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CHAPTER I INTRODUCTION

1.1. Purpose.

The present work is a fine-grained study of coexistent tone systems in Chinese dialects. In each case study of the dialect in question it is an inquiry into a mixed linguistic system where two strata or rather more than two strata cooccur and interact with each other in a symbiotic relation. It offers a microlinguistic look at sound change in progress and is mainly concerned with the problem of implementation, i.e., how a sound change is implemented, rather than the problem of actuation (see Chen and Wang 1975). Our deliberation will be based on a dynamic model of sound change, which is theoretically more viable than the traditional static view of language in accounting for sound change, and fortified by such a dynamic model where time dimension has an important role, we try to arrive at a systematic account for ways in which two rival tone systems are pitted against each other for eventual triumph. It is our conviction that a genuine understanding of aspects of sound change can only be obtained by subjecting them to a detailed and holistic scrutiny. This fairly exhaustic lexically-oriented study of the tone development under discussion is an echo of that conviction and we hope that general patterns that

emerge in this endeavor will deepen our understanding of the principles governing sound change in progress.

1.2. An Overview of the Coexistent Tone Systems in Chinese Dialects.

As far as the development of Middle Chinese Tones IIv and IIIv is concerned, three tone systems A, B & C as given below exist at modern stage and there are a variety of ways in which any one of the three tone systems can coexist with each other in Chinese dialects:

A. IIvo = IIIv = IIIu

B. IIvo = IIIv

C. IIvo ≠ IIIv

(From now on Roman numerals will be used to designate Middle Chinese (MC) tone categories as recorded in the Rime book, Qieyun (601 AD), while Arabic numerals are reserved for the tone reflexes in modern dialects; the lower case alphabets represent types of MC initials: u = unvoiced, v = voiced, vo = voiced obstruent, vs = voiced sonorant; voiced obstruents include MC initials of *b-, *v-, *d-, *dp-, *dz-, *dzr-, *dzp-, *g-, *gr-, *z- & *zp- and voiced sonorants comprise MC initials of *m-,

*mv-, *n-, *np-, *ng-, *l-, *j- & *0- (see Appendix 1); note that IIvo, for example, is an abbreviation for the Tone II lexemes with the MC voiced obstruent initials)). System A mean that the reflexes of IIvo, IIIv and IIIu have merged into a single tone category. System B means that there is a merger of IIvo and IIIv, but the distinction between IIIv and IIIu has not been obliterated. System C means that IIvo and IIIv still remain distinct. Viewed in global and oversimplified terms (A) and (B) are unique of the tonal development of norhtern dialects while (C) can be found only in southern dialects or rather the substratum of southern dialects only including Wu, Yue, Min & Hui dialect groups. One can also view the interface of (A), (B) & (C) in time dimension. If the three tone systems cooccur in a dialect, (C) will be oldest and (A) latest on the temporal plane. Two separate tone systems can also be extracted with respect to the development of IIvs: (D) IIvs merged with IIu and (E) IIvs is kept apart from IIu. For the sake of simplicity we will defer the discussion of it until later. Let us consider the development of IIvo first.

As observed above, (A), (B) and (C) may interact with each other in many ways. In the southern Min group, for example, (C) still survives vis-a-vis (B) in Chaozhou ((A) also occurs but to a lesser extent),

whereas (C) has already given way to (B) in Xiamen. Kejia, in particular the Haifeng (Schaank 1897) and Lufeng (Yang 1957) varieties, boasts of a triple-layered tone system consisting of (A), (B) and (C); (B) has been eclipsed by (A) in the Meixian variety showing no distinction between IIIu and IIIv. If the Kejia group still tenaciously holds to (C), the Gan group, Kejia's closest neighbor, suffers the attrition of (C) so much that it has become an arena for (B) and (A) to compete with each other (the Linchuan dialects (see 3.7.) yields only a handful of survivals of (C)). Dialects in the northeastern part of Hunan such as Changsha, Hanshou, Naxian, Xiangyin and Yuangjiang also show unmistakable evidence of coexistence of (A) and (B); IIvo is realized as 3b in the colloquial pronunciation as well as and as opposed to 3a in the literary pronunciation. Besides the Kejia group the Huizhou group also exhibits the rivalry between (B) and (C), but it differs from Kejia in that while IIvo of (C) merges with Iu in Kejia, it is realized as 2b in some varieties such as Xiuning, Tunxi, Taiping (Xianyuan) and Wuyuan (in Jiangxi province) or merges with IIu in such varieties as Shexian (Huicheng), Qimen, Yixian, Jiqi and Jingde. For a case study of the coexistence of (B) and (C) in the Huizhou dialect see 3.6., and for a recent exploration of the sound system of the Huizhou dialect see K. Chang (1986). The tone development of the Huizhou dialect

discussed here is drawn from Chao & Yang (1965), Hirata (1982a&b), Meng (1985), T. Shen (1983), Wei et al (1935), Wu (1985), Ye (1986) and Zhang (1983a&b). As for the Wu group a cursory look over the tone chart (Chart 4) of Chao (1928) reveals that a majority of southern varieties keeps IIvo distinct from IIIv, but even in them we can still find cases of competing tone systems of (B) and (C), as, for example, in Jinhua where, as revealed in a fairly exhaustive treatment (Ye 1958), there are plenty of the competing forms 2b (colloquial) and 3b (literary) as reflexes of IIvo. Finally, the competition of (B) and (C) are also found in the Yue group, for example Cantonese (see 3.5 for more discussion).

Now let us return to the tone systems associated with (D) and (E) as given below:

D	IIvs	=	IIu
E	IIvs	≠	IIu

System D showing no distinction between IIvs and IIu is typical of northern dialects, whereas system E where IIvs and IIu remain distinct is unique of southern dialects like Wu and Yue. Kejia has E as the indigenous substratum with D superimposed on it. E is realized as 1a as a result of the merger of IIvs and Iu, and D

emerges as 2a, and the tendency is that 1a is gradually losing ground to 2a. The coexistence of D and E also occurs in some Huizhou dialects; they are realized as 2a and 2b in Xiuning, Tunxi and Wuyuan, and as 1a and 2b in Taiping (Xianyuan). In southern Min like Xiamen and Chaozhou there are still a dozen or so of recalcitrant E lexemes pitted against the overwhelming majority of the D forms. The E and D forms are realized as 2b and 2a in Chaozhou, while they are manifested as 3b and 2a in Xiamen since in the latter case IIv and IIIv have been merged (see K. Chang 1975a & 1984 and for the Chaozhou examples in particular see S-Y, Zhang 1979: 263). Because of the coexistence of D and E in some Min dialects some phonologists posit two types of initial in proto-Min stage: voiceless sonorants occur in the upper tone register (our D) and voiced sonorants in the lower tone register (our E). This hypothesis is untenable on three counts: (1) if the distinction solely rested on the voicing of initials the finals of each doublet would not show a divergence in quality, (2) there would be a clear semantic contrast in each doublet and (3) the D items and the E items would have not shown a distinction between the literary pronunciation and the colloquial pronunciation, this kind of distinction being an indication that the two systems are anchored at two different points on a chronological plane. The falsity of the three points immediately invalidate the above

claim that there is a contrast of voicinging in sonorant initials in proto-Min.

