts'io ²
	卓	8. ts'io ²
	琢	9. tiok ² (Chao: also /tiok ² /)
	啄	10. tiok ² , tiong ⁵⁵
	涿~縣, ~鹿	11. --
徹	戳 (戳)	12. luk ⁵ (cf. 220-19) (Chao: /ts'ok ² /)
澄	濁	13. tsuk ²
	濯	14. tik ² (2)
莊	捉	15. tsok ⁵ (Chao: also /tsok ⁵ /)
初		
牀	鐺 (鋌) ~子, 手~	16. tsuk ⁵
	浞 水濕	17. --
山	朔	18. sok ²
見	覺知~	19. kok ²
	角	20. kok ²
	餃 (角 _a) ~子 _a	21. ka:w ¹³ (L.), (a) kok ² (C.)
溪	確	22. k'ok ²
	摧擊, ~蒜	23. k'ok ²
	殼	24. hok ²
群		
疑	嶽	25. ngok ²
	岳	26. ngok ²
	樂音~	27. ngok ²

(1) /mok⁵/ used for e.g., peanuts; /mok²/ used for e.g., clothes.

(2) Same pronunciation given on separate occasions.

曉匣	學	1. hok ²	
影	握	2. ak ⁵	
喻云			
喻以			
	曾開一：登德		
	平		
	登		
幫	崩	3. pang ⁵⁵	
滂	朋	4. p'ang ⁵¹	
並			
明			
端	登	5. tang ⁵⁵	
	燈	6. tang ⁵⁵	
透			
定	藤	7. t'ang ⁵¹	
	騰	8. t'ang ⁵¹	
	騰	9. —	
	藤	10. t'ang ⁵¹	
	疼 (癢)	11. t'ung ²²	(cf. 216-9)
	膝	12. t'ang ⁵¹	
泥	能	13. nang ⁵¹	
來	楞	14. —	
精	曾姓	15. tsang ⁵⁵	
	增	16. tsang ⁵⁵	
	憎	17. tsang ⁵⁵	
清			
從	曾~經	18. ts'ang ⁵¹	
	層	19. ts'ang ⁵¹	
心	僧	20. tsang ⁵⁵	
邪			
曉匣	恆	21. hang ⁵¹ (L.), ha:ng ⁵⁵ (C.)	(1)

- (1) /ha:ng⁵⁵/ occurs in the name of a village in the first qu in the Zhong-shan county: /ha:ng⁵⁵ mi¹³/ 恆美 .

端 透 定 見 溪 群 疑	曾開一：登德	
	上等	
	等	1. tang ¹³
	肯	2. hang ¹³

端 透 定	曾開一：登德	
	去 嶝	
	堯	3. tang ²²
	鎧鞍～	4. --
	鄧	5. tang ²²
	+ 澄水渾，～～	6. tsing ²²
精 清 從 心 邪	贈磨～	7. --
	贈	8. tsang ²²
見 溪 群 疑	互橫～在中間	9. kang ¹³

曾開一：登德	
入	
德	
幫 滂 並 明	北 1. pak ⁵
	墨 2. mak ²
	默 3. mak ²
端	得 4. tak ⁵
	德 5. tak ⁵
	忒~殺, ~好 6. t'ik ⁵ (Chao: /t'ak ⁵ /)
透 定 泥	特 7. tak ²
	肋 8. lak ² , la:k ² (1)
	勒 9. lak ²
精 清 從 心 邪	則 10. tsak ⁵
	賊 11. ts'ak ²
	塞 12. sak ⁵
見 溪	刻時~ 13. k'ak ⁵
	刻用刀~ 14. k'ak ⁵
	克 15. k'ak ⁵
群 疑	
曉 匣	黑 16. ha:k ⁵

- (1) /la:k²/ occurs in /mok² ts'a:k² la:k²/ 剝○肋 'naked down to the waist'.

曾開三：蒸職		
平		
蒸		
幫 滂 並 明	冰	1. ping ⁵⁵
	憑	2. p'ang ⁵¹
泥 來	陵	3. ling ⁵¹
	凌	4. ling ⁵¹
	菱	5. ling ⁵¹
	綾	6. ling ⁵¹
知 徹 澄	徵～求	7. tsing ⁵⁵
	澄	8. ts'ing ⁵¹ (1)
	徵	9. ts'ing ⁵¹
	★ 橙	10. ts'a:ng ⁵¹ (cf. 195-4)
照 穿 神	蒸	11. tsing ⁵⁵
	稱～呼，～重量	12. ts'ing ⁵⁵
	乘	13. sing ⁵¹
	繩	14. sing ⁵¹
審 禪	陸田～	15. --
	升	16. sing ⁵⁵
	勝～任	17. sing ⁵⁵
	承	18. sing ⁵¹
日	丞	19. sing ⁵¹
	仍	20. ing ⁵¹
見	扔	21. --
	兢戰戰～～	22. king ⁵⁵
溪 群 疑	矜	23. king ⁵⁵
	凝	24. nging ⁵¹ (L.), k'ing ⁵¹ (C.)

(1) 187-8a. 瞪 /ts'ang⁵¹/ (Chao).

曉匣	興~旺	1. hing ⁵⁵
影	應~當, ~用	2. ing ⁵⁵
	鷹	3. ing ⁵⁵
喻云		
喻以	蠅	4. ing ⁵¹

	曾開三：蒸職	
	上	
	拯	
照穿神審禪	拯~救	5. ts'ing ¹³

	曾開三：蒸職	
	去	
	證	

(2) 知徹澄照穿神審禪	瞪~眼	6. tsing ²²	(Chao: /tang ²² / (1))
	證	7. tsing ²²	
	症(證)	8. tsing ²²	
	稱相~	9. tsing ²²	
	秤一桿~	10. ts'ing ²²	
	剩	11. sing ²²	
	勝~敗	12. sing ²²	
見溪群疑	凝湯~成凍了	13. nging ⁵¹ (L.), k'ing ⁵¹ (C.)	(cf. 187-24)

(1) Chao: /tang²²/ in /nga:n¹³ tang²² tang²²/ 眼瞪瞪 'to stare fixedly, to glare'.

(2) 並 initial: 188-5.1. 仵 /pang²²/.

曉	興高～	1. hing ²²
匣		
影	應～對，響～，答～	2. ing ²²
喻云		
喻以	孕	3. jan ²²
	曾開三：蒸職	
	入	
	職	
幫	逼	4. pik ⁵
滂		
並		
明		
泥	匿	5. nik ⁵
來	力	6. lik ²
精	稷	7. tsik ⁵
	卽	8. tsik ⁵
	鯽	9. tsik ⁵
清		
從		
心	息	10. sik ⁵
	熄	11. sik ⁵
	媳(息)	12. sik ⁵
邪		
知	植早種禾	13. tsik ²
徹	飭	14. sik ⁵
	敕	15. —
澄	直	16. tsik ²
	值(直)	17. tsik ²

莊 初	側	1. ts'ak ⁵ (L.), tsak ⁵ (C.)
	測	2. ts'ak ⁵
	側	3. ts'ak ⁵
牀 山	色	4. sik ⁵
	齏客~	5. sik ⁵
	渣	6. --
照	織	7. tsik ⁵
	職	8. tsik ⁵
穿 神 審	食	9. sik ²
	蝕	10. sik ²
	識	11. sik ⁵
	式	12. sik ⁵
	飾	13. sik ⁵
	拭	14. sik ⁵
	殖	15. tsik ²
	植	16. tsik ²
見	棘	17. kik ⁵
	亟	18. k'i ²² (cf. 59-13.1)
溪 群 疑	極	19. kik ²
影	憶	20. ik ⁵
	億	21. ik ⁵
	抑	22. ngik ⁵
喻云 喻以	翼	23. ik ²
	弋	24. --

	曾合一：登德 平 登
曉 匣	弘 1. wang ⁵¹
[影	泓 1.1. wang ⁵⁵ (Chao) (a word added to the <u>Ji-yun</u>)] 曾合一：登德 入 德
見 溪 群 疑	國 2. kok ²
曉 匣	或 3. wa:k ² 惑 4. wa:k ²
	曾合三：蒸 入 職
影 喻云 喻以	域 5. wa:k ² (Ball: /wik/ for Shi-qi)
	梗開二：庚陌 平庚 庚
幫 滂 並	烹 6. p'ang ⁵⁵ (1) 彭 7. p'a:ng ⁵¹ 膨～脹 8. p'a:ng ⁵¹
明	盲 9. ma:ng ⁵¹ *虻 (蟲) 牛～ 10. mong ⁵¹

(1) 191-6a. 澎 /p'a:ng⁵⁵/ (Chao).

知 徹 澄	撐	1. ts'a:ng ⁵⁵ (L.), ts'a:ng ²² (C.)
	澄	2. ts'ing ⁵¹ (cf. 187-8)
莊 初 牀 山	鐺烙餅用具	3. tong ⁵⁵
	生	4. sang ⁵⁵ (L.), sa:ng ⁵⁵ (C.)
	牲	5. sang ⁵⁵ (L.), sa:ng ⁵⁵ (C.)
	笙	6. sang ⁵⁵
	甥	7. sang ⁵⁵
	更~換, 五~	8. kang ⁵⁵ (L.), ka:ng ⁵⁵ (C.)
	梗~米	9. --
見	庚	10. kang ⁵⁵
	羹	11. kang ⁵⁵
	坑	12. ha:ng ⁵⁵
	溪	
群 疑	亨	13. hang ²² (L.), ha:ng ⁵⁵ (C.) (1)
	行~爲	14. hang ⁵¹ (L.), ha:ng ⁵¹ (C.)
	衡	15. hang ⁵¹
	匣	

	梗開二：庚陌	
	上 梗	
幫 滂 並 明 端 透 定 泥 來	猛	16. meng ¹³ (L.), ma:ng ¹³ (C.)
	打	17. ta ¹³
	冷	18. lang ¹³ (L.), la:ng ¹³ (C.)

- (1) /ha:ng⁵⁵/ occurs in the name of a village near Ku-chong:
/ha:ng⁵⁵ mi¹³/ 亨尾 .

莊 初 牀 山	省~長	1. sang ¹³	
	省節~	2. sang ¹³	
見	哽骨~在喉	3. kang ¹³	(L.), k'ang ¹³ (C.)
	埂田~	4. kang ¹³	
	梗~子, 莖	5. kang ¹³	
溪 群 疑			
曉 匣	杏	6. hang ²²	
梗開二：庚陌			
去 映			
幫 滂 並 明	孟	7. mang ²²	
知 徹 澄	芽椅子~兒	8. --	
	鋸~光	9. ts'ing ⁵¹	(L.), ts'a:ng ⁵¹ (C.)
	張塞	10. tsa:ng ²²	
見	更~加	11. kang ²²	
溪 群 疑	硬	12. nga:ng ²²	
曉 匣	行品~	13. hang ²²	

梗開二：庚陌	
入	
陌	
幫	百 1. pa:k ²
	柏 2. pa:k ²
	伯 3. pa:k ²
	迫 4. pik ⁵ (Chao: /pik ⁵ /, /pa:k ⁵ /)
滂	拍 5. p'a:k ²
	魄 6. p'a:k ²
	珀 7. p'a:k ²
並	白 8. pa:k ²
	帛 9. pa:k ²
明	拓打 10. --
	陌~生, 阡~ 11. pa:k ² (1)
知	
徹	*拆(坼)開 12. ts'a:k ²
	戚歟 13. --
澄	澤 14. tsak ²
	擇~菜, 選~ 15. tsak ²
	宅 16. tsak ²
莊	窄 17. tsa:k ²
初	踏豆~子, 破豆 18. --
牀	
山	
見	格 19. ka:k ²
溪	客 20. ha:k ²
	咳(喀) 21. k'at ⁵
群	
疑	額 22. nga:k ²
曉	赫 23. ha:k ² (Chao: /hak ² /)
	嚇恐~ 24. ha:k ²
匣	

- (1) Chen gave the same pronunciation on two separate occasions. He also contrasted the Zhong-shan pronunciation with the Cantonese one, which he cites as [mek] in low tone. (Ball: /mák/)
- 194-11a. 緝 (Ball: /mák/).

	梗開二：耕麥		
	平		
	耕		
幫	浜 - 條~	1. pan ⁵⁵	(1)
滂			
並	棚	2. p'a:ng ⁵¹	
明	萌	3. mang ⁵¹	
知			
徹			
澄	橙~子	4. ts'a:ng ⁵¹	
莊	爭	5. tsang ⁵⁵	(L.), tsa:ng ⁵⁵ (C.)
	箏	6. tsang ⁵⁵	
	(睜)	7. tsang ⁵⁵	(L.), ts'a:ng ²²
初			
牀			
山			
見	耕	8. kang ⁵⁵	(L.), ka:ng ⁵⁵ (C.)
溪	鏗	9. hang ⁵⁵	
	· 揜	10. --	
	· 𢇛	11. --	
	· 硜	12. king ²²	(1)
群			
疑			
曉			
匣	莖	13. king ²²	
影	鶯	14. ang ⁵⁵	(Ball: /ing/ in Shi-qi, /ang/ rest of the county)
	鸚~鵒, ~哥	15. ang ⁵⁵ , ing ⁵⁵	
	櫻~桃	16. ing ⁵⁵	
喻云			
喻以			

(1) Same pronunciation was given on two separate occasions.

	梗開二：耕麥
	上
	耿
幫	
滂	
並	蚌 (鮑) 1. pong ¹³ (cf. 181-17)
明	甍 2. —
見	耿 3. kang ¹³
溪	
群	
疑	
曉	
匣	幸 4. hang ²²

	梗開二：耕麥
	去
	諍
幫	迸～裂 5. ping ²²
滂	
並	
明	

	梗開二：耕麥
	入
	麥
幫	擘用手～開 6. p'ia:k ² , ma:k ² (Chao: /mik ⁵ /)
	擘黃～，藥名 7. —
滂	
並	
明	麥 8. ma:k ²
	脈 9. mak ²
知	摘 10. tsak ²
徹	
澄	

莊 初	責	1.	tsa:k ²	
	策	2.	ts'a:k ²	
	冊	3.	ts'a:k ²	
	柵~欄	4.	sa:n ⁵⁵	
牀 山				
見	革	5.	kak ⁵ , ka:k ²	(1)
	隔	6.	ka:k ²	
溪 群 疑				
曉 匣	核審~	7.	hat ²	
	核果子~	8.	hat ² (L.), wat ² (C.)	
	覈	9.	—	
影	扼	10.	ak ⁵	
	輓	11.	—	
	厄	12.	ak ⁵	
喻云 喻以				

	梗開三：庚陌			
	平			
	庚			
幫 滂 並	兵	13.	ping ⁵⁵	
	平	14.	p'ing ⁵¹ (L.), p'ia:ng ⁵¹ (C.)	
	坪	15.	p'ing ⁵¹	
	評	16.	p'ing ⁵¹	
明	鳴	17.	ming ⁵¹	
	明	18.	ming ⁵¹	
	盟	19.	mang ⁵¹	

- (1) /kak⁵/ is pronounced [kɛp⁵] in the word /kak⁵ ming²²/ 革命 'revolution', with /k/ assimilating the point of articulation of the following /m/.

見	京	1. king ⁵⁵
	荆	2. king ⁵⁵
	驚	3. king ⁵⁵ (L.), kia:ng ⁵⁵ (C.)
溪 群	卿	4. hing ⁵⁵
	擎	5. k'ing ⁵¹
	鯨	6. k'ing ⁵¹
疑	迎	7. nging ⁵¹
影	英	8. ing ⁵⁵
喻云		
喻以		
梗開三：庚陌		
上		
梗		
幫	丙	9. ping ¹³
	秉	10. ping ¹³
滂 並		
	皿	11. mang ¹³
見	境	12. king ¹³
	景	13. king ¹³
	警	14. king ¹³
溪 群 疑		
影	影	15. ing ¹³ ([jɪŋ ¹³]) (L.), ja:ng ¹³ (C.)
喻云		
喻以		

梗開三：庚陌	
去映	
幫	柄 1. ping ²² (L.), pia:ng ²² (C.)
滂	病 2. ping ²² (L.), pia:ng ²² (C.)
並	命 3. ming ²² (L.), mia:ng ²² (C.)
明	敬 4. king ²² (L.), kia:ng ²² (C.)
見	竟 5. king ¹³
溪	鏡 6. king ²² (L.), kia:ng ²² (C.)
	慶 7. hing ²²
	競 8. king ²²
群	
疑	
影	映 9. ing ¹³ ([jIn ¹³])
喻云	
喻以	

梗開三：庚陌	
入陌	
幫	碧 10. pik ⁵
滂	
並	
明	
見	戟 11. kik ⁵
溪	隙 12. kwik ⁵ (Ball: /k'wik/ (1))
群	劇~裂 13. k'ia:k ²
疑	劇戲~ 14. k'ia:k ²
	展木~ 15. kia:k ²
	逆順~, ~風 16. ngak ²

(1) Ball gives /k'wik/ for Shi-qi, but /kwik/ or /k'wik/ for Cantonese.

	梗開三：清昔	
	平	
	清	
幫	并	1. ping ²²
滂		
並		
明	名	2. ming ⁵¹ (L.), mia:ng ⁵¹ (C.)
精	精	3. tsing ⁵⁵ (L.), tsia:ng ⁵⁵ (C.)
	晶	4. tsing ⁵⁵
	睛眼～	5. tsing ⁵⁵
	旌	6. tsing ⁵⁵
清	清	7. ts'ing ⁵⁵
從	情	8. ts'ing ⁵¹
	晴	9. ts'ing ⁵¹ (L.), ts'ia:ng ⁵¹ (C.)
	晴～受	10. --
心		
邪		
知	貞	11. tsing ⁵⁵
	禎	12. tsing ⁵⁵
徹	鯉～子	13. --
	偵	14. tsing ⁵⁵
澄	呈	15. ts'ing ⁵¹
	程	16. ts'ing ⁵¹
照	正～月	17. tsing ⁵⁵
	征	18. tsing ⁵⁵
穿		
神		
審	聲	19. sing ⁵⁵ (L.), sia:ng ⁵⁵ (C.)
禪	成	20. sing ⁵¹ (L.), sia:ng ⁵¹ (C.)
	城	21. sing ⁵¹ (L.), sia:ng ⁵¹ (C.)
	誠	22. sing ⁵¹
	盛～滿了	23. sing ²² (L.) (cf. 202-12), sing ⁵¹ (C.)

見 溪 群 疑	輕~重，年~ 1. k'ing ⁵⁵ (L.), hia:ng ⁵⁵ (C.)
影	嬰 2. ing ⁵⁵ 纓 3. ing ⁵⁵
喻云 喻以	盈 4. ing ⁵¹ 贏 5. ing ⁵¹ (L.), ja:ng ⁵¹ (C.)
梗開三：清昔	
上 靜	
幫 滂 並 明	餅 6. pia:ng ¹³
泥 來	領 7. ling ¹³ (L.), lia:ng ¹³ (C.), nia:ng ¹³ (1) 嶺 8. ling ¹³ (L.), lia:ng ¹³ (C.)
精 清 從	井 9. tsing ¹³ (L.), tsia:ng ¹³ (C.) 請 10. ts'ing ¹³ (L.), ts'ia:ng ¹³ (C.) 靜 11. tsing ²² 靖 12. tsing ²²
心 邪	省反~ 13. sing ¹³
知 徹 澄	逞~能 _a , ~志 _b 14. a) ts'ing ⁵¹ , b) ts'ing ¹³
照 穿 神 審 禪	整 15. tsing ¹³

(1) /lia:ng¹³/ 'to apply for'; /nia:ng¹³/ 'collar'.

見 溪 群 疑	頸	1. kia:ng ¹³	
	梗開三：清昔		
	去		
	勁		
	幫合～	2. ping ²²	
	滂	3. p'ing ²²	(1)
	並		
	明		
	泥		
	來	4. ling ²²	
	精		
	清		
從 心	淨	5. tsing ²² (L.), tsia:ng ²² (C.)	
	性	6. sing ²²	
	姓	7. sing ²² (L.), sia:ng ²² (C.)	
邪			
知			
徹			
澄	鄭	8. tsia:ng ²²	
	正	9. tsing ²² (L.), tsia:ng ²² (C.)	
	政	10. tsing ²²	
照			
穿			
神	聖	11. sing ²²	
	盛興～	12. sing ²²	
	勁～敵	13. king ²²	
審			
禪			
見			
溪			
群			
疑			

(1) 202-3a. 悒 /p'ing¹³/ (Chao).

	梗開三：清昔		
	入 昔		
幫	壁	1. pik ⁵	
滂	僻	2. p'ik ⁵	
並	闢	3. p'ik ⁵	
明	擗	4. —	
精	積	5. tsik ⁵ (Ball: /tsik/, /tsek/)	
	跡	6. tsik ⁵	
	脊	7. tsia:k ²	
[清	刺	7.1 ts'ia:k ² (Ball: /ts'it/ in Shi-qi (1)]	
從	籍	8. tsik ²	
	藉 _{狼~}	9. tsik ²	
心	惜	10. sik ⁵ (L.), sia:k ² (C.)	
	昔	11. sik ⁵	
邪	席	12. tsik ²	
	夕	13. tsik ²	
知			
徹			
澄	擲	14. tsa:k ²	
照	隻	15. tsia:k ²	
	炙	16. tsik ² (L.), tsia:k ² (C.)	
穿	赤	17. ts'ik ⁵ (L.), ts'ia:k ² (C.)	
	斥	18. ts'ik ⁵	
	尺—~, ~寸, I~	19. ts'ia:k ²	
神	射	20. sia ²² (cf. 12-9)	
審	適	21. sik ⁵	
	釋	22. sik ⁵	
	螫	23. sik ⁵	
禪	石	24. sia:k ²	
	碩	25. sia:k ²	

(1) Ball records /tsak/ and /tsek/ for the rest of the Zhong-shan county.

影 喻云 喻以	益	1. ik ⁵
	亦	2. ik ²
	譯	3. ik ²
	易交~	4. ik ²
	液	5. ik ²
	腋	6. ik ²
<hr/>		
梗開四：青錫		
平		
青		
幫 滂	妍~頭	7. p'ing ⁵⁵
	〔拼〕	8. p'ing ⁵⁵ , p'ing ²² , p'un ¹³
並	瓶	9. p'ing ⁵¹ (L.), p'ia:ng ⁵¹ (C.) (1)
	屏圍~	10. p'ing ⁵¹
明	萍	11. p'ing ⁵¹
	銘	12. ming ⁵¹
	螟	13. ming ⁵¹
	冥	14. ming ⁵¹ (2)
端	丁	15. ting ⁵⁵
	釘鐵~	16. ting ⁵⁵ (L.), tia:ng ⁵⁵ (C.)
	釘	17. —
	*疔	18. tia:ng ⁵⁵
透	叮	19. ting ⁵⁵
	聽~見, ~話	20. t'ing ⁵⁵ (L.), t'ing ²² (L.), t'ia:ng ⁵⁵ (C.)
	廳	21. t'ia:ng ⁵⁵
	汀	22. ting ⁵⁵
定	亭	23. t'ing ⁵¹ (L.), t'ia:ng ⁵¹ (C.) (3)
	停	24. t'ing ⁵¹
	廷	25. t'ing ⁵¹
	庭	26. t'ing ⁵¹
	蜓蜻~	27. t'ing ⁵¹
	霆	28. t'ing ⁵¹

(1) /p'ia:ng⁵¹/ only occurs in the combination /jaw⁵¹ p'ia:ng⁵¹/ 油瓶 'child brought to a second or subsequent marriage by a woman'.

(2) 204-14a. 瞑 /ming¹³/ (Chao).

(3) /t'ia:ng⁵¹/ occurs in e.g., /ti²² t'ia:ng⁵¹/ 地亭 'area in front of the house for drying grains, etc.--in the villages'.

泥 來	寧安~, 滬~	1. ning ⁵¹
	靈	2. ling ⁵¹ (L.), lia:ng ⁵¹ (C.)
	零	3. ling ⁵¹ (L.), lia:ng ⁵¹ (C.)
	鈴	4. ling ⁵¹
	伶	5. ling ⁵¹
	拎	6. --
	翎	7. ling ⁵¹
精 清	青	8. ts'ing ⁵⁵ (L.), ts'ia:ng ⁵⁵ (C.)
	蜻~蜓	9. ts'ing ⁵⁵
從 心	星	10. sing ⁵⁵ (Ball: /sing/, /seng/ for Shi-qi (1))
	腥	11. sing ⁵⁵ (L.), sia:ng ⁵⁵ (C.) (Ball: /seng/ always)
邪		
見	經	12. king ⁵⁵
溪		
群		
疑		
曉 匣	馨	13. hing ⁵⁵
	形	14. hing ⁵¹
	型	15. hing ⁵¹
	刑	16. hing ⁵¹
	陘井~	17. --

梗開四：青錫

上

迴

幫 滂 並 明		
	並	18. ping ²²

- (1) Except for Shi-qi which approximates Cantonese speech, Ball records /ang/ final corresponding to both /ang/ and /ing/ finals in Cantonese.

端	頂	1. ting ¹³ (L.), tia:ng ¹³ (C.)
	鼎	2. ting ¹³
	酊	3. ting ⁵⁵
透	艇	4. t'ia:ng ¹³
	挺	5. t'ing ¹³
	錠 (鋌)	6. ting ²² (cf. 206-12)
精		
清		
從		
心		
邪		

梗開四：青錫		
去		
徑		
端	釘~住	8. ting ⁵⁵ (L.), tia:ng ⁵⁵ (C.) (cf. 204-16)
	訂~約	9. ting ²² (L.), tia:ng ²² (C.)
	聽~其自然, ~任	10. t'ing ²² (L.), t'ia:ng ⁵⁵ (C.) (cf. 204-20)
透	定	11. ting ²²
	錠	12. ting ²²
泥	寧~可 (甯)	13. ning ⁵¹ (cf. 205-1)
	佞	14. ning ²²
	〔另〕	15. ling ²²
來		
精		
清		
從		
心		
邪		

見 溪 群 疑	徑	1. king ²²	
	經~緯, ~線	2. king ⁵⁵	(cf. 205-12)
	逕	3. king ²²	
	磬鐘~	4. k'ing ²²	
	磬	5. k'ing ²²	

梗開四：青錫			
入			
錫			
幫 滂	壁	6. pik ⁵	(Chao: /pia:k ² /)
	劈	7. p'ia:k ²	
	霹	8. p'ik ⁵	
並 明	覓	9. mik ²	
端	的目~	10. tik ⁵	
	滴	11. tik ⁵	
	嫡	12. tik ⁵	
透	踢	13. t'ia:k ²	
	剔	14. t'ik ⁵	
	笛	15. tia:k ²	
定	敵	16. tik ²	
	狄	17. tik ²	
	糴	18. tia:k ²	
泥 來	溺~死	19. nik ⁵	
	歷	20. lik ²	
	曆	21. lik ²	
精 清 從 心	績	22. tsik ⁵	
	戚	23. ts'ik ⁵	
	寂	24. tsik ²	
邪	錫	25. sik ⁵	(L.), sia:k ² (C.)
	析	26. sik ⁵	

見 溪 群 疑	擊	1. kik ⁵	
	激	2. kik ⁵	
	吃 (喫)	3. ja:k ²	(1)

梗合二：庚陌
平
庚

曉 匣	橫～直	4. wa:ng ⁵¹
--------	-----	------------------------

梗合二：庚陌
上
梗

見 溪 群 疑	礦 (鑛)	5. k'ong ²²
------------------	-------	------------------------

梗合二：庚陌
去
映

曉 匣	橫蠻～	6. wa:ng ⁵¹ (cf. 208-4), wa:ng ²² (2)
--------	-----	---

梗合二：庚陌
入
陌

見 溪 群 疑	號虞～	7. kwik ⁵
------------------	-----	----------------------

(1) Chao: also /ja:k²/. Ball records /yak/ for both Shi-qi and Cantonese, but /yiek/ for Macao.

(2) /wa:ng²²/ occurs in e.g., /wa:ng²² wa:ng²²/ 橫橫 'line after line' (to depict horizontal parallel lines, bars, etc.).

	梗合二：耕麥
	平
	耕
曉	轟 1. kwang ⁵⁵
	掬～出去 2. --
匣	宏 3. wang ⁵¹

	梗合二：耕麥
	去
	諍
曉	轟 4. kwang ⁵⁵ (cf. 209-1)
匣	

	梗合二：耕麥
	入
	麥
曉	
匣	獲 5. wa:k ²
	劃 6. wa:k ²

	梗合三：庚
	平
	庚
曉	兄 7. hing ⁵⁵
匣	
影	
喻云	榮 8. ing ⁵¹
喻以	

	梗合三：庚
	上
	梗
影	
喻云	永 9. wing ¹³
喻以	

影 喻云 喻以	梗合三：庚	
	去 映	
	泳	1. wing ²²
	詠	2. wing ²²

精 清 從 心	梗合三：清昔	
	平 清	
邪 見 溪 群 疑	辟	3. —
	埤	4. --
影 喻云 喻以	傾	5. k'ing ⁵⁵
	瓊	6. k'ing ⁵¹
	營	7. ing ⁵¹
	塋	8. ing ⁵¹

精 清 從 心 邪	梗合三：清昔	
	上 靜	
	穎穎	9. —
	穎	10. --

見溪	頃百畝，～刻 1. k'ing ¹³
群疑	糝～麻 2. --
影	
喻云	
喻以	穎 3. wing ²²

梗合三：清昔
入
昔

影	
喻云	
喻以	疫 4. wik ²
	役 5. wik ²

梗合四：青錫
平
青

(1)

曉匣	螢 6. ing ⁵¹
	榮～陽 7. wing ⁵⁵ (2)

梗合四：青錫
上
迴

曉匣	
	迴～然不同，～異 8. --

(1) 見 initial: 211-5.1. 肩 /kwing/ or /kang/ for Shi-qi (Ball).

(2) Same pronunciation given on two separate occasions.

		梗合四：青錫	
		入	
		錫	
見 溪 群 疑	閑	1.	—
		通合一：東屋	
		平	
		東	
幫 滂 並	篷	2.	p'ung ⁵¹ , hung ⁵¹ (t.)
	蓬	3.	p'ung ⁵¹
明	蒙	4.	mung ⁵¹
端	東	5.	tung ⁵⁵
	通	6.	t'ung ⁵⁵
透	* 燻把包子~~	7.	t'ung ⁵⁵
定	同	8.	t'ung ⁵¹
	銅	9.	t'ung ⁵¹
	桐	10.	t'ung ⁵¹
	筒	11.	t'ung ⁵¹
	童	12.	t'ung ⁵¹
	瞳	13.	t'ung ⁵¹
泥 來	籠	14.	lung ⁵¹
	聾	15.	lung ⁵¹
	櫛	16.	lung ⁵¹

精 清 從 心 邪 見	機	1.	tsung ⁵⁵		
	鬃 (駢) 馬~, 猪~	2.	tsung ⁵⁵		
	聰	3.	ts'ung ⁵⁵		
	忽	4.	ts'ung ⁵⁵		
	葱	5.	ts'ung ⁵⁵		
	囟 烟~	6.	t'ung ⁵⁵		
	匆	7.	ts'ung ⁵⁵		
	叢	8.	sung ⁵¹		
溪 群 疑	公	9.	kung ⁵⁵		
	蚣 蜈~	10.	kung ⁵⁵		
	工	11.	kung ⁵⁵		
	功	12.	kung ⁵⁵		
	攻~擊	13.	kung ⁵⁵		
	空~虛	14.	k'ung ⁵⁵		
曉 匣	烘~乾	15.	hung ²²	(/hong ²² / C.)	(cf. 215-3.1)
	紅	16.	hung ⁵¹		
	洪	17.	hung ⁵¹		
	鴻	18.	hung ⁵¹		
	虹	19.	hung ⁵¹	(Chao: /p'ung ⁵¹ / C.)	
影 喻云 喻以	翁	20.	jung ⁵⁵		

通合一：東屋

上
董

幫
滂
並
明

- 槽~僮 21. mung¹³
 蠟~蟲 22. mung⁵¹

端 透 定	董	1. tung ¹³	
	懂	2. tung ¹³	
	桶	3. t'ung ¹³	
	捅~破了	4. --	
	動	5. tung ²²	
泥			
來	攏	6. lung ¹³	(1)
精	總	7. tsung ¹³	
清			
從			
心			
邪			
見			
溪	孔	8. k'ung ¹³	
群			
疑			
曉	[哄]~騙	9. hung ¹³	
匣	永	10. hung ²²	
通合一：東屋			
去			
送			
端 透 定	凍	11. tung ²²	
	棟	12. tung ²²	
	痛	13. t'ung ²²	
	洞	14. tung ²²	
泥			
來	釁多涕鼻疾	15. --	
	弄	16. lung ²²	
精	糶	17. tsung ²²	
清			
從			
心	送	18. sung ²²	
邪			

(1) 214-6a. 寵 /lung⁵⁵/ (Chao).