1.3. The Tone Development in the Middle Chinese Period.

1.3.1. The Split of Four Tone Categories.

The four tone categories (I, II, III & IV or rather LEVEL, RISING, FALLING & ENTERING in traditional terminology) as recorded in Qieyun is a time-honored legacy dating back to the Qi-Liang period (see Zhou 1981: 434-473 and 1982). As early as the Tang dynasty the four tone categories underwent bipartition conditioned by the voicing of the initials and each developed into two subtones. The split of the four tone categories is presupposed by a well-attested tone development that started at least no later than the late Tang period: the merger of IIvo and III (more discussion in 1.3.2). Tone II has to collapse into IIu/vs and IIvo before the latter can merger with IIIv. The Japanese Buddhist monk Annen's comment on the tone values in his work Shittan Zoo (880 AD) also points to the subtonal split of the four tone categories that were already in existence in the 9th century (see Zhou 1981: 494-500 & Mei 1970). Our understanding of the tonal phenomena in Chinese is enhanced by the following excellent works: F-K Li (1980)'s elucidation of the relation between tone and the segmental, Matisoff (1970, 1972 & 1973)'s

tonogenesis of Non-Chinese languages and WSY Wang's feature analysis of tone (1967).

1.3.2. Historical Evidence on the Merger of IIvo with IIIv.

The two types of tone system, Type 1 where the reflexes of IIvo and IIIv are kept apart and Type 2 where they have merged into one tone category, as found in modern Chinese dialects, have their respective precursors in the Middle Chinese period. Type 1 can be traced back to Qieyun (601 AD), a rime book based on the Qi-Liang tradition whereas Type 2 has its predecessor in the Loyang dialect of the late Tang period as reflected in Li Fu's Corrigenda (880 AD) (see Hong 1982: 175 and R. Li 1982) where Qieyun was criticized for distinguishing between IIvo and IIIv as well as the Changan dialect as recorded in Huilin (737-820 AD)'s Yiqiejingyinyi (810 AD) grounded on the Qin sound system (see Huang 1931 & Chou 1948). In other words, the merger of IIvo and IIIv must have started no later than the late Tang period, about two or three hundred years after the completion of Qieyun, in some northern dialects like Loyang and Changan, as attested in the above historical documents. Here one should guard against the naivete that the tone system of Loyang and Changan directly evolved from the tone system of Qieyun;

a more realistic line of thinking is to attribute the discrepancy between Qieyun and Loyang/Changan to the existence of dialectal variation in the Middle Chinese period (see Chang 1975b). The rime practice of Tang poets like Bai Juyi (772-846 AD) (see Lai 1982) and Han Yu (768-824 AD) (see Xun 1982:236-237) also shows signs of the merger of IIvo and IIIv. About one hundred years later Kaimeng Yaoxun (929 AD), a Chinese text with pronunciation notations representative of a Northwestern dialect, also yields the same kind of merger (see Lo 1933: 122-129). The above discussion is partially indebted to Chang (1987).

The merger of IIvo and IIIv as revealed in Huilin's Yiqiejingyinyi deserves a little bit elaboration, since it constitutes a case of sound change in progress in support of the theory of lexical diffusion based on solid evidence furnished by a historical document. Huang (1931: 112) was the first to point out the confusion of IIvo and IIIv inferred from the mix-up of the use of the lower qie lexeme which, by the Fanqie convention, determines the tone category of the glossed lexeme. However, it takes Chou (1948: 359-444) to scout Huang's monograph to look for the lexemes that show the tonal alternation between IIvo and IIIv and collate them with their counterparts in Guangyun. The number of the lexemes showing the tonal alternation is substantial.

According to Numoto (1982: 1053)'s statistics, of the total of 309 items with the IIvo initials 239 stay in Tone II and 9 occur in Tone I whereas 61 show alternation between or merger of Tone II and III, the proportion between the unchanged ones and the ones that are in the process of change or have been changed is 4 to 1. If the merger of IIvo and IIIv was still an on-going process in Huilin's Changan dialect in the early 9th century, it must have completed its course in the sound system of Yunjing by the 12th century (see L. Wang 1958: 194). One can thus conceive the merger of IIvo and IIIv as a gradual process of diffusion that takes centuries to run the full course.

1.4. The Neogrammarian Hypothesis and the Thesis of Lexical Diffusion.

The Neogrammarian doctrine that sound change operates without exception is often claimed to be a useful working hypothesis which makes it possible for the comparative study of Indo-European languages to be carried out with scientific rigor. In the framework of the regularity hypothesis cases of exception are explained away in terms of analogical formation or dialectal borrowing in the sense that exceptions are not regarded as belonging to the domain of sound change. Ever since it was advanced by Osthoff & Brugman

in 1878 the hypothesis of the regularity of sound change has worked its way into the mind of historical linguists and become the implicit assumption or rather credo in the study of sound change. Neogrammarians' claim of exceptionless sound change, however, did not go unchallenged; Schuchardt, for one, represents a single-handed heroic effort to combat the Neogrammarian dogma. In his monograph 'Über die Lautgesetze: Gegen die Junggrammatiker' (On Sound Laws: Against the Neogrammarians) written in 1885 he carries the bases of the Neogrammarians' thesis to a reductio ad absurdum (see Vennemann and Wilbur 1972). For a reappraisal of Schuchardt's contributions see Wilber and Vennemann's articles (ibid.).

Entrenched with the formal device of the generative theory which he later renounced Wang (1969) is a landmark in the history of the anti-Neogrammarians' paradigm. Although the theory of lexical diffusion is not without its precursors in the present century, such as Sommerfelt (1962) in Europe and Sturtevant (1917) in America, it is in this 1969 article that its main ideas are crystallized and mapped out in most unequivocal terms so that the theory can be subject to empirical verification. This theory is further developed and elaborated on in a series of follow-up works many representatives of which are anthologized in

Wang (ed.) (1977). Chen and Wang (1975), a joint work summing up the past lexical diffusionists' endeavors, cautiously draws a line between implementation and actuation so that the theory of lexical diffusion is so constrained that it aims at accounting for the problem of implementation rather than actuation. In the meantime the theory of lexical diffusion was brought to the limelight by Labov's 1979 presidental address subsequently published as Labov (1981) where he tries to solve the Neogrammarian controversy. Recent pursuits in this regard include, to name a few, Krishnamurti et al (1983), Phillips (1984) and Ogura (1987). For an effort to clarify some of the misunderstood issues and explore the potential of the theory of lexical diffusion see Shen (1987).

Here we will not repeat all the arguments that have been offered. We will rather recap some of the main ideas that are of immediate concern to our discussion. The main distinction between the Neogrammarian position and the theory of lexical diffusion is that as opposed to the traditional static view of sound change the lexical diffusionists offer us a dynamic look into language change where time dimension plays a pivotal role in the theoretical framework (see Chen & Hsieh 1971 and Chen 1972). In such a dynamic model sound change consists of three stages along the time plane: (1)

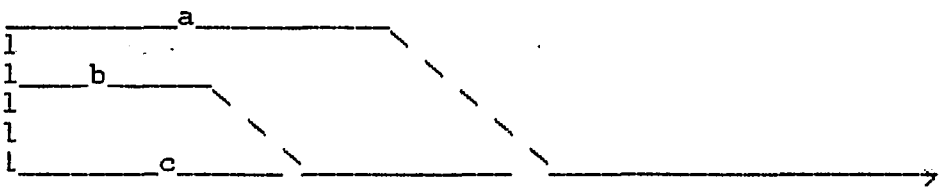
unchanged forms, (2) alternation between unchanged forms and changed forms (3) changed forms. Thus a sound change is completed only after it runs the whole gamut of these three steps. This brings us to one of the central claims in the theory of lexical diffusion that sound change is phonetically abrupt, but lexically gradual. That is, a sound change cannot affect every member of the lexicon overnight; it often takes years, decades or even centuries to soak up the whole lexicon. If sound change proceeds in a lexically gradual manner, then the coexistence of alternant forms will not be an uncommon phenomenon. This kind of phenomenon that constitutes what is traditionally referred to as exceptions is in fact a change that has not completed its course in the dynamic model of sound change. With respect to the alternant forms there is a pretty intriguing claim that a sound change is regular unless other sound changes compete against it (Wang 1969). In a way, our work is built around such a claim and tries to put it to empirical test.

1.5. Language Contact and Coexistent Sound Systems.

Langauge as a self-contained and monolithic system seems to be taken for granted in most, if not all, works based on structural linguistics as well as generative linguistics. However, from Weinreich (1953)'s extensive

bibliography (totaling 658 items) one can see a sustained interest in problems of language contact. Studies carried out in the framework of structuralism on coexistent linguistic systems in a single language are few and far between. One such rare case that I know of is Fries and Pike (1949)'s article. Though their central concern is to work out a procedure for uncovering coexistent phonemic systems in a language, many issues that they raise and touch on deserve our serious attention such as (1) what are the criteria that can be used to determine whether a borrowed sound has been wholly absorbed to the native system, (2) implanted sounds once assimilated to the indigenous system tend to be modified along with the native sounds, (3) in detecting the coexistence of conflicting overlapping systems it is necessary to look outside the language to track down the source of the alien system in another language even though the system may have disappeared, and (4) monolinguals and bilinguals play a different role in the absorption and modification of the alien sounds.

In thinking about the formation and the development of coexistent tone systems in some southern Chinese dialects in the light of the above issues as well as studies of language contact, a picture like this suggests itself:



This graph can be elucidated in an oversimplified scenario about the development of the multi-layered tone systems in southern dialects. Thus, one can regard systems a, b and c as the descendants of a common proto-language. At the early stage the three systems split off from the main branch and followed their own paths of development. Then speakers of system c driven by famine, war, natural disasters or through government planning migrated to the south and settled there. In the meantime system b developed into a prestige language and perhaps after a lapse of several centuries the group that spoke system b again moved to the south. Dialect contact occurred. The community speaking system c introduced system b into their dialect and as time went on system c and system b were completely merged and melted into an integral system. After several more centuries had passed another wave of southward migration occurred bringing the speakers of system a into touch with the southerners, which brought about another wave of dialect contact. This time system a was superimposed on the native system consisting of systems b and c. One can compare the stacking of layers to the storage of

information in the memory of the computer. Just as the oldest piece of information will be pushed out of memory as more and more information is fed into it, so the oldest layer will be jostled out of the position under the pressure of the influx of new layers. To put this conjectured picture of the stacking effect in real-life terms, we can say that Kejia and Gan once shared a common stage of developing the voiced obstruents into the voiceless aspirated series. We call this the proto-Ke/Gan stage during which systems b and c still coexisted. Then a portion of the Ke/Gan people stayed in the Jiangxi area and the rest moved further southward to the western part of Fujian, the western and eastern parts of Guangdong, and other areas. Those that underwent migration are the present-day Kejia people and they still keep the coexistent systems b and c, as they are geographically more remote from the north and therefore under less pressure of the northern influence. Those that stayed behind are the precursor of the modern Gan people, and as they are closer geographically to the north and cannot shun the encroachment of the northern influence system c was squeezed out of the way when system a, the newest layer, was stacked onto system b.
An important piece of supportive evidence comes from Linchuan, a more conservative variety of Gan dialects, which retains some trace of system c. (see 3.7 for more discussion).

Whenever dialect contact occurred, there would be various degrees of influx of phonological, morphological, syntactic and lexical elements from the source dialect to the target dialect. Following the implanting of the new system to the native system, conflicting and overlapping systems existed side by side. Then two coexistent systems began to affect each other and eventually fused into a locked system. This kind of fusion caused by contact between different dialect groups or genetically related languages is a common trait of South-East Asia, a linguistically diversified area, as insightfully reported in Matisoff (1983). Another path of development is that they were initially in competition and finally one system triumphed over another system. This kind of variation which owes its impetus to an outside system is referred to as 'adaptive change' as opposed to the purely system-internal variation referred to as 'evolutive change' (these two terms are due to Anderson 1973). The adaptive change emerges as interdialectal variation and evolutive change as intradialectal variation in our discussion of the Kejia case. Since our work is concerned with how the coexistent systems work in a language, the intradialectal variation which quite possibly operates upon the agency of earlier morphological processes may well fall outside the scope

of our discussion. We include it here for the purpose of contrasting it with the interdialectal variation.

When one tries to unpack the coexistent systems one has to work in the reverse direction starting from the mixed system and trying to restore the alien system by peeling off the layers. In a sense, we are adopting the notion of diasystem as suggested in Weinreich (1954), although in our case there is no living dialect to serve as a source language for us to fall back on. But the gist is that the diasystem is based on the structural linguistic concept of language as a system of oppositions and function. This principle enables us to extract the literary and the colloquial systems from the mixed language. The colloquial and literary layers as worked out here in keeping with the concept of contrast and function are not necessarily coincident with the colloquial and literary distinction in the native speaker's intuition. Whenever this is a conflict between them our decision is in favor of the former.

The discrepancy between the literary pronunciation and the colloquial pronunciation in southern dialects fits the notion of diglossia very well (see Fergerson 1964). Diglossia involves the situation in which in addition to the major dialect which serves as the medium for daily conversation there is a highly codified

superposed variety based on written literature and learned through formal education which is used for formal and written purpose.