見 溪 群 疑	貢	1. kung ²²	
	控	2. k'ung ²²	
	空~缺	3. k'ung ⁵⁵	(cf. 213-14)
[曉 匣	火共	3.1. hung ²²	(/hong ²² / C.)]
	関	4. kung ²²	
影 喻云 喻以	甕	5. ung ²²	
通合一：東屋			
入 屋			
幫 滂	卜	6. puk ⁵	
	撲	7. p'ok ²	
並	醜醋生白~	8. p'ok ²	
	+仆倒	9. p'ok ² , p'uk ⁵	(C.)
明	僕	10. puk ²	
	曝	11. puk ⁵ , pow ²²	
	瀑~布	12. puk ⁵ , pow ²²	
端	木	13. muk ²	
	沐	14. muk ²	
透 定	禿	15. t'uk ⁵	
	獨	16. tuk ²	
	讀	17. tuk ²	
	牘	18. tuk ²	
	犢牛~子	19. tsuk ²	
	漬	20. tsuk ²	
泥 來	鹿	21. luk ²	
	祿	22. luk ²	

精 清 從 心 邪	族	1. tsuk ²
	速	2. ts'uk ⁵
見 溪 群 疑	穀	3. kuk ⁵
	谷	4. kuk ⁵
	哭	5. huk ⁵
曉 匣	斛	6. huk ²
影 喻云 喻以	屋	7. uk ⁵

通合一：冬沃		
平		
冬		
端 透 定 泥	冬	8. tung ⁵⁵
	疼	9. t'ung ²²
	農	10. nung ⁵¹
	膿	11. nung ⁵¹
來	儂我，你	12. nung ⁵¹
	宗	13. tsung ⁵⁵
	鬆	14. sung ⁵⁵

見 溪 群 疑 曉 匣	攻	1. kung ⁵⁵
	碯	2. --

通合一：冬沃
去
宋

端 透 定 精 清 從 心 邪	統	3. t'ung ¹³
	宋	4. sung ²²

通合一：冬沃
入
沃

端	篤	5. tuk ⁵
	督	6. tuk ⁵
透	毒	7. tuk ²
定	綠	8. tsung ⁵⁵
精	綠 綠 織布機上的～	9. tsung ⁵⁵
清	綠 牡豕	
從		
心		
邪		

見	酷	1. kuk ⁵
溪		
群		
疑		
曉		
匣	宿	2. --
影	沃	3. juk ⁵
喻云		
喻以		

	通合三：東屋	
	平	
	東	
非	風	4. hung ⁵⁵
	楓	5. hung ⁵⁵
	* 瘋	6. hung ⁵⁵
敷	豐	7. hung ⁵⁵
奉	馮	8. hung ⁵¹
微		
泥		
來	隆	9. lung ⁵¹
	窿	10. lung ⁵⁵
精		
清		
從		
心	嵩	11. sung ⁵⁵
邪		
知	中當~	12. tsung ⁵⁵
	忠	13. tsung ⁵⁵
	衷	14. tsung ⁵⁵
徹	冲	15. ts'ung ⁵⁵
澄	蟲	16. ts'ung ⁵¹
	盅	17. tsung ⁵⁵ (cf. 222-19)

莊 初 牀 山	崇	1. sung ⁵¹
照 穿 神 審 禪	終 充	2. tsung ⁵⁵ 3. ts'ung ⁵⁵
日	戎 絨	4. jung ⁵¹ 5. jung ⁵¹
見	弓 躬 宮	6. kung ⁵⁵ 7. kung ⁵⁵ 8. kung ⁵⁵
溪 群 疑	穹 窮	9. k'ung ⁵¹ 10. k'ung ⁵¹
影 喻云	熊 雄	11. hung ⁵¹ 12. hung ⁵¹
喻以	融	13. jung ⁵¹

	通合三：東屋	
	去 送	
非 敷 奉 微	諷 鳳 夢	14. hung ¹³ (1) 15. hung ²² 16. mung ²²
知 徹 澄	中射~ 仲	17. tsung ²² 18. tsung ²²

(1) Same pronunciation was given on two separate occasions.

照 穿 神 審 禪 曉 匣	眾	1.	tsung ²²	
	銃放~	2.	t'ung ¹³	
	*嗅用鼻子聞	3.	ts'aw ²²	(cf. 90-16)

通合三：東屋				
入				
屋				
非 敷 奉 微	福	4.	huk ⁵	
	幅	5.	huk ⁵	
	蝠蝠~	6.	huk ⁵	
	複	7.	huk ⁵	
	腹	8.	huk ⁵	
	覆反~	9.	huk ⁵	
	服	10.	huk ²	
	伏	11.	huk ²	
	扶梁	12.	huk ²	
	復~原	13.	huk ²	
	•目	14.	muk ²	
	•穆	15.	muk ²	
泥 來	•牧	16.	muk ²	
	六	17.	luk ²	
	陸	18.	luk ²	
精 清 從 心 邪	戮	19.	luk ⁵	
	肅	20.	suk ⁵	
	宿	21.	suk ⁵	
	夙	22.	suk ⁵	

知 徹 澄	竹	1.	tsuk ⁵	
	築	2.	tsuk ⁵	
	畜~牲	3.	ts'uk ⁵	
	逐	4.	tsuk ²	
	軸	5.	tsuk ²	
莊 初 牀 山 照	縮	6.	suk ⁵	
	祝	7.	tsuk ⁵	
	粥	8.	tsuk ⁵	
	叔	9.	suk ⁵	
	熟煮~, ~悉	10.	suk ²	
穿 神 審 禪	淑	11.	suk ⁵	
	肉	12.	juk ²	
	菊	13.	k'uk ⁵	
	掬一~, 一捧	14.	k'uk ⁵	
	麴酒~	15.	k'uk ⁵	
日 見 溪 群 疑	畜~牧	16.	ts'uk ⁵	(cf. 221-3)
	蓄儲~	17.	ts'uk ⁵	
	郁	18.	juk ⁵	
	育	19.	juk ²	
	影 喻云 喻以			

通合三：鍾燭		
平		
鍾		
非敷	封	1. hung ⁵⁵
	峯	2. hung ⁵⁵
	蜂	3. hung ⁵⁵
	鋒	4. hung ⁵⁵
	烽	5. hung ⁵⁵
奉	逢	6. hung ⁵¹
	縫～衣服	7. hung ⁵¹
微		
泥來	濃	8. nung ⁵¹ (L.), jung ⁵¹ (C.)
	龍	9. lung ⁵¹
精	蹤	10. tsung ⁵⁵
	縱～橫	11. tsung ⁵⁵
清從	從～容	12. tsung ²²
	從跟～	13. ts'ung ⁵¹
心邪	鬆	14. sung ⁵⁵
	松	15. ts'ung ⁵¹
知徹		
澄	重～複	16. ts'ung ⁵¹
	鐘	17. tsung ⁵⁵
照	鍾	18. tsung ⁵⁵
	盅(鍾)	19. tsung ⁵⁵
穿神	衝	20. ts'ung ⁵⁵
	春～米	21. tsung ⁵⁵
審禪		
日	茸參～	22. jung ⁵¹

見 溪 群 疑	恭	1. kung ⁵⁵
	供~給, ~不起	2. kung ⁵⁵
曉	胸	3. hung ⁵⁵
	凶吉~	4. hung ⁵⁵
	兇~惡	5. hung ⁵⁵
匣		
影	雍	6. jung ⁵⁵
	癰	7. jung ⁵⁵
喻云 喻以	容	8. jung ⁵¹
	容美~	9. jung ⁵¹
	鎔	10. jung ⁵¹
	庸	11. jung ⁵¹
	溶	12. jung ⁵¹

	通合三：鍾燭	
	上	
	腫	
非	捧	13. hung ¹³ (L.), p'ung ¹³ (C.), pung ¹³ (C.) (1)
	奉	14. hung ²²
敷		
奉		
微		
泥	隴	15. lung ¹³
	壠	16. lung ¹³
來		
精		
清		
從		
心	憊~愚	17. sung ¹³
	聳	18. sung ¹³
邪		

(1) /pung¹³/ 'to hold up in both hands'.

知 徹 澄 照	冢	1.	ts'ung ¹³
	寵	2.	ts'ung ¹³
	重輕~	3.	tsung ²² (L.), ts'ung ¹³ (C.)
	種~類	4.	tsung ¹³
	腫	5.	tsung ¹³
穿 神 審 禪			
日	冗撥~, ~長	6.	jung ¹³
	甍~毛	7.	jung ¹³
見	拱~手	8.	kung ¹³
	鞏~固	9.	kung ¹³
溪 群 疑	恐	10.	k'ung ¹³
影 喻云 喻以	擁	11.	jung ¹³
	甬~道	12.	jung ¹³
	勇	13.	jung ¹³
	湧	14.	jung ¹³
通合三：鍾燭			
去			
用			
非 敷 奉	俸	15.	hung ¹³
	縫一條~	16.	hung ⁵¹ (cf. 222-7)
微 泥 來			

精 清 從 心 邪	縱放～	1. tsung ²²	
	誦	2. tsung ²²	
	頌	3. tsung ²²	
	訟	4. tsung ²²	
照 穿 神 審 禪	種～樹	5. tsung ²²	
見 溪 群 疑	供～養，上～	6. kung ⁵⁵	(cf. 223-2)
	共	7. kung ²²	
影	壅～肥	8. jung ⁵⁵	(Chao: /ung ⁵⁵ /)
	雍	9. jung ⁵⁵	(cf. 223-6)
喻云 喻以	用	10. jung ²²	

泥 來	通合三：鍾燭		
	入 燭		
精 清 從 心 邪	綠	11. luk ²	
	錄	12. luk ²	
精 清 從 心 邪	足	13. tsuk ⁵	
	促	14. ts'uk ⁵	
精 清 從 心 邪	栗	15. suk ⁵	
	俗	16. tsuk ² (L.), suk ² (C.)	
	續	17. tsuk ²	

照 穿 神 審 禪	燭	1.	tsuk ⁵
	囑	2.	tsuk ⁵
	觸	3.	ts'uk ⁵
	贖	4.	suk ²
	束	5.	ts'uk ⁵
	蜀	6.	tsuk ⁵
	屬	7.	suk ²
日	辱	8.	juk ²
	褥	9.	juk ²
見 溪 群 疑	銅~碗	10.	--
	曲~折, 歌~	11.	k'uk ⁵
	局	12.	kuk ²
	玉	13.	juk ²
	獄	14.	juk ²
曉 匣	旭~日	15.	juk ⁵
影 喻云 喻以			
	欲	16.	juk ²
	慾	17.	juk ²
	浴	18.	juk ²

INDEX

This index covers all the characters representing the morphemes which are included in the lexicon of this dialect handbook. Characters are arranged alphabetically according to the p'in-yin spelling of their Mandarin pronunciation. Pagination follows that marked at the top right or left corner of the lexicon. This pagination will enable the reader to find out all the corresponding dialectal forms of a given character (hence morpheme) included in our handbooks, by referring to the same page number in the handbooks.

Alternative forms (pronunciations) of a morpheme in Mandarin are indicated with an arrow. Alternative pronunciations of a character representing different morphemes are given in parentheses indicated with an arrow; these will help the reader check the semantic and/or the morphological derivation of morphemes, if any, in various dialects.

The Mandarin pronunciation of characters adopted here is that listed in Ting Sheng-shu and Li Jung's *Ku-chin tzu-yin tui-chao shou-ts'e* (Peking: K'o-hsüeh Ch'u-pan-she, 1958). No normalization or correction was attempted on the part of the present authors.

Romaniza- tion	Character	Page number	Romaniza- tion	Character	Page number
ā	阿	1	àn	岸	117
	腌	106		按	117
ǎ	阿 → ā			案	117
à	阿 → ā		āng	骯	167
āi	哀	28		腌 → ā	
	埃	28	áng	昂	167
	唉	28	āo	熬	68
	挨	32		呦	72
ái	呆 (𡇗)	28	áo	熬	68
	捱	33		熬 → ào	
ǎi	藹	31	ǎo	襖	70
	矮	34	ào	傲	71
	唉 → āi			熬	71
ài	礙	30		奧	71
	愛	30		懊	71
	艾	31		澳	71
	隘	35		呦 → aō	72
	唉 → āi		bā	巴	7
ān	庵	92		芭	7
	諳	92		疤	7
	安	115		八	120
	鞍	115	bá	拔	120
ǎn	揞	93		跋	136
	暗	94		鉞 → bó	

bǎ	把	8
	鉋 → pá	
bà	霸	9
	襠	9
	壩	9
	垠	9
	爸	9
	耙(杷)(→ pá)	9
	罷	34
	把 → bǎ	
bái	白 → bó	
bǎi	擺	34
	百 → bó	
	柏 → bó	
	伯 → bó	
bài	拜	32
	稗	34
	敗	35
	韞 bèi	
bān	班	120
	斑	120
	頒	120
	扳	120
	般	133
	搬(般)	133
	癢	133

bǎn	板	121
	版	121
bǎn	扮	119
	瓣	119
	辦	119
	片(版)	120
	伴	134
	拌(秤)	134
	半	135
	絆	135
bāng	幫	166
	邦	180
	浜	195
bǎng	榜	167
	謗	168
	綁	181
bàng	謗	168
	傍	168
	棒	181
	蚌	181
	謗 → bǎng	
bāo	褒	67
	包	72
	胞	72
	剝(→ bō)	183
	炮 → páo	

báo	薄 (→ bó)	169
	雹 (→ bó)	183
bǎo	保	69
	堡	69
	寶	69
	飽	73
bào	抱	69
	報	70
	暴	70
	范	70
	豹	73
	爆	73
	鮑	73
	鉋	73
	刨 → páo	
	花	70
bēi	杯	40
	背	42
	卑	47
	碑	47
	悲	51
běi	北 → bò	
bèi	貝	30
	韞	32
	億	32
	倍	41

bèi	輩	42
	背	42
	焙	42
	悖	42
	被	49, 50
	婢 → bì	
	臂	50
	備	54
	避 → bì	
	僻 → pì	
bēn	奔	156
	鏽	156
bén	鏽 → bēn	
	奔 → bēn	
běn	本	157
bèn	笨	157
	遶 (奔)	158
bēng	崩	184
bèng	蚌	196
	迸	196
bī	逼	189
bí	鼻	54
bǐ	彼	49
	鄙	53
	比	53
	枇	53

bǐ	筆	153
bì	蔽	35
	敝	35
	幣	35
	弊	35
	斃	35
	獎	35
	蓖	37
	陛	38
	閉	38
	算	38
	鑒	38
	裨	47
	俾	49
	婢	49
	臂	50
	避	50
	鄙 → bǐ	
	比 → bǐ	
	泌 → mì	
	祕 → mì	
	庇	54
	痺	54
	篋 (枇)	54
	畢	
	必	153

bì	弼	153
	碧	199
	壁	203
	壁	207
biān	鞭	122
	編	122
	邊	129
	蝙	129
biǎn	眨	102
	扁	130
	匾	130
	蝙 → biān	
biàn	辨	124
	辯	124
	變	125
	汴	125
	便	125
	辦	130
	徧	131
	遍	131
biāo	臆	75
	標	75
	彪	91
biǎo	表	77
	錶 (表)	77
biào	鏢	77

biē	鼈	126
	慙	126
	慙 (閉)	132
bié	別	126
bīn	彬	149
	賓	149
	檳	149
	浜	195
bìn	殯	152
	髻	152
bīng	檣 → bīn	
	冰	187
	兵	197
bǐng	稟	111
	丙	198
	秉	198
	柄 → bǐng	
	餅	201
	屏 → píng	
bǐng	柄	199
	病	199
	并	200
	併	202
	並	205
bō	波	3
	菠	3

bō	玻	3
	鉢	136
	撥	136
	鮓	159
	剝	183
bó	菠 → bō	
	薄 (萋)	5
	悖 → bèi	
	鉞	136
	勃	159
	博	169
	泊	169
	薄	169
	駁	183
	雹	183
	百	194
	柏	194
	伯	194
	白	194
	帛	194
bǒ	跛	4
	簸	4
bò	簸 → bǒ	
	薄 → bó	
	北	186
	擘	196

bò	壁	196	cān	參	92
	埤	159		餐	115
bú	醖	215	cán	蠶	92
bǔ	捕	17		慚	95
	卜	215		殘	115
bù	部	15	cǎn	慘	93
	簿	15		燦 → càn	
	布	17	càn	燦	117
	佈	17	cāng	倉	166
	怖	17		蒼	166
	步	17	cáng	藏	166
	埠 (步)	17	cāo	操	68
	不	159		糙	71
cā	擦 (搽)	118		操	71
cāi	猜	28	cáo	曹	68
cái	才	28		槽	68
	材	28	cǎo	草	69
	財	28		騾	69
	裁	28	cè	廁	59
	纔	28		側	190
cǎi	彩	29		測	190
	採	29		測	190
	睬	29		策	197
cài	菜	30		冊	197
	採	30	cēn	參	110
	蔡	31	cén	岑	110

céng	曾	184	chài	蠶	35
	層	184	chān	攪	100
cèng	蹭	185	chán	讒	97
chā	叉	7		饒	97
	汊 → chà			蟪	102
	差	7		纏	123
	揷	99		蟬	123
chá	茶	7		禪	123
	搽 (塗)	7		潺	118
	茬 → zhà		chǎn	詔	103
	查	7		產	119
	叉 → chā			鏟	119
	察	120	chàn	鏟 → chǎn	
chǎ	岔 → chà			顛	125
chà	差 → chā			懺	100
	訖	9	chāng	昌	172
	汊	9		菖	172
	岔 (趺)	9		倡 (→ chàng)	172
	刹	122	cháng	長	171
chāi	釵	33		腸	171
	差	33		場	171
	拆 → chè			常	172
chài	豺	33		嘗	172
	柴	33		裳	172
chǎi	冊 → cè			償	172
chài	賄	194	chǎng	場	171

chǎng	廠	174
chàng	倡	175
	唱	175
	悵	175
	暢	175
chāo	抄	72
	鈔	72
	超	76
	剿 → jiǎo	
cháo	巢	72
	朝	75
	潮	75
chǎo	炒	73
	吵	73
chào	鈔 → chāo	
chē	車	11
chě	扯 (擔)	11
	尺 → chǐ	
chè	拆 (拆)	194
	澈	126
	掣	127
chēn	琛	110
chén	沉	110
	陳	150
	塵	150
	辰	150

chén	晨	150
	臣	150
	橙 → chéng	
chèn	趁	152
	襯	152
	稱 → chēng	
chēng	稱	187
	撐	192
	鐘	192
	筭	193
	嚶	200
chéng	澄	187
	懲	187
	橙	187
	乘	187
	陞	187
	承	187
	丞	187
	澄	192
	橙	195
	呈	200
	程	200
	成	200
	城	200
	盛	200
chěng	懲 → chéng	

chěng	逞	201
chèng	稱	188
	秤	188
chī	吃 → jí	
	眈	48
	癡	56
	嗤	56
chí	池	48
	馳	48
	匙	48
	遲	52
	癡 → chī	
	持	56
chǐ	侈	49
	豉	50
	恥	57
	齒	58
	尺	203
chì	翅	50
	飭	189
	敕	189
	赤	203
	斥	203
chōng	充	219
	衝	222
	春	222