1.6.Organization.

The body of this thesis consists of two parts: Chapter II deals with the development of the IIIv lexemes in Chaozhou and Chapter III deliberates on the development of the IIv Lexemes in Kejia. The discussion of each chapter is supplemented by carefully sorted data pool given in the appendices. Conclusion (Chapter IV) gives the summary of our deliberation and its theoretical implications and presents some residue problems for future endeavor.

CHAPTER II

THE DEVELOPMENT OF THE IIIv LEXEMES IN CHAOZHOU

2.1. Introduction.

As a point of departure let us outline the organization of this chapter. In 2.2. we try to unpack the coexistent tone systems in three varieties of Southern Min and point out the dilemma in the Quanzhou case. In 2.3. we reopen the Chaozhou case to examine some of the criticism of Wang and Cheng (1972) and try to straighten out the issues and resolve the disputes. 2.4. analyzes the coexistent systems of initials and 2.5. the literary and colloquial makeup of a syllable. 2.6. specifies the interaction between the colloquial and literary layers. 2.7. represents a study of the distinction and interaction of the coexistent tone systems organized on the basis of rime groups. 2.8. sums up the bidirectional interaction between the colloquial and literary layers. 2.9 is a statistical count of types of doublets. 2.10 is also a count of types of interaction between colloquial and literary layers.

2.2. Coexistent Tone Systems in Three Min Dialects.

As discussed in 1.2 three coexistent tone systems (i.e. A, B & C) are posited for the development of MC IIvo and IIIv and two coexistent tone systems (i.e. D & E) for the development of MC IIvs and IIvs. For the present purpose we will disregard system A, although there are some minor cases showing its existence in Southern Min. The development of MC IIv and IIIv in the three southern Min dialects Chaozhou, Xiamen & Quanzhou can be captured in the following formula:

Chaozhou

(1) IIvo -----> 2b /___ X & Y

(2) IIvs -----> 2a /____ Y

2b /____ X

(3) IIIv -----> 3b /____ X

2b /____ Y

Xiamen

(1) IIvo -----> 3b /____ X & Y

(2) IIvs -----> 2a /____ Y

3b /____ X

(3) IIIv -----> 3b /____ X & Y

Quanzhou

(1) IIvo -----> 2b /____ X & Y

(2) IIvs -----> 2a /____ Y

2b /_____ X

(3) IIIv -----> 3 /_____ X & Y

where, for example, (1) reads, MC IIvo is realized as IIb in the modern Chaozhou dialect in Systems X & Y. X and Y represent the segmental (viz. initial & final) distinction between the colloquial layer (C) and the literary layer (L); we will use C and D instead to designate these two layers in the data pool given in Appendix II. The distinction between X and Y worked out on the basis of systems of contrast and function need not be coincident with the distinction between the colloquial pronunciation and the literary pronunciation in the intuition of the native speaker (for an example of the discrepancy of these two senses see 2.7.3.). What makes the situation even more complicated is that there is a skewed correlation between coexistent segmental systems and coexistent tone systems. In some cases there is an one-to-one correspondence; for example, with respect to the development of IIIv in Chaozhou X (the colloquial segmental) occurs in 3b (tone system C where IIvo and IIIv are kept apart) and Y (the literary segmental) occurs in 2b (tone system B where IIvo and IIIv have been merged). In other cases, there is an one-to-many correlation. For example, take the development of IIvo alone in Chaozhou. Both X and Y (the colloquial and literary segmentals) occur in 2b. The tonal development in Chaozhou merits our special attention here, since it has generated some disputes (see Wang & Cheng 1972, Egerod 1976 & 1982 and Ting

1978 as well as the discussion in 2.3.). The MC IIIv (i.e., IIIvo & IIIvs) lexemes in the Chaozhou dialect occur both in modern Tones 3b and 2b. Those in Tone 3b represent System X and those in Tone 2b, System Y. One important piece of evidence being adduced is that with nasal finals the morphemes in Tone 3b, but not those in Tone 2b, undergo nasalization. The Chaozhou dialect also shows a tonal bifurcation in the MC IIvs morphemes. Some morphemes with the MC IIvs initials are doublets showing alternative readings. The MC IIvs morphemes realized as Tone 2a represent System Y and those realized as Tone 2b, System X, and this observation is also based on the occurrence of nasalization in System X. Unlike northern Chinese dialects that exhibit a homogeneous merger of MC IIvo to modern Tone III, the MC IIvo morphemes, be they in System Y or System X, still stay in Tone IIb in the Chaozhou dialect.

The difference (represented by '-') and commonality (represented by 'v') among the three dialects can be wrapped up in the following table where all of them share Rule (2). Chaozhou and Quanzhou as opposed to Xiamen share Rule (1), whereas unlike Quanzhou and Xiamen Chaozhou is unique in having Rule(3).

	Chaozhou	Xiamen	Quanzhou
(1)	v	-	v
(2)	v	v	v
(3)	-	v	v

With some minor exceptions the preservation of the MC IIvo morphemes as a class distinct from the MC IIIvo morphemes can be used as a convenient criterion to distinguish southern Chinese from northern Chinese. But there are intermediate cases where the class of IIvo morphemes shows a partial merger with Tone IIIv morphemes. The Chaozhou and Quanzhou dialects of the Min group as well as the Wenzhou dialect of the Wu group are southern dialects par excellence, while the Guangzhou dialect of the Yue group and the Yongding (Xiayang) dialect of the Kejia group experience a partial coalescence of the MC IIvo with Tone IIIv. The development of the MC IIvo initials needs some comment. In the Guangzhou dialect lots of the MC IIvo lexemes shift to Tone IIIv especially in System Y and are realized as lexemes with unaspirated initials, and there are still quite a number of them that remain in Tone IIv in System X and emerge as aspirated initials (see the discussion in 3.5.)

As shown in the above table, Chaozhou and Quanzhou are alike in retaining 2b as a reflex of MC Tone IIvo

whereas Xiamen does not have Tone 2b as an independent category which have merged with Tone 3b. Yet despite the difference in tone development these three dialects show a very high degreee of similarity in segamental system. A neat and systematic, if not wholly isomorphic, correspondence can be established between them with respect to the initial and final systems in the colloquial layer and the literary layer. The unpacking of these dialectal layers in these dialects enables us to conjecture that in the course of historical development an alien system must have introduced and imposed on the indigenous system probably as a result of population movement or the influence of a prestige dialect.

Given this intake of an extrasystem (i.e. an alien system) one can ask what it was like when it got implanted. One very attractive hypothesis (Ting 1978) is that the source dialect representing the literary layer is a seven-tone system where Tone 2b and Tone 3b have merged, and the target language representing the colloquial layer is an eight-tone system. This assumption can account for the development of Chaozhou and Xiamen with no difficulty. In the Chaozhou case one can claim, as Ting does, that Tone 2b embracing modern reflexes of MC Tone IIvs and Tone IIIv of the extrasystem was superimposed on Tone 2b derived from MC

Tone IIv and Tone 3b derived from MC Tone IIIv of the host system and that the tone value of Tone 2b of the former system happened to be the same as that of the latter system. Thus, the Tone 3b portion used to be seen as a product of the split of MC Tone IIIv is in fact the chunk of the Tone III words that have merged with the reflex of Tone IIv. This is a plausible explanation in as far as the reflexes of Tone IIIv that share the tone value with the reflexes of Tone IIvo contain the segmental features exclusively found in the the phonological system of the literary layer. This theory does not encounter any mayor problem in the Xiamen case since it can be resonably the dialect in question underwent a merger of 2b and 3b in the indigenous system.

But one runs into a dilemma in the Quanzhou case. Suppose that Quanzhou stands in a sister relationship with Chaozhou and Xiamen evolving from a common proto-Min language and in the course of development they experienced at least once the imposition of an extrasystem. Quanzhou and Chaozhou share the same kind of segmental (i.e. initial & final) distinction between the colloquial layer and the literary layer. Since Chaozhou is a dialect where an eight-tone system serves as a substratum on which an alien seven-tone system is imposed, one would expect Quanzhou to be impinged on by

a seven-tone system. Yet such an expectation is not met by the tone system of Quanzhou where 2b and 3b are kept apart even though 3b and 3a have been coalesced in isolation tone. If a seven-tone was implanted, one would expect the merger of 2b and 3b to be found in the literary layer. One cannot entertain the possibility with no impugnment that the two tones merged and then split again for the reversal of phonological rules can hardly happen. If the seven-tone system is ruled out, we are left with the possibility of an eight-tone system as being introduced into the native sytem. But the eight-tone system as an alien system being imposed onto the seven-tone system as a native system runs counter to the posited pattern of the seven-tone system as an alien system being imposed onto the eight-tone system as a native system. For the time being we will keep the dilemma in the Quanzhou case in reserve for future study.

Like Quanzhou many Min dialects like Datian and Yongan retain a distinctive category of 2b, but make no distinction of 3b and 3a (Chen & Li 1983 & 1985). It can be conjectured that the vertical merger of 3a and 3b may have the effect of blocking the horizontal merger of 2b and 3b.(for discussion of vertical and horizontal merger see Lien 1986).

2.3. The Chaozhou Case Reopened.

Karlgren (1915-1926: 589 & 1948: 443-444) is the first western philologist who discovered the interesting phenomenon of 'the split' of MC Tone IIIv into two modern tone reflexes: the Lower Qu (2b), which merges with the reflexes of Tone IIvo, and the Qu (3b). His finding is based on Gibson (1886), and he can not figure out the cause of 'the split'. But he makes an insightful observation that there are fewer Qu words than Lower Qu words. This may indicate that Lower Qu words are winnning out on Qu words (cf. our statisttical figures at 2.8). No ink had been spilt over this issue since Karlgren's note until Cheng and Wang (1972) examined it in a new light. They argued for an internal diffusion to account for this phonologically unconditioned tone split. This thesis has since then widely aroused lingusits' interest (notably Labov 1981) and also forms some focal points for theoretical disputes (see Egerod 1976 & 1982 and Ting 1978). While one can not be blind to the existence of strata in a southern dialect like Chaozhou, the criticism leaves us an illusion that the literary layer and the colloquial layer can be kept apart and cannot interact, and that they each follow their own paths of development. As a result, they would sweep the instances of interaction under the rug as a product of

contamination apparently based on the implicit assumption of the regularity of sound change. In this chapter I would argure that colloquial layer and literary layer coexist side by side in a symbiotic system in Chaozhou and there is ample evidence of bidirectional diffusion across the lexicon. Lexical diffusionists' claim that sound change is propagated gradually across the lexicon remains unchallenged in the Chaozhou case even when the position of dialectal strata is adopted.

The controversy on the Chaozhou case can boil down to a dispute over the problem of how to treat the correlation of tonal and segmental contrasts. In an attempt to look for the condition for the split of IIIv into 3b and 2b, Cheng and Wang (1972) fail to find it in the patterning of initials as well as finals, although they are well aware of the fact that vowel nasalization occurs with 3b only (p 97). They also try to correlate types of finals (viz. plain vowels, nasalized vowels, the vowels with the bilabial nasal ending and the vowels with the velar nasal ending) with modern tonal reflexes 2b and 3b of the IIvo or IIvs lexemes, and no significant correlation results (p 98). It is perhaps because of consideration of the overall picture of the development of the IIIv lexemes that they are reluctant to regard vowel nasalization as the

conditioning factor of the collapsing of IIIv to 2b and 3b. They significantly provide a list of items where the same segmental sequence occurs in both 2b and 3b. The evidence that emerge leads them to conclude that the Chaozhou case is a system-internal development that is caught in midstream.

The Chaozhou phenomenon as a dramatic example of even split without phonetic motivation is adduced as an important piece of supportive evidence in Chen and Wang (1975), a summing-up article of the previous contributions to the theory of lexical diffusion. Egerod (1976) does not contest the thesis of lexical diffusion that phonological change propagates itself gradually across the lexicon. He rather questions the advisability of using the model of lexical diffusion to account for the unusual tone development in Chaozhou. In his belief the solution lies in the recognition of the existence of layers in Chaozhou. He proposes a dual system where the older (colloquial) layer and the younger (literary) layer are distinguished and such a distinction of layers is embraced by a correlation of tonal and segmental contrasts. When the correlation is violated, he would regard it as a case of contamination. Similarly, Ting (1979) resorts to a distinction between the literary reading and the colloquial reading and the notion of contamination

which he believes can account for the Chaozhou tonal development. But he differs from Egerod in two respects: (1) more examples are furnished to illustrate the correlation of tonal and final contrasts as manifested in the distinction between the colloquial and literary readings, and (2) two tone systems are proposed, one in which IIvo and IIIv merge with each other in literary reading and another in which they are still kept apart in colloquial reading. Egerod (1982) is basically a reiteration of what is said in his (1976) article. He again puts forward the credo that the explanation should be sought in the existence of strata, and the concept of contamination or analogical formation for that matter should be evoked to explain away cases of violation of the correlation of tonal and segmental contrasts.

Egerod (1976 & 1982) and Ting (1979) may be not isomorphic in every respect, but there are at least three points of commonality: (1) they share the implicit assumption that sound change operates without exception, and any exception is viewed as a result of contamination, (2) in the preoccupation with cases of the correlation they ignore cases of its violation, and (3) they lose sight of the overall picture of the development of IIIv lexemes since they do not make a statistical comparison of percentage of cases of

correlation and its violation.