	冲	218
chóng	崇	218
	崇	219
	重	219
chǒng	寵	224
chòng	銃	220
	衝 → chōng	
	冲 → chōng	
chōu	抽	86
	搗	86
chóu	綢	86
	稠	86
	籌	86
	紬	86
	仇 (讎)	86
	酬	86
	愁	86
chǒu	丑	88
	瞋	88
	醜	88
chòu	臭	90
chū	初	19
	出	163
chú	除	19
	儲 → chǔ	
	鋤	19

chú	廚	23
	雛	23
chǔ	儲	19
	褚	20
	楚	20
	礎	20
	處	21
	杵	21
chù	處	22
	紂	162
	畜	221
	觸	226
chuāi	揣 → chuǎi	
chuǎi	揣	61
chuān	川	140
	穿	140
chuán	傳	140
	椽	140
	船	140
	箏	140
chuǎn	喘	141
	舛	141
chuàn	串 (穿)	142
	釧	142
	串	139
chuāng	瘡	171

chuāng	窗	181
chuáng	幢	181
	撞 → zhuàng	
chuǎng	闖 (搶)	174
chuàng	闖 → chuǎng	
	創	175
chuī	吹	61
	炊	61
chuí	垂	61
	槌	63
	錘 (鎚)	63
chūn	椿	160
	春	160
chún	脣	160
	純	160
	蕓	160
	醇	160
chǔn	蠢	161
chuō	戳 (戮)	183
	綽	176
chuò	綽	176
	輟	143
cī	差 → chā	
	雌 → cí	
	疵	48
cí	雌	48

cí	瓷	51	cù	醋	18
	咨	51		卒 → zú	
	慈	55		猝	159
	磁	55		促	25
	辭	55	cuān	𪔐 (𪔐)	133
	詞	55	cuán	攢 → zǎn	
	祠	55	cuàn	竄	136
	茲 → zī			篡	139
cǐ	此	49	cuī	催	40
cì	刺	50		崔	40
	賜	50	cùi	脆	45
	次	54		翠	64
	伺 → sì			粹	64
	廁 → cè			悴	64
cōng	聰	213	cūn	村	157
	忽	213		絨	160
	葱	213	cún	存	157
	鹵	213		蹲 → dūn	
	匆	213	cǔn	忖	158
	叢 → cóng		cùn	寸	159
	從	222	cuō	差 → chā	
cóng	叢	213		搓	1
	從	222		撮	137
còu	湊	84	cuó	銼	4
cū	粗 (麤)	14	cuò	銼	6

cuò	挫	6	dān	耽	9
	措	18		擔	9
	錯	18		丹	115
	錯	170		單	115
	挫	6	dǎn	膽	96
dā	搭	94		揮 (担)	116
	答	94	dàn	淡	95
dá	答	94		擔	96
	沓	94		誕	116
	達	117		彈	116
dǎ	打	192		旦	116
	迭 → dié			蛋 (彈)	116
dà	大	2		憚	116
dāi	欵 (檯)	28	dāng	當	166
	待 → dài			鎗 → chēng	
dǎi	得 → dé		dǎng	黨	167
dài	待	29		擋	167
	怠	29	dàng	當	168
	殆	29		擋 → dǎng	
	載	29		蕩	167
	代	29	dāo	宕	168
	袋	29		刀	67
	貸	29		叨 (嗷)	67
	帶	30	dǎo	禱	69
	大	30		島	69
				倒	69

dǎo	導	69	dí	敵	207
	導	70		狄	207
dào	道	69		糴	207
	稻	69	dǐ	底	38
	導 → dǎo			抵	38
	到	70	dì	弟	38
	倒	70		第	39
	盜	70		帝	39
dé	得	186		遞	39
	德	186		地	54
děi	得 → dé			的	207
dēng	登	184	diān	掂 (占)	106
	燈	184		顛	129
děng	等	185		癲	129
dèng	凳	185	diǎn	點	107
	證	185		典	130
	鄧	185	diàn	店	107
	澄	185		墊	107
	瞪	188		電	131
dī	提 → tí			殿	131
	低	37		尊	131
	堤	37		墊 (填)	131
	滴	207		佃	131
dí	嫡	207		筭	107
	的 → dì		diāo	刁	79
	笛	207		貂	79

diāo	雕	79	dǐng	酊	206
	凋	79		釘	206
	鵬	79		訂	206
diǎo	鳥	80		定	206
diào	釣	81		錠	206
	吊	81	diū	丟	85
	掉	81		丟	91
	調	81	dōng	東	212
diē	爹	10		冬	216
	跌	108	dǒng	董	214
dié	疊	108		懂	214
	碟 (疊)	108	dòng	凍	214
	牒	108		棟	214
	蝶	108		動	214
	諜	108		洞	214
	跌 → diē		dōu	都	14
	迭	132		兜	81
dīng	丁	204	dǒu	斗	83
	釘	204		抖	83
	釘	204		陡	83
	疔	204	dòu	鬥	84
	叮	204		豆	84
	酊 → dǐng			逗	84
	訂 → dìng			豇	84
dǐng	頂	206		讀 → dú	
	鼎	206	dū	都	14

dū	督	217	duàn	段	135
dú	獨	215	duī	堆	40
	讀	215	duì	對	42
	續	215		碓	42
	續	215		隊	42
	瀆	215		兌	43
	毒	217	dūn	敦	156
dǔ	堵	16		墩	156
	賭	16		蹲	157
	肚	16	dùn	頓	158
	瀆 → dú			鈍	158
	篤	217		盾	158
dù	如	17		囤	158
	蠹	17		沌	158
	杜	16		鈍	158
	肚	16		遁	158
	度	17		燉	156
	渡	17	duō	多	1
	鍍	17	duó	多 → duō	
duān	端	133		掇	137
duǎn	短	134		奪	137
duàn	斷	134		鐸	169
	斷	135	duǒ	朶	5
	鍛	135		朶	5
	段	135		稞 (槌)	5
	緞 (段)	135	duò	舵	2

dū	督	217	duàn	段	135
dú	獨	215	duī	堆	40
	讀	215	duì	對	42
	讀	215		碓	42
	讀	215		隊	42
	讀	215		兌	43
	毒	217	dūn	敦	156
dǔ	堵	16		墩	156
	賭	16		蹲	157
	肚	16	dùn	頓	158
	瀆 → dú			鈍	158
	篤	217		盾	158
dù	如	17		囤	158
	蠹	17		沌	158
	杜	16		鈍	158
	肚	16		遁	158
	度	17		燉	156
	渡	17	duō	多	1
	鍍	17	duó	多 → duō	
duān	端	133		掇	137
duǎn	短	134		奪	137
duàn	斷	134		鐸	169
	斷	135	duǒ	朶	5
	鍛	135		朶	5
	段	135		稂 (耒)	5
	緞 (段)	135	duò	舵	2

fàn	範	109
	犯	109
	泛	109
	梵	109
	販	145
	飯	145
fāng	方	178
	芳	178
	妨 → fáng	
	肪 → fáng	
fáng	妨	178
	肪	178
	防	178
	房	178
fǎng	紡	179
	仿	179
	彷彿	179
	傲	179
	訪	179
fàng	放	179
feī	非	65
	飛	65
	妃	65
féi	肥	65
fěi	匪	66
	榧	66

fěi	菲	66
	翡	66
fèi	廢	46
	肺	46
	吠	46
	沸	66
	沸	66
	費	66
fēn	分	163
	芬	163
	紛	163
fén	焚	163
	墳	163
	殯	163
fěn	粉	164
fèn	分 → fēn	
	噴 → pēn	
	憤	164
	忿	164
	糞	164
	奮	164
	份 (分)	164
fēng	風	218
	楓	218
	瘋	218
	豐	218

fēng	封	222
	峯	222
	蜂	222
	鋒	222
	烽	222
féng	馮	218
	逢	222
	縫	222
fěng	諷	219
fèng	諷 → fěng	
	縫 → féng	
	鳳	219
	奉	223
	俸	224
	縫	224
fó	佛	165
fǒu	浮 → fú	
	否	87
fū	夫	23
	膚	23
	跗	23
	敷	23
	孵	23
	麤	23
	俘 → fú	
fú	俘	23

fú	夫 → fū	
	符	23
	扶	23
	芙	23
	浮	85
	弗	165
	佛	165
	拂	165
	縛	180
	福	220
	幅	220
	蝠	220
	服	220
	伏	220
	袱	220
	膚 → fū	
	敷 → fū	
	佛 → fó	
fǔ	府	25
	腑	25
	俯	25
	甫	25
	脯	25
	斧	25
	撫, 殍	25
	父 → fù	

fǔ	釜	25
	腐	25
	輔	25
	幅 → fú	
fù	父	25
	付	26
	賦	26
	傳	26
	赴	26
	計	26
	附	26
	婦	87
	負	87
	阜	87
	富	89
	副	89
	復	89
	複	220
	腹	220
	覆	220
	服 → fú	
	復	220
	縛 → fú	
	仆 → pū	
gà	尬 → jiè	
gāi	該	28

gǎi	改	29
gài	概	30
	溉	30
	丐	31
	蓋	31
	芥 → jiè	
gēn	甘	95
	柑	95
	泔	95
	魷 (魷) → jiān	
	干	115
	肝	115
	竿	115
	乾	115
gǎn	感	93
	敢	96
	橄	96
	桿 (竿)	116
	稈	116
	拚	116
	趕	116
gàn	幹	117
gāng	岡	167
	崗	167
	剛	167
	綱	167

gāng	鋼	167
	缸 (甌)	167
	扛 → káng	
	肛	181
gāng	岡 → gāng	
	崗 → gāng	194
	港	182
gàng	鋼	169
	杠	169
	虹 → jiàng	
gāo	高	68
	恙	68
	糕	68
	膏	68
	篙	68
gǎo	稿	70
	搞 (攪)	73
gào	告	71
	膏	71
	誥	71
gē	歌	1
	哥	1
	戈	4
	割	118
	摺 (閣)	170
	膈	170

gē	鴿	94
gé	蛤	94
	合	94
	葛	118
	閣	170
	格	194
	革	197
	隔	197
	膈 → gé	170
gě	合 → hé	
	葛 → gé	
	個 → gè	
gè	個	3
	各	170
gěi	給	114
gēn	跟	148
	根	148
gēn	艮 → gèn	
	艮	149
	互	185
gēng	更	192
	梗 → jǐng	
	庚	192
	羹	192
	耕	194
gěng	哽	193

gěng	埂	193
	梗	193
	耿	196
	頸 → jǐng	
gèng	互 → gèn	
	更 → gēng	
gōng	公	213
	蚣	213
	工	213
	功	213
	攻	213
	攻	217
	弓	219
	躬	219
	宮	219
	恭	223
	供	223
gǒng	永	214
	拱	224
	鞏	224
	礦 → kuàng	
gòng	貢	215
	供	225
	共	225
gōng	紅 → hóng	
gōu	勾	82

gōu	鉤	82
	溝	82
gǒu	狗	83
	苟	83
gòu	垢	83
	穀	84
	夠 (穀)	84
	構	84
	購	84
	勾	84
	媾	84
gū	姑	15
	孤	15
	箍	15
	辜	15
	估 → gǔ	
	沽	16
gú	骨 → gǔ	
gǔ	古	16
	估	16
	盞	16
	牯	16
	股	16
	鼓	16
	賈	16
	骨	160

gǔ	滑 → huá	
	穀	216
	谷	216
gù	故	18
	固	1
	錮	18
	雇	18
	顧	18
	告 → gào	
guā	爪	12
	蝸 → wō	
	括 → kuò	
	聒 → guō	
	刮	140
guǎ	寡	13
	剛	13
guà	掛	45
	卦	45
guāi	乖	43
guǎi	拐	44
guài	怪	44
guān	官	134
	棺	134
	觀	134
	冠	134
	鰓	137

guān	關	138
guǎn	管	135
	館	135
guàn	貫	136
	灌	136
	罐 (罐)	136
	觀	136
	冠	136
	慣	139
guāng	光	177
	桃 → guàng	
guǎng	廣	177
guàng	桃	178
	逛 (徃)	180
guī	瑰	40
	圭	46
	閨	46
	規	61
	龜	63
	歸	65
guì	詭	62
	軌	64
	癸	64
	晷	64
	鬼	66
guì	會	43

guì	創	43	hài	駭	32
	檣	43	hái	骸	32
	鰈	46	hān	蚶	95
	桂	47		憨	95
	跪	62		酣	95
	櫃	65		盱	115
	貴	67	hán	含	92
gǔn	滾	158		函	92
gùn	棍	159		涵	92
guō	鍋	4		邯	95
	聒	137		寒	115
	郭	178		韓	115
guó	國	191		汗 → hàn	
guǒ	果	5	hǎn	喊	96
	裹	5		喊	98
	菓	5		罕	116
guò	過	4	hàn	撼	93
hā	蝦	8		憾	94
há	蝦 → hā			旱	116
	嚇 → xiā			漢	117
	蛤 → gé			汗	117
hāi	咳(欬) → ké			翰	117
hái	孩	28		鐸	117
hǎi	海	29	hāng	夯	181
hài	亥	29	háng	行	167
	害	31		航	167

háng	杭	167
háng	行 → háng	
hāo	蒿	68
	嫖	68
háo	豪	68
	壕	68
	毫	68
	號	68
	鶴 → hè	
hǎo	好	70
	郝	170
hào	浩	70
	昊	70
	皓	70
	好	71
	耗	71
	號	71
hē	喝 (飲)	94
	喝	118
	薏	170
hé	河	1
	何	1
	荷	1
	和	4
	禾	4
	合	94

hé	盒	94
	盍	97
	核	160
	閣 → gé	
	核	197
	曷	118
hè	荷 (蘭)	3
	賀	3
	和	6
	嚇	10
	喝 → hē	
	豁	137
	郝 → hǎo	
	鶴	170
	壑	170
	赫	194
	嚇	194
hēi	黑	186
hén	痕	148
hěn	很	149
hèn	恨	149
hēng	亨	192
héng	恆	184
	亨 → hēng	
	衡	192
	橫	208

héng	橫	208	hú	和 → hé	
hōng	轟	209		胡	15
	拘	209		湖	15
	烘	213		狐	15
hóng	弘	191		壺	15
	宏	209		乎	15
	紅	213		瓠	15
	洪	213		鬍 (胡)	15
	鴻	213		糊	15
	虹	213		瑚	15
hǒng	哄	214		核 (櫟) → hé	
	汞 → gǒng			斛	215
hòng	哄 → hǒng		hǔ	虎	17
	開	215		澼	17
hóu	侯	82		琥	17
	喉	82		瑚 → hú	
	猴	82		許 → xǔ	
	癰	82	hù	瓠	15
hǒu	吼	83		糊 → hú	
hòu	後	83		戶	17
	厚	83		滬	17
	后	83		辱	18
	侯	85		互	18
hū	呼	15		護	18
	忽	160		瓠	18
	湖 → hú		huā	花	13

huā	華 → huá		huàn	患	139
huá	華	13		宦	139
	鐸	13	huāng	荒	177
	划	13		慌	177
	滑	138	huáng	黃	177
	猾	138		簧	177
huà	化	13		皇	177
	華	13		蝗	177
	樺	13		惶	177
	畫	45		煌	177
	話	45		遑	177
	劃	209	huǎng	誑 (誑)	177
huái	懷	43		恍	177
	槐	43		晃	177
	淮	43	huàng	晃 → huǎng	
huài	壞	44	huī	誑	40
huān	歡	134		恢	40
huán	桓	134		灰	41
	還	138		麾	61
	環	138		揮	65
huǎn	緩	135		輝	65
	皖 (皖)	135		徽	65
huàn	喚	136	huí	回	41
	煥	136		茴	41
	換	136		廻	41
	幻	138	huǐ	悔	41

huǐ	毀	62
	燬	62
huì	賄	41
	匯	41
	晦	42
	誨	42
	潰 → kuì	
	會	43
	繪	43
	穢	46
	惠	47
	慧	47
	諱	67
	卉	67
	彙	67
	慧	64
hūn	昏	157
	婚	157
	惛	157
	葦	164
hún	渾	157
	魂	157
	餽	157
hùn	混 → hùn	
hùn	混	158
huō	豁	137

huō	剗	178
huó	活	137
huǒ	火	5
	夥(火)	5
huò	禍	5
	貨	6
	豁	137
	霍	178
	霍	178
	鑊	178
	或	191
	惑	191
	獲	209
jī	雞	37
	稽	37
	羈	48
	奇 → qí	
	飢	52
	肌	52
	基	56
	姬	56
	箕	56
	幾	59
	機	59
	譏	59
	饑	59

jī	屐	199
	績	203
	跡	203
	績	207
	擊	208
	期 → qī	
	其 → qí	
	疾 → jí	
jí	集	113
	輯	113
	急	114
	級	114
	及	114
	疾	154
	吉	154
	卽	189
	棘	190
	亟	190
	極	190
	革 → gé	
	籍	203
	藉	203
	寂	207
	吃 → chī	
	擊 → jī	
jǐ	幾 (→ jī)	60

jǐ	擠	38
	濟 → jì	
	几	53
	己	58
jǐ	給 → gěi	
	戟	199
	寂 → jì	
jì	祭	36
	際	36
	檫	36
	濟	39
	劑	39
	計	39
	繼	39
	繫	39
	髻	39
	騎 → qí	
	倚	50
	技	50
	妓	50
	寄	51
	冀	55
	記	58
	忌	59
	既	60
	季	65

jì	薺	38
	鯽	189
	稷	189
jī	緝	113
jiā	家	8
	加	8
	茄	8
	嘉	8
	傢(家)	8
	佳	33
	夾	99
jiá	夾 → jiá	
	袂	99
jiǎ	假	9
	賈	9
	甲	101
	胛	101
jià	假	10
	架	10
	駕	10
	嫁	10
	稼	10
	價	10
	甲 → jià	
	夏 → xià	
	夾 → jiá	

jiān	廕(樣)	98
	監	100
	尖	101
	殲	101
	漸 → jiàn	
	兼	107
	攤	107
	奸	115
	艱	118
	間	118
	奸	121
	姦	121
	煎	123
	犍	123
	犍	127
	肩	129
	堅	129
jiǎn	減	98
	鯨	98
	檢	103
	儉	103
	簡	119
	襴	119
	束	119
	揀	119
	鐫	122

j iǎn	剪	124
	藕	130
	趺	130
	筧	130
j iàn	監	100
	鑑	100
	艦	100
	漸	103
	劍	106
	間 →	j iān
	襴 →	j iǎn
	諫	122
	澗	122
	踐	124
	件	124
	箭	125
	濺	125
	賤	125
	餞	125
	建	128
	健	128
	臙	128
	薦	131
	見	131
	僭	107
j iāng	將	171

j iāng	漿	171
	疆	172
	僵	172
	薑	172
	疆	172
	繯	172
	姜	172
	江	181
	缸	181
j iǎng	蔣	173
	獎	173
	槳	173
	講	182
	耩	182
	趺 →	j iǎn
j iàng	將	175
	漿 →	j iāng
	醬	175
	匠	175
	降	182
	虹	182
j iāo	交	72
	郊	72
	膠	72
	教	72
	焦	75

jiāo	蕉	75
	椒	75
	驕	76
	嬌	76
	澆	80
	僥 → jiǎo	
jiáo	嚼	176
jiǎo	絞	73
	狡	73
	鉸	73
	攪	73
	覺 → jiào	
	較 → jiào	
	矯	78
	繳	80
	僥	80
	脚 → jué	
	覺(→ jué)	183
	角(→ jué)	183
	餃(角)	183
	教	74
	校	74
	較	74
	酵	74
	窖	74
	覺(→ jué)	174

jiào	醮	7 8
	瞧	7 8
	轎	7 9
	叫	8 1
	嚼 → jiáo	
	覺(→ jué)	183
jiǎo	剿	77
jiē	皆	31
	階	31
	稽	31
	街	31
	街	33
	接	104
	揭	128
	結 → jié	
	隔 → gé	
	嗟 → juē	
jié	劫	106
	子	127
	竭	128
	節	132
	截	132
	結	133
	潔	133
	鐸	133
	捷	104

jié	子	146
	隔 → gé	
	詰	154
jiě	姐	11
	解	34
	結 → jié	
jiè	借	12
	藉	12
	楫	12
	介	33
	界	33
	芥	33
	尬	33
	疥	33
	屆	33
	戒	33
	誠	33
	解 → jiě	
	械 → xiè	
	藉 (→ jié)	203
	今	111
jīn	金	111
	禁	111
	襟	111
	津	150
	巾	151

jīn	斤	155
	筋	155
	矜	187
jǐn	錦	112
	儘 (盡)	151
	緊	152
jìn	僅	153
	謹	155
	浸	112
	禁	113
	矜	113
	近	155
	近	156
	勁 (勵)	156
	禁 → jīn	
	儘 → jǐn	
	競	187
	梗	192
	耕 → gēng	
	莖	195
	京	198
jīng	荆	198
	驚	198
	鯨	198
	精	200
	晶	200

jīng	睛	200
	旌	200
	經	205
jǐng	景	198
	警	198
	井	201
jìng	頸	202
	境	198
	竟	199
	鏡	199
	敬	199
	競	199
	靜	201
	靖	201
	淨	202
	勁	202
	徑	207
	經	207
	逕	207
	迳	207
	迳	207
jiǒng	窘	161
	迥	211
jiū	拏	86
	鳩	87
	鬪	87
	糾 (ㄐ)	87
	究	90

jiū	糾	91
jiǔ	糾 → jiū	
	酒	88
	九	88
	久	88
	韭	88
	灸	88
jiù	臼	88
	舅	88
	咎	88
	咎	90
	就	90
	救	90
	舊	90
	柩	90
jū	究 → jiū	
	居	19
	車	19
	鋸 → jú	
	拘	24
	駒	24
	俱	24
jú	掬 → jú	
	鋤 → jú	
	橘	163
	菊	221
	掬	221

jú	局	226
	拘 → jū	
jǔ	舉	21
	矩	26
jù	遽	22
	俱 → jū	24
	聚	25
	據	22
	鋸	22
	巨	21
	拒	21
	距	21
	句	27
	具	27
	懼	27
	劇	199
	鍋	226
jū	疽	19
juān	涓	147
	捐	141
	身 → shēn	
juǎn	捲	142
juàn	卷	142
	絹	142
	倦	142
	圈 → quān	

juàn	眷	142
juē	嗟	10
jué	鰓 → guì	
	覺	74
	絕	143
	厥	146
	慙 (勞)	146
	掘	146
	慨	146
	決	148
	訣	148
	掘	165
	懈	165
	脚	176
	鑊	180
	覺	183
	角	183
juè	倔 → jué	
jūn	均	161
	鈞	161
	菌 → jùn	
	君	164
	軍	164
jǔn	窘 → jiǒng	
jùn	俊	162
	菌	161

jùn	灌	162	káng	扛	181
	郡	165	kǎng	慷 → kāng	
kā	攜	120	kàng	抗	169
kǎ	咳 → ké			炕	169
	咳 (喀)	194		囤	169
kāi	開	28	kǎo	考	70
	揩	31		烤 (燥)	70
kǎi	凱	29	kào	靠	71
	愷	29		犒	71
	慨	30	kē	軋	1
	楷	32		苛	1
kài	慨 → kǎi			科	4
	咳 (歟) (→ ké) 30			窠	4
kān	堪	92		棵 (科)	4
	龕	92		顆	5
	看	115		磕	97
	刊	115	ké	客	10
kǎn	坎	93		咳 (歟)	30, 194
	砍	93		殼 → qiào	
	侃	116	kě	可	2
kàn	勘	93		渴	118
	看	117	kè	可 → kě	
	瞰	92		課	6
kāng	康	167		刻	186
	糠	167		克	186
	慷	168		客	194

kě	懇	149	kù	褲 (袴)	18
	壑	149		酷	218
	肯	185	kuā	誇	12
kēng	坑	192	kuǎ	垮 (垮)	13
	鏗	195		垮	13
	揸	195	kuà	跨	13
	輕	195	kuǎi	蒯	44
	硯	195	kuài	塊	42
	傾 → qīng			塊 (墳)	44
kōng	空	213		快	45
kǒng	孔	214		筷	45
	恐	224		會 → huì	
kòng	空	215	kuān	寬	134
	控	215	kuǎn	款	135
kōu	搗	82	kuāng	匡	179
	瞞 (曉)	82		筐	179
kǒu	口	83	kuáng	狂	179
kòu	叩	83	kuàng	眶	178
	扣	84		曠	178
	寇	84		況	180
	鉤	84		礦	208
kū	枯	15	kuī	盔	40
	窟	160		虧	61
	哭	216		窺	61
kǔ	苦	16	kuí	魁	40
kù	庫	18		奎	46

kuí	逵	63	lài	賴	30
	蔡	63		癩	30
	夔	63	lǎi	瀨	32
	揆	64	lán	婪	92
kuǐ	傀	41		藍	95
kuì	潰	42		籃	95
	愧	65		蘭	115
	饋	65		攔	115
	餽	65		欄	115
kūn	昆	157	lǎn	覓	96
	崑	157		攬	96
	坤	157		攬	96
kǔn	紉 (捆)	158		懶	116
kùn	困	159		纜	96
kuò	闊	137	làn	濫	96
	括	137		纜 → lǎn	
	廓	178		爛	117
	擴 (擴)	178	lǎn	婪	93
lā	拉	94	láng	郎	166
lā	拉 → lá			廊	166
là	臘	97		狼	166
	蠟	97		娘	166
	鐵	97		榔	166
	辣	117	lǎng	朗	167
	痢 (瀨)	117	làng	浪	168
	落 → luò		lāo	撈	67
lái	來	28			

láo	勞	67	lěi	耒	42
	牢	67	lèi	累	42
	嘮 (嘮)	67		累	62
lǎo	老	69		類	64
lào	澇	71		淚	64
	癆	71		肋	186
	勞 → láo		léng	楞	184
	嘮 → láo		lěng	冷	192
	落 (→ luò)	169		楞 → léng	
	烙 (→ luò)	169	lí	犁	37
	酷 (→ luò)	169		黎	37
	絡 → luò			離	47
	樂 → lè			籬	47
		yuè		璃	47
lè	樂	169		麗	47
	落 → luò			梨	51
	洛 → luò			釐	55
	絡 → luò			狸	55
	肋 (→ lèi)	186	lǐ	禮	38
	勒 (→ lēi)	186		履	53
lēi	勒	186		李	57
léi	雷	40		里	57
	累 → lèi			裏	57
lěi	儡	41		理	57
	累 → lèi			鯉	57
	壘	64	lì	例	36

lì	厲	36	liǎn	臉	103
	勵	36	liǎn	斂	103
	麗	39		殮	103
	隸	39		練	131
	荔	50		鍊	131
	離	50		棟	131
	利	54		變	142
	痢	54		櫪	142
	吏	58	liáng	良	170
	立	113		涼	170
	笠	113		量	170
	粒	113		糧	170
	栗	1 3		梁	170
	力	189		梁	170
	歷	207	liǎng	兩	173
	曆	207	liàng	亮	174
lián	零 → líng			諒	174
	廉	101		輜 (兩)	174
	鐮	101		量	174
	簾	101	liāo	撩 → liáo	
	匳	101	liáo	撩	79
	連	122		聊	79
	聯	122		遼	79
	鱣	122		寥	79
	隣	129		僚	79
	蓮	129		燎	75
liǎn	斂	102			

liáo	療	78	lǐng	拎 → líng	
liǎo	燎	77	líng	陵	187
	了	80		凌	187
	瞭	80		菱	187
liào	瞭 → liǎo			綾	187
	料	81		靈	204
	炮	81		零	204
	廖 → liù			鈴	204
liè	獵	104		伶	204
	列	126		拎	204
	烈	126		翎	204
	裂	126	lǐng	領	201
	劣	143		嶺	201
lín	林	110		令 → lìng	
	淋	110	lǐng	令	202
	臨	110		另	206
	霖	110	liū	溜 → liù	
	鄰	150	liù	流	85
	鱗	150		劉	85
	燐	150		留	85
	麟	150		榴	85
lǐn	凜	111		硫	85
	凜	111		琉 (瑠)	85
	廩	111	liǔ	柳	88
lìn	淋	110	liù	溜	89
	賃	112		餽	89
	吝	152		廖	89

liù	六 (→ lù)	220
lóng	瀧	181
	籠	212
	聾	212
	櫛	212
	隆	218
	窿	218
	龍	222
lǒng	櫛	214
	隴	223
	壠	223
lòng	弄 (→ nòng)	214
lǒu	摟 → lǒu	
lóu	樓	82
	稊	82
	體	82
lǒu	摟	83
	簍	83
lòu	漏	84
	陋	84
	露 → lù	
lú	盧	14
	爐	14
	蘆	14
	鷓	14
	鑪	14

lú	廬	18
	魯	16
	櫓 (鱗)	16
	虜	16
	滷	16
	擄	16
lù	路	17
	賂	17
	露	17
	鷺	17
	鹿	215
	祿	215
	六 (→ liù)	220
	陸	220
	戮	220
	綠	225
	錄	225
luán	鸞	133
	鑾	133
luǎn	卵	134
luàn	亂	136
lún	論 (→ lùn)	157
	崙	157
	倫	160
	淪	160
	輪	160

lùn	論	159
luō	囉 → luò	
	捋 (→ lǚ)	137
luò	羅	1
	鑼	1
	羅	1
	蔣	1
	騾	3
	螺	3
	腦	3
	囉 (爾見)	3
luǒ	裸	5
	瘰	5
	虜 → lǚ	
luò	擢	6
	落	169
	烙	169
	酪	169
	洛	169
	絡	169
	駱	169
lǚ	驢	18
lǚ	呂	20
	稭 (稽)	20
	旅	20
	侶	20

lǚ	縷	25
	屨	26
	履	53
	捋	137
	慮	21
	濾	21
	律	162
	率 (→ shuài)	162
	綠	225
lüe	略	176
	掠	176
mā	媽	7
	抹 → mō	
má	麻	7
	痲	7
	蟆	7
mǎ	馬	8
	碼 (馬)	8
mà	罵	9
mái	埋	31
mǎi	買	34
mài	賣	34
	邁	35
	麥 (→ mò)	196
	脈 (→ mò)	196
mán	漫 → màn	

mán	埋 (→ má i)	31	mào	帽	70
	蠻	120		貌	73
	瞞 (謾)	133		茂	84
	餞	133		貿	84
mǎn	滿	134	mé i	梅	40
màn	慢	121		枚	40
	漫	135		媒	40
	幔	135		煤	40
	蔓 → màn			玫	40
máng	虯	180		縻 → mí	
	忙	166		眉	51
	芒	166		楣	51
	茫	166		徽	51
	芒 (→ wáng)	178		沒 (→ mò)	159
	盲	191	mě i	每	41
	虻 (蟲) → méng	178		美	53
mǎng	莽	167	mè i	謎 → mí	
	蟒	167		妹	42
māo	貓	72		昧	42
	貓	75		媚	54
máo	毛	67		寐	54
	茅	72	mēn	悶 → mèn	
	錨	72	mén	門	156
	矛	85		捫	156
mǎo	卯	73	mèn	悶	158
mào	冒	70	mēng	蒙 → méng	

méng	虻	191	mián	棉	122
	萌	195		眠	129
	盟	197	miǎn	免	124
	蒙	212		勉	124
měng	猛	192		娩	124
	蒙 → méng			緬	124
	懵	213		澗	124
	蠓	213		晃	124
mèng	孟	193	meàn	面	125
	夢	219		麪	131
mí	迷	37	miáo	苗	75
	彌	47		描	75
	糜	47	miǎo	杳 → yǎo	
	籬 (籬)	47		藐	77
	縻	47		渺	77
mǐ	米	37		秒	77
	謎	38	miào	廟	78
	靡	49		妙	78
	弭	49		繆	91
mì	昧 → mèi		miè	滅	126
	秘	54		蔑	132
	泌	54	mín	民	
	密	153		閨 → mǐn	
	蜜	153	mǐn	閨	149
	覓	207		憫	151
mián	綿	122		敏	151

mǐn	泯 (搵)	151
	泯	151
	皿	198
	黽	196
míng	鳴	197
	明	197
	名	200
	銘	204
	螟	204
	冥	204
mìng	命	199
miù	謬	91
	繆 → miào	
mō	摸	169
mó	魔	3
	磨	3
	摩	3
	𪔐 (𪔐)	3
	墓	3
	模	14
	抹 (搵) → mǒ	
	膜	169
mǒ	抹 (搵)	120
	抹	136
mò	磨 → mó	
	末	136

mò	沫 → mǒ	
	抹	136
	沒	159
	莫	169
	膜 → mó	
	寞	169
	墨	186
	默	186
	陌	194
	麥	196
	脈	196
	冒 → mào	
móu	謀, 睺	85
	繆 → miào	
mǒu	某	82
mú	模 → mó	
mǔ	畝	82
	牡	82
	母	82
	拇	82
mù	暮	17
	慕	17
	墓	17
	募	17
	幕	169
	木	215

mù	沐	215
	目	220
	穆	220
	牧	220
nā	那 → nà	
	納 → nà	
ná	拿 (拏)	7
nǎ	(那)	2
	那	2
	納	94
	納	94
	捺	117
nǎi	乃	29
	奶 (孌)	34
nài	耐	30
	奈	30
nán	南	92
	男	92
	難	115
	圉	124
nàn	難	117
nāng	囊 → náng	
náng	囊	166
nǎng	曩	167
	攘 (攬)	181
nāo	撓 → náo	