Their view of language change is a static one in sharp contrast to the lexical diffusionists' dynamic model of sound change. In the theory of lexical diffusion exceptions mean that sound change is still going on and has not completed its course. As will be argued here, the Chaozhou tone development is a genuine case of lexcal diffusion. But I will approach this problem in a somewhat different perspective. I will accept it as an undenial fact that Chaozhou is made up of several strata accumulated over the centuries through waves of migration from the north. Once an alien layer is taken in and superimposed over the indigenous layer, they develop into a symbiotic relation and both layers can affect each other. Thus, I will champion the thesis of bidirectional diffusion: the literary segmental can spill over onto the colloquial tone whereas the colloquial segmental can infiltrate into the literary tone.

It is worth our effort to consider the consequence of Egerod's and Ting's static view of the Chaozhou tonal phenomenon. Of any lexeme in Chaozhou there are four logically possible types of relationship held between the segmental sequence and tone as given below:

(1) both the segmental and tone are colloquial.

(2) both the segmental and tone are literary.

(3) the segmental is colloquial, whereas tone is literary.

(4) the segmental is literary, whereas tone is colloquial.

(1) and (2) are cases of correlation of segmental and tone contrasts, and (3) and (4) are cases of violation of the correlation. In Egerod's and Ting's framework (1) and (2) are the reflection of the existence of the distinction between the colloquial and literary layers, and (3) and (4) are regarded as due to contamination. Although the first part is indisputable, the second part is open to question, since the term 'contamination' is an ill-defined concept, supposedly a catch-all for the adherent of the regularity hypothesis to dump any case of exception into. This is a natural consequence of their static view of language, and they do not give us a clear picture of how language changes or else they may believe that language does not change, an idea that I don't think they will entertain.

Thus, we can see that talking about strata alone does not solve the problem. Since the static view of language does not work, I will adopt the dynamic model of language change where time dimension plays an

important role (see Chen 1972 and Chen & Hsieh 1971). In a dynamic model the above four types of relationship can be anchored in a temporal dimension symbolized by the flying arrow in the following fashion:

At the outset type (2), the literary layer, was introduced and superimposed onto type (1), the colloquial layer, and they existed side by side. As time went on, they developed into a symbiotic relationship, and the patterns represented by (3) and (4) occurred, involving a bidirectional diffusion. In short, (1) and (2) are the unchanged cases and (3) and (4) are cases of on-going sound change. Taken in this sense, the thesis first advanced in Wang and Cheng (1972) remains unchallenged, namely the tone change in Chaozhou is a system-internal developement that is indeed caught in mid-stream. When the lexical diffusionists' approach to the Chaozhou case is recast in this fashion, the split part naturally has to be abandoned. As regards the claim of system-internal development it should be pointed out that the input came from outside and has become an integral part of the phonological system participating in the ensuing

sound change.

2.4. The Coexistent Systems of Initials.

The following Scheme of the colloquial and Literary Distinction in the Realization of MC Voiced Initials is gleaned from S-Y Zhang (1979).

MC	col.	lit.	exs.
*b	ph	p	nose 鼻 , weed seed 稗 , manange/do 辦
	p	p	feed 哺
	ph	ph	embrace 抱
	p	h	hatch 孵
*v	p	h	woman 婦 , father 父 , meal 飯
*d	t	t	beans 豆 , lazy 惰 , big 大
	t	th	replace 代 , move 動
*dp	t	ts	reside 住 , bump into 撞
	th	ts	cane/staff 杖 , pillar 柱
	t	t	heavy 重
*dz	tsh	ts	craftsman 匠
	ts	ts	lowly 賤
	z	z	character 字
*dzr	t	s	thing/job 事
	ts	ts	condition/citation 狀
*dzp	ts	s	solid 實
*z	ts	s	thank/surname 謝

	tsh	s	feed 飼 , look, 尋
			like/portrait 像
	ts	z	Buddhist temple 寺
*zp	ts	s	ascend/up 上 , oath 誓
	tsh	s	tree 樹
	s	s	not yet 尚
*g	k	k	healthy 健 , old 舊
			together 共
*gr	k	h	sweat 汗 , school 校
			painting 繪 , thick 厚
	kh	h	to cry 號 , rainbow 虹
	h	h	summer 夏
	0	h	hall 廈 , below/descend 下 ,
			stuffing 餡 , drought 旱
*m	b	m	conceal 眯 , horse 馬
	m	m	life/fate 命 , exempt from 免
*mv	m	b	look forwards 望 ,
			dance 舞 , ask 問
*n	l	n	noisy 鬧 , brain 腦
	h	n	year 年
	n	n	milk/breast 奶
*np	n	z	milk 乳 , dye/be
			infected 染 , allow/yield 讓
	z	n	bait 餌 , two 二
	l	z	endure 忍,
	h	z	ear 耳
*ng	g	ng	art 藝 , hinder, 礙

			imperial 御
	h	ng	artemisia 艾 , ant 蟻,
			bank/shore 岸
	n	ng	lotus root 藕
	0	ng	eye 眼 , I 我
	h	0	tile 瓦
*1	n	1	wave 浪 , rotten 爛 ,
			two 兩
	t	1	deer 鹿
	th	1	rely on/surname 賴
	l	1	interest/sharp, 利
			toy with 弄 , road 路
*j	h	0	distant 遠 , rain 雨 ,
			latitude 緯
	0	0	have 有
*0	ts	0	itch 癢 , raise/support 養
	s	0	wing 翼
	h	0	leaf 葉
	k	0	easy 易

As far as voiced obstruents are concerned, aspiration is not a reliable criterion to work out the difference between colloquial and literary styles since in some cases the initials are the same, the distinction being carried by the finals. Unlike Northern Mandarin Min where MC voiced obstruents yield aspirated voiceless obstruents in Tone *1 (level tone) and unaspirated

counterparts in other tones (oblique tones) Min dialects do not develop a tonally conditioned secondary aspiration, although a majority of MC voiced obstruents bring about unaspirated voiceless stops. (for the development of MC voiced obstruents in southern Min see R-L, Li 1985 & C-J, Zhou 1981). The colloquial and literary distinction as manifested in the above modern reflexes of the *m- initial is oversimplified. As we all know, denasalization of MC nasal initials in the Min dialect group is a unique development among Chinese dialects, and whether nasalization occurs or not depends on the nature of the final: the nasal element of the initial remains intact when the final is nasalized or the nasal fianl loses its nuclear vowel. But we should not hazard the conclusion that the nasal feature is cast off elsewhere, neither can we say that it is retained in the literary style, but changes to a homorganic voiced stop in the colloquial style.