	饒	72
	撓	72
	橈 → ráo	
	腦	69
	惱	69
	瑙	69
	鬧	74
něi	那 → nà	
	餒	41
nèi	內	42
nè	捺 → nǎ	
	嫩	159
néng	能	184
	膿 → nóng	
ní	泥	37
	倪	37
	尼	51
	呢	51
	兒 → ěr	
nǐ	你	57
	擬	58
nì	泥 → ní	
	膩	54
	匿	189
	逆	199
	溺	207

nì	晒	153
niān	鳶	123
nián	黏	101
	鮎	106
	拈	106
	年	129
niǎn	碾	124
	輦	124
	捻	108
	撚	130
	攢 (蹀)	130
niàn	念	108
	碾	125
niáng	娘	170
niàng	釐	174
niǎo	鳥 (→ diǎo)	80
niào	尿	81
	溺 → nì	
niē	捏	132
nié	忝	108
niè	聶	104
	鐮	104
	蹻	104
	臬	133
níng	凝	187
	寧	204

níng	凝	187
	寧	206
	倭	206
niú	牛	87
niǔ	紐	88
	扭	88
	鈕	88
niù	謬 → miù	
nóng	農	216
	膿	216
	濃	216
	濃	222
nòng	騷	214
	弄	214
nòu	耨	84
nú	奴	14
	帑	14
nǔ	努	16
nù	怒	17
nuǎn	暖	134
nuó	挪	1
	難 → nán	
nuò	糯 (稞)	6
	諾	169
nǚ	女	20
nǚ	女 → nǚ	

nùn	嫩 (→ nèn)	159
nüè	虐	176
	瘡	176
ōu	漚 → ǒu	
	歐	82
	甌	82
	謳	82
	區	82
	毆	83
ǒu	藕	83
	偶	83
	嘔	83
	偶	84
òu	漚	85
	樞	85
pá	爬	7
	琶	7
	杷	7
	鈹	7
	耙 (杷)	9
pà	怕	9
	帕 (帨)	9
pāi	拈	194
	拍	194
pái	排	31
	牌	33

pái	簿	33
pǎi	排 → pái	
pài	派	34
pān	扳 (→ bān)	120
	番 (→ fān)	144
	般 → bān	
	攀	120
	片 (吩)	120
	潘	133
pán	盤	133
	胖 → pàng	
pàn	盼	119
	樛	121
	拚	133
	判	135
	叛	135
pāng	滂	166
páng	滂	167
	旁	166
	螃	166
	彷彿 (→ fǎng)	179
	龐	180
	傍 → bàng	
pàng	胖 (胙) (→ pán)	180
	胖 (胙)	182
pāo	泡 (→ pào)	72

pāo	拋	72
páo	跑 → pǎo	
	刨	72
	鷹	72
	袍	67
	炮 → pào	
pǎo	跑	72
pào	泡 (滂)	73
	炮 (礮)	73
pēi	胚	40
	坯 → pī	
	披 → pī	
péi	培	40
	陪	40
	賠 (陪)	40
	裴	40
pèi	沛	30
	旆	30
	配	42
	佩	42
	轡	54
pēn	噴	156
pén	盆	156
pèn	噴	158
pēng	烹	191
péng	朋	184

péng	彭	191
	澎	191
	棚	195
	篷	212
	蓬	212
pěng	捧	223
pī	批	37
	坯	40
	披	47
	丕	51
	劈	207
	霹	207
	被 → bèi	
pí	罷 → bà	
	皮	47
	疲	47
	脾	47
	裨 → bī	
	毳	51
	枇	51
pǐ	匹	154
	劈 → pī	
pì	譬	50
	屁	54
	僻	203
	闢	203

piān	片 → piàn	
	扁 → piǎn	
	篇	122
	偏	122
pián	便 (→ biàn)	122
	駢	129
piàn	片	131
	騙	125
	遍 → biàn	
	徧 → biàn	
piāo	飄	75
	漂	77
piáo	瓢	75
	嫖	75
	朴 → pǔ	
piǎo	漂	77
piào	票	78
	漂	78
piē	撇	132
piě	撇	132
pīn	拚 → pàn	
	餅	204
	拼	204
pín	貧	149
	頻	149
pǐn	品	111

pìn	牝	53
	牝	151
	聘	202
píng	憑	187
	平	197
	坪	197
	評	197
	瓶	204
	屏	204
	萍	204
	馮 → féng	
pō	朴 → pǔ	
	波 → bō	
	頗	3
	坡	3
	潑	136
	泊 → bó	
pó	婆	3
	繁 → fán	
pǒ	頗	4
pò	破	5
	朴 → pǔ	
	迫	194
	拍 → pāi	
	魄	194
	樸 → pǔ	

pò	珀	194
pōu	剖	82
pōu	剖 → pōu	
pū	舖	14
	撲	215
	仆	215
pū	蒲	14
	菩	14
	脯 (脯)	14
	醢 → bú	
	僕	215
pū	普	15
	浦	15
	譜	15
	朴 (樸)	183
pù	鋪	17
	暴 → bào	
	堡 → bǎo	
	曝	215
	瀑	215
qī	妻	37
	淒	37
	悽	37
	棲	37
	溪 → xī	
	欺	56

qī	期	56
	緝 → jī	
	七	54
	漆	54
	戚	207
	沏	132
qí	齊	37
	臍	37
	薺 → jì	
	枝 → zhī	
	畦	47
	祁	52
	鰭	52
	耆	52
	其	56
	棋	56
	旗	56
	麒	56
	期	56
	奇	48
	騎	48
	岐	48
	祇 → zhǐ	
	俟 → sì	
	祈	59
	竣 → sù	
qǐ	稽 --- jī	

qǐ	啓	38	qiān	嵌 → qiàn	
	企	50		謙	107
	起	58		遷	123
	杞	58		韃	123
	豈	60		千	129
	乞	156		鷓	98
qì	砌	39		牽	129
	契	39		鉛	141
	企 → qǐ		qián	潛	101
	器	55		鉗	102
	棄	55		錢	123
	氣	60		乾	123
	汽 (氣)	60		虔	123
	妻 → qī			捐 (勸)	123
	泣	114	qiǎn	淺	124
	瞋	114		遣	124
	訖	156		嵌 → qiàn	
	迄	156	qiàn	嵌	100
	亟 → lí			欠	106
	戚	207		歉	108
qiā	招	99	qiāng	槍	171
qià	恰	99		搶	173
	洽	99		羌	172
qiān	籤	101	qiáng	牆	171
	簽 (懺)	101		戕	171
	僉	101		強	172

qiǎng	搶 → qiāng		怯	105
	強 → qiáng		切	133
qiāo	銚 75		竊	133
	繰 75	qīn	侵	110
	敲 72		欽	111
	雀 (→ què) 176		衾	111
qiáo	蕉 → jiāo		親	152
	樵 75	qín	琴	111
	瞧 75		禽	111
	喬 76		擒	111
	僑 76		秦	150
	橋 76		勤	155
	蕎 76		芹	155
qiǎo	巧 73		歉	155
	悄 77	qǐn	寢	111
	鵲 → què	qìn	叱	112
	雀 → què		揷 (檢)	113
qiào	俏 78	qīng	清	200
	鞘 78		輕	201
	竅 81		青	205
	殼 183		蜻	205
qiē	切 132		傾	210
qié	茄 3	qíng	情	200
qiě	且 11		晴	200
qiè	筴 12		賄	200
	妾 104		卿	198

qíng	擎	198	qū	趨	23
	傾 → qīng			煖	162
qǐng	請	201		駿	162
	頃	211		區	24
	綵	211		驅	24
qìng	親 → qīn			瞿	24
	慶	199		屈	165
	磬	207		沔	133
	罄	207		麴	221
qióng	穹 (→ qióng)	219		曲	226
qióng	瓊	210	qú	渠	19
	穹	219		俦	19
	窮	219		瞿	24
qiū	秋	86	qǔ	取	25
	鞦	86		娶	25
	丘	87		曲 (→ qū)	226
qiú	囚	86	qù	趣	26
	涸	86		去	22
	仇 → chóu			忝 → qī	
	求	87		闕	212
	球	87	quān	圈 (捲)	141
	裘	87	quán	痊	140
	毬	87		全	140
qiǔ	糗	87		泉	140
	朽 → xiǔ			拳	141
qū	蛆	19		權	141

quán	顴	141	ráng	攘	174
	髻	141	rǎng	壤	174
quǎn	尤	147		攘	174
quàn	勸	145		嚷 (攘)	174
	券	145	ràng	讓	175
	圈 → quān		ráo	饒	76
quē	闕	146		橈	76
què	缺	148	rǎo	擾	77
qué	瘕	6		繞	77
què	怯	106		繞	79
	闕 → quē		rè	熱	127
	雀	176	rén	壬	110
	鵲	176		任	110
	卻	176		人	150
	確	183		仁	150
	摧	183	rěn	忍	151
	殼	183	rèn	任	113
qún	羣	164		紕	113
	裙	164		妊	113
rán	然	123		甚 → shèn	
	燃	123		刃	153
rǎn	染	103		認	153
	冉	103		韌	153
rǎng	嚷 → rǎng		rēng	扔	187
ráng	瓢	172	réng	仍	187
	穰	172	rěng	扔	187

rì	日	154
róng	榮	209
	戎	219
	絨	219
	融	219
	茸	222
	容	223
	蓉	223
	鎔	223
	溶	223
rǒng	冗	224
	甦	224
	茸 → róng	
róu	柔	87
	揉	87
ròu	肉	221
rú	如	19
	儒	24
rǔ	汝	21
	乳	26
	孺	26
	入 → rù	
	女 → nǚ	
rù	入	114
	月 → yuè	
ruǎn	軟	141

ruǎn	阮	145
ruǐ	藥	61
rui	芮	46
	瑞	62
	銳	46
rùn	潤	162
	閏	162
ruò	若	176
	弱	176
sā	撒	118
sǎ	灑	8
	灑	34
	撒 → sā	
sà	薩	118
	卅	97
sāi	腮	28
	鰓	28
	思 → sī	
	塞	186
sài	賽	30
	塞 → sāi	
sān	三	95
sǎn	散	116
	傘	116
sàn	散	117
sāng	桑	166

sāng	喪	166	shà	廈	9
sāng	磗	168		霎	99
	噪	168	shāi	篩 (簾)	33
	揉	168		色 (→ sc)	190
sàng	喪	168		殺 → shā	
sāo	騷	68		曬	34
	臊	68		杉	97
	搔	68		衫	100
sǎo	掃	69		鈔	100
	嫂	69		山	118
sǎo	臊 → sāo			刪	121
	掃 → sǎo			羶	123
sè	澀	114		搨 (扇)	123
	澹	114		煽	123
	瑟	154		珊	115
	塞	186	shǎn	陝	103
	色	190		閃	103
	嗇	190	shàn	疝	121
sēn	森	110		禪 → chán	
sēng	僧	184		善	124
shā	沙	7		繕	124
	紗	7		膳	125
	杉 → shān			單 (→ dān)	125
	殺	120		擅	125
	刹 → chà			扇	125
shǎ	傻	13		煽	125

shàn	瞻	104
shāng	商	172
	傷	172
shǎng	賞	174
	晌 (餉)	174
	上	174
shàng	上	175
	尙	175
shāo	梢	72
	捎	72
	稍	74
	燒	76
sháo	韶	76
	勺	176
	芍	176
shǎo	少	77
shào	捎 → shāo	
	梢	74
	少	78
	紹	77
	邵	78
	召 → zhào	
shē	奢	11
	除	11
shé	蛇	11
	余 (余)	11

shé	舌	127
	折 (→ zhé)	127
shě	捨	11
shè	赦	12
	舍	12
	駘	12
	社	11
	攝	105
	涉	105
	拾 → shí	
	設	127
	射	203
shéi	誰 → shuí	
shēn	參 → cān	
	深	110
	森 → sēn	
	身	150
	申	150
	伸	150
	娠	150
	紳	150
shén	甚 → shèn	
	神	150
shěn	沈	112
	審	112
	嬉	112

shèn	甚	112
	甚	112
	滲	113
	腎	151
	慎	153
shén	什 → shí	
shēng	升	187
	勝	187
	生	192
	牲	192
	笙	192
	甥	192
	聲	200
shéng	繩	187
shěng	省	193
shèng	乘 → chéng	
	剝	188
	勝	188
	聖	202
	盛	202
shǐ	施	48
	師	52
	獅	52
	篩	52
	詩	56
	濕	114

shǐ	蝨	154
	失	154
	拾 → shí	
shí	射 → shè	
	時	56
	鱗	56
	十	114
	什	114
	拾	114
	實	154
	食	190
	識	190
	蝕	190
	石	203
	碩	203
shǐ	豕	49
	矢	53
	屎	53
	使	57
	史	57
	駛	57
	始	58
shì	世	36
	勢	36
	誓	36
	逝	36

shì	是	49	shǒu	手	88
	氏	49		首	88
	砥	49		守	88
	示	55	shòu	受	88
	視	55		瘦	90
	嗜	55		獸	90
	士	57		壽	90
	仕	57		授	90
	柿	57		售	90
	市	58	shū	梳	19
	恃	58		疏	19
	事	59		蔬	19
	試	59		書	19
	弑	59		舒	19
	侍	59		摳	24
	室	154		輸	24
	識	190		殊	24
	式	190		叔	221
	飾	190	shú	紉	163
	拭	190		叔 → shū	
	使 → shǐ	9		熟	221
	適	203		淑	221
	釋	203		贖	226
	螫	203	shǔ	暑	21
shōu	收	86		鼠	21
shóu	熟 → shú	88		黍	21

shǔ	署	22	shuān	拴	141
	薯	22	shuàn	涮	139
	數	25	shuāng	霜	171
	蜀	226		孀	171
	屬	226		雙	181
shù	墅	21	shuǎng	爽	174
	疏 → shū		shuàng	雙	182
	庶	22	shuí	誰	63
	恕	22	shuǐ	水	64
	署 → shǔ		shuì	稅	46
	數	27		說	46
	戌	27		睡	62
	輸	27	shǔn	盾 → dùn	
	樹	27	shùn	順	162
	豎	26		舜	162
	漱	90		瞬	162
	術	163	shuō	說	143
	述	163	shuò	數 → shù	
	束	226		蟀 → shuài	
shuāi	衰	63		勺 (→ sháo)	176
	摔	63		芍 (→ sháo)	176
shuài	帥	65		朔	183
	率	65	sī	斯	48
	率	163		廝	48
	蟀	163		撕 (斯)	37, 48
shuān	門 (榦)	138		私	51
	拴 (栓)	138			

sī	司	55	sòng	誦	225
	絲	55		頌	225
	思	55		訟	225
sǐ	死	53		訴 → sù	
sì	四	54	sōu	搜	86
	肆	54		颶	86
	似	57		餽	86
	祀	57		菟	86
	巳	57	sǒu	叟	83
	寺	58	sòu	嗽	84
	嗣	58		漱 → shù	
	飼	58	sū	蘇	14
	伺	58		酥	14
	思	58		穌	14
	俟	57		疏 → shū	
	賜 → cì		sú	俗	225
	竣	160	sù	素	18
	食 → shí			訴	18
sōng	宗	216		塑	18
	嵩	218		嘖	18
	松	222		宿	89
	鬆	216, 222		速	216
sǒng	慫	223		肅	220
	聳	223		宿	220
sòng	送	214		夙	220
	宋	217		粟	225

suān	酸	133
suàn	算 (筭)	135
	蒜	136
suī	雖	63
	綏 → suí	
	尿 → niào	
suí	隨	60
	綏	63
suì	髓	61
	碎	42
	歲	45
	遂	64
	隧	64
	穗	64
sūn	孫	157
sǔn	損	158
	筍	161
	樺	161
suō	娑	1
	蓑	4
	梭	4
	唆	4
	莎	4
	縮	221
suǒ	鎖	5
	瑣	5

suǒ	所	20
	些 → xiē	
tā	他	1
	塌	97
	湯	97
tǎ	塔	97
	獺	117
tà	踏	94
	搨	94
	沓	94
	榻	97
tāi	胎	28
tái	台	28
	臺	28
	苔	28
	抬 (擡)	28
tài	態	29
	太	30
	泰	30
tǎi	釐	29
	畝 (噓)	29
tān	貪	92
	坍 (埤)	95
	灘	115
	攤	115
tán	潭	92

tán	譚	92
	談	95
	痰	95
	淡 (→ dàn)	95
	檀	115
	壇	115
	彈 (→ dàn)	115
tǎn	毯	95
	坦	116
	袒	116
tàn	探 (擲)	93
	炭	116
	歎	116
tāng	湯	166
	趟	168
táng	堂	166
	棠	166
	螳	166
	唐	166
	糖	166
	塘	166
tǎng	倘	167
	躺 (踢)	167
tàng	燙 (湯)	168
	趟 (→ tāng)	168
tāo	叨	67