It is difficult to draw a line in the matter of nasalization with reference to these two styles. However, it is safe to assume that denasalization is an on-going process that diffuses across the lexicon and has not completed its course. The following colloquial and literary distinction is based on the difference in the final. The finals in the first half are derived from the MC nasal finals and the those in the second

half from the MC plain finals. If we assume that words in modern tones 3b and 2b represent the colloquial and literary styles respectively, we can make some conjecture on the intermingling of some words of the two tone categories. In terms of the value of finals mav 3b (slow), buv 3b (stuffy), mav/buav 3b (ten thousand) and bu 3b (fog) belong to the literary layer and are expected to carry Tone 2b. Yet they are in Tone 3b. Thus, these words must have diffused from Tone 2b to Tone 3b. Likewise, mo(z) 2b (tome, admire, dusk) and mou(z)/mov 2b (luxuriant) segmentally should belong to the colloquial layer and is expected to be in Tone 3b. Yet they are in Tone 2b. We can therefore infer that they migrate from 3b to 2b.

MC *M- Reflexes

colloquial		literary		
miaz 3b		mev 2b		life 命
	<--	mav 3b	buav 2b	slow 慢
mav 3b				dream 夢
miv 3b				face 面
miz 3b				noodle 麵
-		buav 2b		inudate 漫
-		mev 2b		surname 孟
-	<--	buv 3b	buv 2b	stuffy 悶

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bai 3b	mue(z) 2b	conceal 昧

bo 3b			hat 帽
bio 3b			temple 廟
bo/mo 3b			grindstone 磨
-		mau(z) 2b	to brave 冒
-		miau(z) 2b	wonderful 妙
mo(z) 2b -->			tomb, 墓
			admire, 慕
			dusk 暮
mou(z)/ 2b -->			luxuriant 茂
mov 2b			
me(z) 3b -->			scold 罵
-		buav 2b	curtain 幕

MC *mv- Reflexes

colloquial	literary	
moz 3b	buav 2b	look towards 望
muv 3b	buv 2b	ask 問
<-- mav 3b		ten thousand 萬
<-- buav 3b		

<-- bu 3b		fog 霧
	bu 2b	task 務

2.5. The Literary and Colloquial Makeup of a Syllable.

A syllable in Chaozhou as in other Chinese dialects is composed of a sequence of initial (IN) and

final (FN) superimposed by tone (TN). It is unique in Chaozhou that different layers (C <colloquial>) and L <Literary>) may coexist in the same syllable. Below is an exhaustive matrix of eight types of combination.

	IN	FN	TN
1	L	L	L
2	C	C	C
3	C	L	L
4	L	C	C
5	L	C	L
6	C	L	C
7	L	L	C
8	C	C	L

2.6. The Interaction between the Collouquial and Literary Layers.

The following table exhausts all the segmental (i.e., initial and final) and tonal differences between the colloquial and literary styles. IN, FN and TN stand for initial, final and tone. The plus and minus signs mean whether a doublet shares or differ in the feature in question. There are seven types of difference all together each desingated by a lower case alphabet in the first column.

	IN	FN	TN
a	-	-	-
b	+	-	-
c	-	-	+
d	-	+	-
e	-	+	+
f	+	-	+
g	+	+	-

With the above table taken as a basis we can capture a range of subtle difference of each type. The subtypes are represented by the numerals placed after each alphabet. In each case shown below the rows stand for pronunciations of a doublet, and the first, second & third columns represent initial, final and tone. Whenever two systems share a feature, a plus sign will be given. One can readily find that in some cases there are more than one colloquial or literary layer. In those cases the alphabet will not be prefixed by a plus sign. on the other hand, if only the plus signs are given, it means that the features in question are the same even though it is difficult to decide whether they belong to the colloquial layer or the literary layer.

a1

C	C	C	cave	tav 3b
L	L	L		thov 1b

a2

L	L	C	share	huv	3b
C	L	L	份	piv	1a

a3

L	C	L	meeting	hui	2b
C	L	L	會	kuai	3b

b1

+	C	C	big	tua	3b
+	L	L	大	tai	2b

b2

+	L	C	tune	tiou	3b
+	C	L	調	toz	3a

c1

L	L	+C	oath	si	3b
C	C	+C	誓	tsua	3b

c2

L	L	+L	earn	tsuav	3a
C	L	+L	賺	thav/tham	3a

c3

L	L	+C	ten	buav	3b

	C	L	+C	thousand	mav	3b
				萬		
c4						
	L	L	+L	down	hia	2b
	C	C	+L	下	e	2b
d1						
	L	+L	L	imperial	nguz	2b
	C	+L	C	御	gu	3b
d2						
	L	+C	L	hatch	hu	1a
	C	+C	C	孵	pu	3b
d3						
	+	+L	L	stare	thev	1b
	-	+L	L	瞪	tev	3a
e1						
	L	+L	+C	thank/	sia	3b
	C	+L	+C	surname	tsia	3b
				謝		
e2						
	L	+C	+L	woman	hu	2b
	C	+C	+L	婦	pu	2b
e3						

	L	+L	+L	noisy	nauz	2b
	C	+L	+L	鬧	lau	2b
e4						
	+	+C	+L	collapse	kui	2b
	-	+C	+L	潰	khui	2b
f1						
	+	L	+C	manage/	pav	3b
	+	C	+C	do 辦	paiz	3b
f2						
	+	L	+L	insipid	tam	2b
	+	C	+L	淡	taz	2b
f3						
	+	C	+C	name	ho	3b
	+	C	+C	號	hou	3b
f4						
	+	L	+L	chant	siov	2b
	+	L	+L	誦	sov	2b
g1						
	+	+L	C	affair	si2	3b
	+	+L	L	事	si2	2b

g2

+L	+L	L	tools	hai	1b
+L	+L	L	械	hai	2b

g3

+L	+C	L	dew	lou	2b
+L	+C	C	露	lou	3b

g4

+C	+C	L	above	tsioz	2b
+C	+C	C	上	tsioz	3b

The abbreviatory tools developed in the above two sections will be used in Appendix 2 where they are under TP.

2.7. The Development of Finals.

The following discussion is based on the data given in Appendix 2.

2.7.1. The Rime Group NI (Zhi).

For this rime group three strata can be established. They can be roughly represented as follows:

(I)	(II)	(III)
t1	t2	t3
ai	i	u/i2
ia		
ua		

There are at least four kinds of relationship that can be identified between each pair of strata. First of all, the final -i as a literary form (II) is contrasted with the final as a colloquial form mostly realized as a diphthong (I). Second, the final -i (II) as a colloquial form is opposed to the final -u/i2 (high back rounded or unrounded) as a literary form (III). Third, the final u/i2 as a literary form (III) is directly set against the final as a colloquial form in (I). Lastly, the final -i as a literary form in (III) occurs side by side with both the final -i and the final -ai as literary form in (II) and (I).