tāo	滔	67
	掏 (搯)	67
	濤	67
táo	桃	67
	逃	67
	淘 (洮)	67
	陶	67
	萄	67
	濤 → tāo	
tǎo	討	69
tào	套	70
tè	忒	186
	特	186
téng	騰	184
	膾	184
	藤	184
	疼 (癢)	184
	膝	184
	疼	216
tī	梯	37
	踢	207
	剔	207
	堤	37
tí	提	37
	啼	37
	蹄	37

tǐ	體	38	tiē	帖 → tiē	
tì	替	39	tīng	聽	204
	涕	39		廳	204
	剃	39		汀	204
	屨	39	tíng	亭	204
tiān	添	106		停	204
tián	天	129		延	204
	甜	106		庭	204
	田	129		蜓	204
	填	129		霆	204
	滇	129	tǐng	艇	206
	忝	107		挺	206
tiǎn	腆	130		鋌 (鋌)	206
	舔	107	tīng	聽	216
tiàn	忝	107	tōng	通	212
tiāo	挑	79		燭	212
tiáo	條	79	tóng	同	212
	調	79		銅	212
	跳	79		桐	212
tiǎo	挑 → tiāo			筒	212
tiào	跳 (趙)	81		童	212
	耀	81		瞳	212
tiē	貼	108	tǒng	桶	214
	帖	108		捅	214
tiē	帖 → tiē		tòng	痛	214
	鐵	132		同 → tóng	

tòng	通 → tōng		tūn	吞	148
tōu	偷	81	tún	屯	156
tóu	頭	81		豚	156
	投	81		鈍	156
tòu	透	84		臀	156
tǒu	叟	83		囤 → dùn	
tū	秃	215	tuō	拖	1
tú	徒	14		他 → tā	1
	屠	14		脱	137
	途	14		託	169
	塗	14		托 (拓)	169
	圖	14	tuó	駝	1
tǔ	土	16		馱	1
	吐	16		陀	1
tù	吐	17	tuǒ	妥	5
	兔	17		橢	5
	唾 → tuò		tuò	唾	6
tuán	團	133	wā	蝸 → wō	
	糰	133		蛙	13
tuǎn	瞞	134		窪	13
tuī	推	40		蛙	44
	忒	186		挖 (挖)	138
tuí	頹	40	wǎ	瓦	13
tuǐ	腿	41	wà	瓦	13
tuì	退	42		襪	146
	蛻	43	wāi	歪 (搯)	44

wǎi 歪 → yǎo

歪 → wāi

wài 外 43

wān 豌 134

剗 134

彎 139

灣 139

wán 完 134

丸 134

紈 134

頑 138

wǎn 碗 (碗, 盥) 135

宛 145

婉 145

晚 145

挽 145

wàn 玩 136

腕 136

萬 145

蔓 145

wāng 汪 177

wáng 忘 → wàng

亡 178

王 178

wǎng 枉 179

往 179

wǎng 網 179

鞵 179

wàng 往 → wǎng

忘 179

妄 179

望 179

旺 180

wēi 煨 41

危 61

萎 61

維 63

惟 63

威 66

微 65

薇 65

wéi 桅 40

爲 61

危 → wēi

唯 64

違 66

圍 66

闡 66

帷 63

微 → wēi

魏 65

wěi 礎 → wèi

wěi	萎 → wēi	
	委	62
	唯 → wéi	
	偉	66
	葦	66
	緯	67
	尾	66
wèi	礎	28
	衛	46
	穢 (→ huì)	46
	僞	62
	餒	62
	爲	62
	遺 → yí	
	位	65
	未	66
	味	66
	魏	67
	慰	67
	胃	67
	謂	67
	蝟	67
wēn	溫	157
	瘟	157
wén	文	163
	紋	163

wén	蚊	163
	聞	163
wěn	穩	158
	吻	164
	芻	164
wèn	問	164
	豐	164
	文 → wèn	
	聞 → wèn	
wēng	翁	213
wèng	甕	215
wō	倭	4
	踉	4
	窩 (過)	4
	蝸	12
wǒ	我	2
wò	臥	6
	洩	6
	握	184
	沃	218
	幹	137
wū	烏	15
	污	15
	朽	15
	巫	23
	誣	23

wū	屋	216
wú	母	23
	誣 → wū	
	吳	15
	蜈	15
	吾	15
	梧	15
	無	23
wǔ	五	16
	伍	16
	午	16
	塢	17
	武	25
	舞	25
	侮	25
	鵠	25
wù	誤	18
	悟	18
	悟	18
	惡 (→ è)	18
	務	26
	霧	26
	戊	84
	杌	160
	物	165
	勿	165

xī	西	37
	犀	37
	溪	37
	奚	37
	兮	37
	犧	49
	畦 → qí	
	嬉	56
	熙	56
	禧	56
	嘻	56
	希	60
	稀	60
	吸	114
	息	189
	惜	203
	析	207
	夕	203
	習	113
	襲	113
	息 → xī	
	熄	189
	媳 (息)	189
	惜 → xī	
	昔	203
	席	203

xí	錫	207
xǐ	洗	38
	璽	49
	徒	49
	喜	58
	蟻	58
xì	細	39
	系	39
	繫	39
	係	39
	戲	51
	隙	199
	夕 → xī	
xiā	蝦	8
	瞎	122
xiá	霞	8
	瑕	8
	遐	8
	暇	10
	狹	99
	峽	99
	洽 → qià	
	匣	101
	狎	101
	挾 (→ xié)	108
	轄	122

xiá	俠	108
xià	下	9
	夏	9
	廈 → shà	
	嚇	10
	下	10
	夏	10
	暇	10
	嚇 (→ hè)	194
xiān	暹	101
	纖	101
	杓	105
	仙	123
	鮮	123
	先	129
	掀	127
xián	咸	98
	鹹	98
	銜	100
	嫌	107
	閑	118
	間	118
	涎	123
	賢	130
	弦	130
	絃	130

xiǎn	險	103
	鮮	124
	癡	124
	顯	130
xiàn	陷	99
	餡 (賺, 餡)	99
	限	119
	莧	119
	憲	128
	獻	128
	現	131
	見 → jiàn	
	縣	147
	相	171
xiāng	箱	171
	廂	171
	湘	171
	襄	171
	鑲	171
	香	172
	鄉	172
	詳	171
xiáng	祥	171
	降 (→ jiàng)	182
xiǎng	想	173
	鯨	173

xiǎng	餉	175
	享	174
	響	174
xiàng	象	173
	像	173
	橡	173
	相 (→ xiāng)	175
	向	175
xiāo	項	182
	巷	182
	消	75
	宵	75
	霄	75
	硝	75
	銷	75
	鴉	76
	蕭	79
	簫	79
xiáo	枵	76
	囂	76
	梟	80
	削	176
	肴 → yáo	
	淆 → yáo	
xiǎo	小	77
	曉	80

xiào	孝	74
	校	74
	効	74
	笑	78
xiē	嘯	81
	些	10
	歇	129
	蠍	129
xié	楔	132
	邪	10
	斜	10
	諧	32
	鞋	33
	攜	47
	脅	106
	協	108
xiě	挾	108
	寫	11
xiè	血 (→ xuè)	148
	瀉	12
	卸	12
	謝	12
	械	33
	懈	35
	解	34
	蟹	34

xiè	泄	126
	褻	126
	屑	132
xīn	歆	111
	心	110
	辛	150
	新	150
	薪	150
	欣	155
	馨	205
	尋 → xún	
xìn	信	152
	霰	153
xīng	興	188
	星	205
	腥	205
	馨 → xīn	
xíng	形	205
	型	205
	刑	205
	脛	205
xǐng	行	191
	省 (→ shěng)	201
	醒	206
	興	189
xìng	杏	193

xìng	幸	196
	性	202
	姓	202
	行	193
xiōng	兄	209
	胸	223
	凶	223
	兇	223
xióng	熊	219
	雄	219
xiū	修	86
	羞	86
	脩	86
	休	187
xiǔ	朽	89
	宿(→ sù)	89
xiù	秀	89
	繡	89
	宿(→ sù)	89
	誘	89
	袖	89
	臭 → chòu	
	嗅	99
	嗅	220
xū	須	23
	鬚	23

xū	需	23
	吁 → yù	
	胥	19
	虛	19
	噓	19
	戌 → shù	
xú	徐	19
xǔ	許	21
xù	序	20
	叙	20
	緒	20
	絮	21
	續	26
	壻	39
	恤	162
	畜(→ chù)	221
	蓄	221
	續	225
xuān	宣	140
	軒	127
	喧	144
xuǎn	旋	140
	玄	147
	懸	147
xuǎn	選	141
xuàn	旋	142

xuàn	鏃	142
	榷	146
	眩	147
xuē	靴	6
	薛	126
	削 → xiāo	
xué	學	184
xuě	雪	143
xuè	穴	148
	血 → xiě	
xūn	窖 → yìn	
	熏	164
	勳	164
	薰	164
xún	尋	110
	荀	160
	詢	160
	旬	160
	循	160
	巡	160
xùn	輦	111
	訊	152
	遜	159
	殉	162
	迅	162
	訓	165

xùn	熏 → xīn	
yā	鴉	8
	丫	8
	亞	8
	鴨	101
	押	101
	壓	101
yá	牙	8
	芽	8
	衙	8
	伢(孖)	8
	涯	33
	崖	33
	押 → yā	
yǎ	雅	9
	啞	9
	亚 → yà	
yà	砑	10
	訝	10
	迓	10
	亚	10
	軋	120
	壓 → yā	
yái	崖 → yá	
yān	淹	102
	閹	102
	醃	105

yān	腌 → ang		yàn	驗	104
	焉	123		爇	106
	薦	127		豔	104
	煙	130		焰	104
	燕	130		鹽	104
	殷 → yīn			雁	122
yán	巖	100		晏	122
	嚴	105		諺	126
	炎	102		堰	128
	鹽	102		燕	132
	閭	102		燕	132
	簷	102		宴	132
	顏	121		硯	131
	延	123		沿 → yān	
	筵	123	yāng	央	173
	言	127		秧	173
	研	129		殃	173
	沿	141	yáng	羊	173
	鉛 → qiān			洋	173
	焰 → yàn			烱	173
yǎn	掩	103		楊	173
	覷	103		陽	173
	儼	105		揚	173
	眼	119		瘍	173
	演	125		佯	173
	堯	142	yǎng	仰	174

yǎng	養	174
	癢	174
yàng	樣	175
	恙	175
	漾	175
yāo	夭	78
	妖	76
	邀	76
	腰	76
	要 (→ yào)	76
	么	80
	么	80
	約 → yuē	
yáo	肴	72
	淆	72
	搖	76
	謠	76
	窖	76
	姚	76
	遙	76
	堯	80
yǎo	咬 (齧)	73
	舀	78
	夭 → yāo	
	杳	80
yào	鞫	74

yào	要	79
	耀	79
	鵲	79
	藥	176
	鑰	176
	躍	176
	虐 → nüè	
	樂 → yuè	
	腰 → yāo	
yē	耶 → yé	
	噎	
	椰	11
yé	耶	11
	爺	11
	邪 → xié	
yě	也	11
	野	11
	冶	11
yè	射 → shè	
	夜	12
	業	106
	罨	105
	葉	105
	頁 (葉)	105
	謁	129
	液	204

yè	腋	204
yī	伊	52
	醫	56
	衣	60
	依	60
	揖	114
	一	154
	椅 → yǐ	
yí	宜	48
	儀	48
	移	49
	夷	52
	姨	52
	胰	52
	疑	56
	飴	56
	怡	56
	貽	56
	遺	63
	誼 → yì	56
yǐ	蟻	50
	倚	50
	椅 (倚)	50
	矣	58
	己	58
	以	58

yǐ	乙	154
	尾 → wěi	
yì	藝	36
	刈	36
	縊	39
	譬	39
	詣	39
	誼	51
	義	51
	議	51
	易	51
	肄	55
	懿	55
	意	59
	異	59
	衣 → yī	
	毅	60
	邑	114
	逸	154
	憶	190
	億	190
	抑	190
	翼	190
	弋	190
	益	204
	亦	204

yì	譯	204
	易	204
	疫	211
	役	211
	艾 → ài	
	池 → xié	
yīn	音	111
	陰	111
	因	151
	姻	151
	涸 (涸)	151
	殷	155
	慇	155
	吟	111
	淫	111
	齷	149
	銀	151
	寅	151
yǐn	飲	112
	引	152
	隱	155
	癰	155
	尹	161
yìn	蔭	113
	窖	113
	飲	113

yìn	印	153
	隱 → yǐn	
yīng	應	188
	鷹	188
	鶯	195
	鸚	195
	櫻	195
	英	198
	嬰	201
	櫻	201
yíng	蠅	188
	迎	198
	盈	201
	羸	201
	營	210
	塋	210
	螢	211
yǐng	影	198
	穎	210
	穎	211
	景 → jǐng	
yìng	應	189
	硬	193
	映	199
yōng	雍	223
	癰	223

yǐng	擁	224
	壘	225
	雍	225
	庸	223
yǒng	永	209
	泳	210
	詠	210
	擁 → yōng	
	甬	224
	勇	224
	湧	224
yòng	用	225
yōu	憂	87
	優	87
	悠	87
	幽	91
yóu	由	87
	油	87
	游	87
	猶	87
	尤	87
	郵	87
yǒu	有	89
	友	89
	酉	89
	莠	89

yòu	誘	89
	又	90
	右	90
	祐	90
	宥	90
	柚	90
	黽	90
	糗	90
	幼	91
	有 → yǒu	
yū	迂	24
	淤	20
yú	愚	24
	虞	24
	娛	24
	于	24
	孟	24
	榆	24
	逾	24
	愉	24
	誤	24
	魚	19
	漁	19
	於	20
	余	20
	餘	20

yú	昇	20
yǔ	語	21
	與	21
	雨	26
	宇	26
	禹	26
	羽	26
yù	雨 → yǔ	
	愈	26
	遇	27
	喻	27
	裕	27
	諭	27
	芋	27
	寓	27
	羽	27
	與 → yǔ	
	御	22
	禦	22
	譽	22
	預	22
	豫	22
	澳 → ào	
	裕	99
	域	191
	郁	221

yù	育	221
	玉	226
	獄	226
	欲	226
	慾	226
	浴	226
	鬱	165
yuān	冤	144
	淵	147
yuán	圓	141
	員	141
	緣	141
	元	144
	原	144
	源	144
	袁	144
	轅	144
	園	144
	援	144
	垣	144
	苑 → yuàn	
yuǎn	遠	145
yuàn	院	143
	怨	146
	願	145
	苑	145

yue	噉	146	yùn	運	165
	日	146		量	165
	約	176		熨 (熨)	165
yuè	耀	79		孕	189
	悅	143		員 → yuán	
	閱	143		均 → jūn	
	月	146	zā	紮	120
	越	146		扎 → zhā	
	粵	146	zá	雜	94
	鉞	146	azāi	災	28
	藥	176		栽	28
	鑰	176	zǎi	宰	29
	躍	176		載	29
	嶽	180	zài	在	29
	岳	183		再	30
	嶽	183		載	30
	樂	183	zān	簪	92
	說 → shuō			簪	110
yūn	量 → yùn		zǎn	攢 (攢)	135
yún	勻	161	zàn	贊	117
	云	164		瀆	117
	雲	164		璽	96
yǔn	允	161		暫	96
	隕	161	zāng	臟	166
	殞	161		隣	166
yùn	韻	165	zàng	葬	168

zàng	藏 (→ cáng)	168
	臟	168
zāo	遭	68
	糟	68
záo	鑿	170
zǎo	早	69
	棗	69
	蚤	69
	澡	69
zào	皂	69
	造	69
	躁	71
	竈	71
zé	則	186
	賊 (→ zéi)	186
	澤	194
	擇	194
	窄 (→ zhǎi)	194
	責	197
	側 → cè	
zéi	賊	186
zēng	曾	184
	增	184
	憎	184
zèng	憎 → zēng	
	贈	185

	鋌	193
	碾	193
zhā	查 (粗) → chá	
	渣 (粗)	7
	扎	120
	紮	120
zhá	扎 (紮) → zhā	
	札	120
	炸 → zhà	
	劓	99
	閘 (牌)	99, 101
	炸 (爍) - - zhà	
	鋤 (鋤)	122
	軋 → yà	
	閘	101
zhǎ	渣 → zhā	
	眨	99
zhà	茬	7
	蛭	9
	詐	9
	榨	9
	炸	9
	乍	9
	柵	197
zhāi	齋	31
	摘	196

zhái	擇 → zé	
	宅	194
zhǎi	錡	32
	窄	194
zhài	債	34
	寨	35
	祭 → jì	
zhān	沾 (霑)	102
	粘 (→ nián)	102
	瞻	102
	占	102
	氈	123
	旃	123
zhān	斬	98
	盞	119
	展	124
zhàn	暫	96
	站	96
	蘸	99
	佔 (占)	104
	綻	119
	棧	121
	戰	125
	顫 → chàn	
zhāng	張	171
	章	172

zhāng	樟	172
	彰	172
zhǎng	長	173
	漲 (長)	173
	掌	174
zhàng	漲	173
	丈	173
	仗	173
	杖	173
	帳	175
	賬 (帳)	175
	脹	175
	障	175
	瘴	175
zhāo	著 → zhù	
	昭	76
	招	76
	朝	76
zháo	著 (→ zhù)	21
zhǎo	爪	73
	沼	77
zhào	罩	74
	櫛	74
	策	74
	趙	77
	兆	77
	肇	

zhào	召	78	zhēn	貞	200
	照	78		禎	200
	詔	78		偵	200
zhē	遮	11	zhēn	枕	112
	蜇	126		診	151
	折 → zhé			疹	151
zhé	摺	105	zhèn	枕	113
	輒	104		鎮	152
	蟄	114		陣	152
	折	127		振	153
	褶 → zhě			震	153
	摘 → zhāi			賑	153
zhě	者	11		娠	153
	褶	105		朕	112
	摺 → zhé		zhēng	徵	187
zhè	蔗	12		蒸	187
	浙	127		爭	195
	宅 → zhái			箏	195
zhēn	針	110		睜	195
	斟	110		貞 → zhēn	
	珍	150		禎 → zhēn	
	榛	150		偵 → zhēn	
	臻	150		正	200
	眞	150		征	200
	診 → zhěn			丁 → dīng	
	肫	160	zhēng	拯	188

zhěng	正 → zhèng		zhí	職	190
	整	201		植	190
zhèng	證	188		殖	190
	症 (證)	188		紙	49
	正	202		只	49
	政	202		旨	53
	鄭	202		指	53
zhī	知	48	zhǐ	止	58
	蚰	48		趾	58
	支	48		址	58
	枝	48	zhì	址	58
	肢	48		滯	36
	梔	48		制	36
	脂	52		製	36
	之	56		智	50
	芝	56		雉	53
	汁	114		稚	54
	織	190		至	55
	擲 → zhì			痔	57
	隻	203		峙	57
	植	189		直	59
zhí	執	114		治	59
	姪	154		值	59
	質	154		志	59
	直	189		誌	59
	值 (直)	189		痣	59
				窒	154

zhì	秩	154
	質	154
	識	190
	擲	203
	炙	203
zhōng	致	54
	中	218
	忠	218
	衷	218
	終	219
zhǒng	鍾	222
	鐘	222
	盅 (鍾)	222
	冢	224
	種	224
zhòng	腫	224
	中	219
	仲	219
	衆	220
	種	225
zhōu	重	224
	周	86
	舟	86
	州	86
	洲	86
	粥	221

zhóu	軸	221
zhǒu	肘	88
zhòu	帚	88
	晝	89
	皺	90
	綯	90
	咒	90
zhū	紂	88
	宙	89
	驟	90
	摑 → chōu	
	豬	19
zhú	諸	19
	誅	23
	蛛	23
	株	23
	朱	24
zhú	殊	24
	珠	24
	主	26
	竹	221
	逐	221
zhǔ	軸 → zhóu	
	燭	226
	築 → zhù	
	煮	21

zhǔ	拄	25
	主	26
	屬 (→ shǔ)	226
zhù	苧	20
	著	21
	箸	21
	助	22
	柱	25
	駐	27
	註	27
	住	27
	注	27
	蛀	27
	鑄	27
	築	221
	祝	221
	囑	226
	貯	21
zhuā	髮	12
	抓	72
zhuǎ	爪 (→ zhǎo)	73
zhuāi	拽 → zhuài	
zhuài	拽	127
zhuān	專	140
	磚 (甄)	140
	膊	140

zhǎn	轉	141
zhuàn	賺	98
	撰	139
	篆	141
	轉	142
	傳 (→ chuán)	142
zhuāng	莊	171
	裝	171
	妝	171
	椿	181
zhuàng	壯	175
	狀	175
	撞	182
zhuī	追	63
	錐	63
zhuì	綴	45
	贅	46
	墜	64
	鎚	63
zhūn	肫	160
	諄	160
zhǔn	準	161
	准	161
zhuō	拙	143
	桌	183
	涿	183

zhuō	捉	183
zhuó	拙 → zhuō	
	著 (→ zhù)	21
	着	176
	酌	176
	焯	176
	卓	183
	琢	183
	啄	183
	濁	183
	濯	183
	鐳	183
	浞	183
zī	資	51
	姿	51
	咨	51
	茲	55
	滋	55
	孳	55
	輜	56
zǐ	紫	49
	姊	53
	子	57
	梓	57
	滓	57

zì	自	54
	字	58
	籽	58
zōng	棧	213
	鬃 (駿)	213
	宗	216
	綜	217
	踪	217
	蹤	222
	縱	222
zǒng	總	214
zòng	糴	214
	綜 → zōng	
	縱	225
zōu	鄒	86
zǒu	走	83
zòu	驟	90
	奏	84
zū	租	14
zú	卒	159
	族	216
	足	225
zǔ	祖	16
	組	16
	阻	20
zuān	鑽	133

zuǎn	鑽 → zuān	
	纂	135
zuàn	鑽 → zuān	
	賺 → zhuàn	
zuī	堆 → duī	
zuǐ	嘴	61
zuì	罪	41
	最	43
	醉	64
zūn	尊	157
	遵	160
zūn	摠	158
zùn	俊 → jùn	
zuō	作 → zuò	
zuó	作 → zuò	
	昨	170
zuǒ	左	2
	佐	2
	撮 → cuō	
zuò	坐	5
	座	6
	坐	6
	做 (作)	18
	鑿	170
	柞	170
	作	170

BIBLIOGRAPHY

- BARALE, Catherine, Mae-chu Chang, Marjorie Chan, John D'Andrea, David Strecker and Moira Yip. 1977. "Aspects of the Kaiping vernacular: a field study report". ms. (1977 Linguistic Institute, U. of Hawaii at Manoa)
- BAWDEN, C.R. 1954. "An eighteenth-century Chinese source for the Portuguese dialect of Macao". Silver Jubilee Volume of the Zinbun-Kagaku-Kenkyusyo (Kyoto U):12-33.
- BEI-JING DA-XUE. 1962. Han-yu Fang-yin Zi-hui 漢語方音字匯. (Peking: Wen-zi Gai-ge Chu-ban-she).
- _____. 1964. Han-yu Fang-yan Ci-hui 漢語方言詞匯. (Peking: Wen-zi Gai-ge Chu-ban-she).
- BOLTZ, William. 1977. "Notes on an eighteenth-century Sino-Portuguese glossary". Romance Philology 30.3:442-453.
- _____. 1978. "Notes on dating the Cantonese dentilabialization of Middle Chinese gutturals". Journal of the American Oriental Society 98.1:99-100.
- BU Yi 布衣. 1977. Ao-men Zhang-Gu 澳門掌故. (Hong Kong: Guang Jiao Jing Chu-ban-she).
- CHAN, Marjorie K.M. (forthcoming). "A response to Boltz' notes on Cantonese dentilabialization".
- CHAO, Yuen Ren. 1940. "Distinctions within Ancient Chinese" Harvard Journal of Asiatic Studies 5:203-233.
- _____. 1947. Cantonese Primer. (Cambridge, Mass.: Harvard University Press).
- _____. 1948. "Zhong-shan fang-yan" 中山方言. Bulletin of the Institute of History and Philology. Academia Sinica XX:49-73.
- _____. 1968. A Grammar of Spoken Chinese. (Berkeley: U. of California Press).
- CHEN, Leo and Jerry Norman. 1965. An Introduction to the Foochow Dialect. (San Francisco: San Francisco State College).
- CHENG, Teresa. 1968. "The phonological system of Cantonese". Project on Linguistic Analysis. Reports Second Series. No. 5 (March 1968):C1-C77.
- CHEUNG, Hung-nin Samuel. 1972. Cantonese as Spoken in Hong Kong. (Hong Kong: Chinese U. of Hong Kong).

- CHINESE LINGUISTICS PROJECT. 1970. Fang-yan Diao-cha Zi-biao
方言調查字表. (Princeton: Princeton U.)
- _____. 1972. Handbook of Chinese Dialect Vocabulary.
(Princeton: Princeton U.)
- CHOU Fa-kao (chief ed.). 1973. A Pronouncing Dictionary of Chinese Characters in Archaic & Ancient Chinese, Mandarin & Cantonese. (Hong Kong: Chinese U. of Hong Kong).
- Deng-Yun Wu Zhong 等韻五種. 1977 Reprint. (Taipei: Yi-wen Yin-shu-guan). (Five rhyme tables included: Yun-jing
韻鏡, Qi-yin Lue 七音略, Si-sheng Deng-zi 四聲等子,
Qie-yun Zhi-chang Tu 切韻指掌圖 and Jing Shi Zeng Yin
Qie-yun Zhi-nan 經史正音切韻指南).
- DOUGLAS, Carstairs. 1899. Chinese-English Dictionary of the Vernacular or Spoken Language of Amoy. (London: Presbyterian Church of England).
- EGEROD, Søren. 1956. The Lungtu Dialect: A Descriptive and Historical Study of a South Chinese Idiom. (Copenhagen: E. Munksgaard).
- _____. 1959. "A sampling of Zhong-shan Hakka". In: Studia Serica Bernhard Karlgren Dedicata, edited by Søren Egerod and Else Glahn. (Copenhagen).
- Guang-Yun 廣韻. (Present copy used is a corrected edition of Chang family's edition of the Guang-yun: Jiao-zheng Song-ben Guang-yun 校正宋本廣韻 (includes an appended index), 1976. (Taipei: Yi-wen Yin-shu-guan).)
- HASHIMOTO, Mantaro J. 1973. The Hakka Dialect: A Linguistic Study of its Phonology, Syntax and Lexicon. (Cambridge, England: Cambridge U. Press).
- HASHIMOTO, Oi-kan Yue. 1972a. Phonology of Cantonese. (Cambridge, England: Cambridge U. Press).
- _____. 1972b. "Two features of Proto-Yue Initials".
Unicorn 9:20-40.
- HSU, Immanuel C.Y. 1970. The Rise of Modern China. (London: Oxford U. Press).
- Hua-qiao Zhi: Ao-men 華僑志: 澳門. 1914. (Taipei: Hua-qiao Zhi Bian-zuan Wei-yuan Hui).
- HUANG, Po-fei. ¹⁹⁷⁰ Cantonese Dictionary; Cantonese-English, English-Cantonese. (New Haven: Yale U. Press).
- KAO, Diana L. 1971. Structure of the Syllable in Cantonese. (The Hague: Mouton).

- KARLGREN, Bernhard. 1954. "Compendium of Phonetics in Ancient and Archaic Chinese". Museum of Far Eastern Antiquities, Bulletin No. 26:211-367.
- KRATOCHVIL, Paul. 1968. The Chinese Language Today: Features of an Emerging Standard. (London: Hutchinson & Co., Ltd.).
- KWOK, Helen. 1971. A Linguistic Study of the Cantonese Verb. (Hong Kong: U. of Hong Kong).
- LI Fang Kuei. 1966. "The zero initial and the zero syllable". Language 42:300-302.
- _____. 1973. "Languages and dialects of China". Journal of Chinese Linguistics 1.1:1-13.
- _____. 1974. "Studies on Archaic Chinese phonology". Translated from Chinese by Gilbert L. Mattos. Working Papers in Linguistics, U. of Hawaii:171-282. (Original paper titled "Shang-gu Yin Yan-jiu" 上古音研究. Tsing Hua Journal of Chinese Studies, N.S. IX, Nos. 1 and 2 (1971):1-61).
- LI Rong 李榮. 1957. "Fang-yan li de wen-bai yi-du" 方言裡的文白異讀. Zhongguo Yuwen (April 1957):22-23.
- LIANG Seng-bao 梁僧寶 (Qing). Si-sheng Yun-pu 四聲韻譜. 2 Vols. 1955 edition. (Peking: Gu-ji Chu-ban-she).
- LIANG Shih-chiu (ed.-in-chief). 1972. A New Practical Chinese-English Dictionary. (Taipei: Far East Book Co., Ltd.).
- LIU Jun-ren 劉君任. 1967. Zhong-guo Di-ming Da Ci-dian 中國地名大辭典. (Taipei: Wen-hai Chu-ban-she).
- LO Chang-pei 羅常培. 1956. Xia-men Yin Xi 廈門音系. Second edition. (Peking: Ke-xue Chu-ban-she).
- MATHEWS, R.H. (Comp.).¹⁹⁴² Mathews' Chinese-English Dictionary. Revised American Edition. (Cambridge, Mass.: Harvard U. Press).
- MATISOFF, James A. 1973. "Tonogenesis in Southeast Asia". In: Hyman, Larry (ed.). Consonant Types and Tone. Southern California Occasional Papers in Linguistics 1:73-95.
- McCOY, William John, Jr. 1966. Szeyap Data for a First Approximation of Proto-Cantonese [with] Appendix. Ph.D. dissertation, Cornell U.
- _____. 1970. "Upper register nasals and laterals in Cantonese". Paper presented at the Third Sino-Tibetan Reconstruction Conference.
- NORMAN, Jerry. 1969. The Kienyang Dialect of Fukien. Ph.D.

dissertation, U. of California at Berkeley.

_____. 1970. "A characterization of the Min dialects".
Unicorn 6:19-34.

The Principles of the International Phonetic Association. 1949.
(London: International Phonetic Association, University
College).

PULLEYBLANK, Edwin G. 1962. "The consonantal system of Old
Chinese". Asia Major 9:58-144, 206-265.

_____. 1970-71. "Late Middle Chinese". Asia Major 15(2):
197-239, and 16 (1-2):121-168.

_____. 1973. "Some further evidence regarding Old Chinese
-s and its time of disappearance". Bulletin of the School
of Oriental Studies XXXVI.2:368-373.

_____. 1977. "Early Middle Chinese". ms.

SCHANE, Sanford A. 1973. Generative Phonology. (Englewood Cliffs,
N.J.: Prentice-Hall).

SMALLEY, William A. 1963. Manual of Articulatory Phonetics.
Revised edition. (Tarrytown, N.Y.: Practical Anthropology).

THOMPSON, Robert W. 1959. "Two synchronic cross-sections in the
Portuguese dialect of Macao". Orbis 8.1:29-53.

VAN ETEN, Albert Henry. 1931. A Study of the Phonology of
Sixth Century (A.D.) Chinese, and a Comparison with that
of the Modern Cantonese Dialect. M.A. thesis, U. of
California, Berkeley.

WHITAKER, K.P.K.A. 1956. "A study of the modified tones in
spoken Cantonese". Asia Major 5:9-36, 184-207.

WONG, James Poy. 1970. "A study of the T'ai Shan (Hoi San)
dialect". ms. (San Francisco State College).

WONG, Sik Ling. 1954. A Chinese Syllabary Pronounced According
to the Dialect of Canton. (Hong Kong: Chung Hwa Book Co.)
(First edition: 1940).

Xiang-shan Xian Zhi 香山縣志. 1923. (1967 reprint of 1923
edition used. Taipei: Cheng-wen Chu-ban-she).

XIE Shou-chang et. al. (ed.) 謝壽昌等. 1933. Zhong-guo
Gu-jin Di-ming Da Ci-dian 中國古今地名大辭典.
(Shanghai: Shang-wu Yin-shu-guan).

Xin-hua Zi-dian 新华字典. 1973. (Peking: Shang-wu Yin-shu-
guan).

- YANG, Paul. 1971. "On the reconstruction of Old Chinese based on modern dialect data". Paper presented at the Fourth Meeting of the Conference on Sino-Tibetan Linguistics, at Indiana U., Bloomington, Indiana.
- _____. 1972. "Prefix Kə- in modern Chinese dialects and Proto-Chinese". Paper presented at the Fifth Annual Conference on Sino-Tibetan Language and Linguistic Studies, Ann Arbor, Michigan.
- YIN Guang-ren and Ru-lin Zhang 印光任. 張汝霖. ca. 1750. Ao-men Ji-lue 澳門記略. (Present copy is a 1968 reproduction of a 1800 edition of the text. Taipei: Cheng-wen Chu-ban-she) (Zhong-guo Fang-zhi Cong-shu [Hua-nan Di-fang] 109).
- YUAN Jia-hua et al. 袁家驊等. 1960. Han-yu Fang-yan Gai-yao 漢語方言概要. (Peking: Wen-zī Gai-ge Chu-ban-she).
- YUE, Anne O. 1979. "The Teng-xian dialect of Chinese". Computational Analysis of Asian and African Languages 12 (CAAL Monograph Series No.3).
- ZHAO Chuan-cheng 趙泉澄. 1955. Qing-dai Di-li Yan-ge Biao 清代地理沿革表. (Peking: Zhong-hua Shu-ju).
- ZHONG-GUO KE-XUE YUAN YU-YAN YAN-JIU SUO (ed.) 中國科學院語言研究所. 1964. Fang-yan Diao-cha Zi-biao 方言調查字表. (Revised edition). (Peking: Ke-xue Chu-ban-she).
- Zhong-hua Xin Zi-dian 中華新字典. 1976. (Hong Kong: Zhong-hua Shu-ju).
- "Zhong-shan qiao-xiang feng-guang" 中山僑鄉風光 ('Scenic spots of Chung-shan'--English title provided). 1975 (?). (Hong Kong: Scenery Publishers).

Addenda:

- CHENG, Teresa. 1973. "The phonology of Taishan". Journal of Chinese Linguistics 1.2:256-322.
- SHU Xin-cheng et al. 舒新城等. 1947. Ci-hai 辭海. (Shang-hai: Zhong-hua Shu-ju).