Here are the examples of the four types of relationship held by each pair of pronunciation in a doublet:

Type 1 TOE/POINT TO 指 tsai(z):tsi/ki,
SHARP/BENEFIT 利 lai:li

Type 2 FOUR 四 si:su/si2,

	EAR	耳	hiz:zu/zi2,
	SEED/SON	子	tsi:tsu
Type 3	TEACHER	師	sai:su/si2,
	HISTORY	史	sai:su/si2
Type 4	PRIVATE	私	sai:si:su/si2

That the final -i can function as a literary form in one instance and as a colloquial form in another instance will cause us no surprise if we assume that linguistic signs are a system of contasts and each of them has no absolute value. S-Y. Zhang (1979)'s otherwise excellent treatment of the colloquial and literary readings of the Chaozhou dialect is marred by the misconception that a linguistic sign has the absolute value; e.g., once the final -i is set up as a literary form, it is literary in all instances.

In the above chart the number under which each group of reflexes falls denotes the relative chronology of the phonological development in question. The reflexes in Group I are the finals that fall outside the rime pattern as recorded in Qieyun and should be held to represent the earliest indigenous stratum, since the rime group Zhi in Karlgren's reconstruction does not have the value of low -a. The reflexes in Group III are

of the latest development; the change of a high front vowel or a diphthong made up of high front vowel and mid front vowel to a high back rounded or unrounded vowel normally occurs after sibilants. The reflex in Group II more or less inherits the legacy of the MC sound value without much change.

The development of the rime group Zhi can thus be viewed as a scene where three strata exist side by side and are pitted against each other for survival. The reflexes subsumed under Group I are a unique trait of Min dialects. The resistence of the reflex -i under Group II when followed by non-grave initials (i.e., excluding labial and velar) to apicalization, a sound change that has been implemented in various degrees across the board throughout northern Mandarin dialects, is a common phenomenon in southern dialects such as Min and Yue. There are a few cases as subsumed under Group III where the reflex -i yields to -u/i2 bearing the imprint of the latest stratum contributed by the newly developed forms in northern Mandarin dialects. We can obtain a schedule of sound change by scanning the intrasystem of Chaozhou and comparing it to the parasystems of other subvarieties of the Min group and the extrasystems of other dialect groups.

Since, as discussed above, the final -i in Group II

can function as a literary form vis-a-vis the finals as collouquial forms in Group I or a colloquial form vis-a-vis the final as a literarly form in Group III, it is hard to tell whether it is literary or colloquial if there is no doublet to rely on. Unlike the rime group Liu and Xiao, the rime group Zhi does not show a good correlation of tonal and final difference. Three types of finals occur in both 2b and 3b. Even without the clue provided by the tones, we can still disentangle the intersecting layers by resorting to the methods mentioned above. The -i form in EARTH 地 and HEAL when compared with the doublets ti:tue/te and ti:tai in Xiamen can be regarded as literary, while the -i form in HEAL 治 , SHOW 示 , BUDDHIST TEMPLE 寺 and LOOK 視 is colloquial relative to the apical vowel -i2 as the reflex found in Northern Mandarin. However, the form -i in AVOID 避 and ABSTAIN FROM 忌 , the lexemes with the labial and velar initials, remains undetermined as to whether it is literary or colloquial, since no distinction can be found within Chaozhou and Min or outside Min.

The colloquial and literary difference of finals in the lexemes with the MC voiced sonorants do not pattern with the tonal distinction, either. This kind of skewed relationship may be a result of interaction between the collouquial and literary forms although we do not know

the direction of fusion. There are, however, a few doublets that still show a neat correlation, be it Type 1, as in BENEFIT 利 lai 3b: li 2b and CHANGE 易 koi 3b: i 2b, or Type 2, as in FEED 飼 tshi 3b: su/si2 2b, TIRED OF 膩 zi 3b: zu2 2b and TWO 二 zi 3b: zi2/no 2b. Between the doublets with a sharp line drawn between the collouqual and literary layer and the singles, be they literary or colloquial forms, that occur in 3b and 2b, lie a handful of doublets whose difference manifests only in tone, as in PREPARE 備 pi 3b: pi 2b, AFFAIR 事 si2 3b: si2 2b, TWO 二 zi 3b: zi 2b, TEAR 淚 lui 3b: lui 2b, TIRED 累 lui 3b: lui 2b and ABSTAIN FROM 忌 ki 3b: ki 2b. The variants in each doublet constitute tell-tale cases of sound change in progress. The change is bidirectional: the lexemes in question may be pulled from 2b to 3b, as in PREPARE, TEAR and ABSTAIN FROM where the tonal reflex is 2b in most of the Chaozhou subvarieties; they may migrate from 3b to 2b, as in AFFAIR. In such cases as TWO and TIRED the direction of spill-over can not be determined. Such kind of sound change governed by two mutually bleeding intersecting rules contemplated here is in the process of bidirectionally cutting across the whole chunk of the lexemes in question. The irregularities observed here are a case of on-going sound change arrested in action.

2.7.2. The Rime Group WI (Xie).

It can be readily seen from the scheme of prototypical difference in the realization of rime categories that each set of literary forms correspond to multiple sets of colloquial forms. Each set of colloquial forms not infrequently cuts across the rime groups based on the literary system. As a typical example, the final -o as a colloquial form corresonds to a multitude of literary forms derived from the rime groups Zhi, Xie, Xiao, Liu, Yu, Dang and Shan. It would be worth our effort to take the colloquial system as a point of departure and start afresh to trace the vicissitudes of a set of lexemes with a common rime value within Chaozhou and across or even beyond Min.

Now let us consider the correlation of tonal and final development. For the 3b lexemes with MC voiced obstruents. We can determine whether the lexeme in question is colloquial or literary by looking inward or outward. We know that the forms such as -oi (A KIND OF WEED 稗), -o (BAG 袋) and -e (STOCKADE 寨) are colloquial as opposed to -ai as a literary form which exists in Chaozhou or outside it. The -ai form in HARM is undoubtedly literary in contrast with the -oi reflex in Yue and kejia, dialects that still retain a distinction between the back -a (Grade 1) and the front -a (Grade 2) (see Chang 1985), and, being in Grade 1,

must have been derived from a back rather than front vowel and later on merged with -ai in Grade 2. As to -ai (DEFEATED 敗), which is in Grade 1, we are unjustified to claim that it is literary since there is no -oi form to contrast with. -i (OATH 誓) is literary vis-a-vis -ua as a colloquial form. With -ai's in A KIND OF WEED and HARM 害 established as literary forms we are now ready to say that their occurrence in 3b is a result of migration from 2b. One supportive piece of evidence is from the reflexes of A KIND OF WEED where dialects 2 & 3 boast of a variation between -oiz and -ai, the second one being implanted from 2b, and standing between these two forms is a compromised form -aiz in dialect 1. The -aiz form suggests that the implanted literary form -ai first acquired the feature of nasalization as well as the character of aspiration from the colloquial -oiz form and eventually jostled it out of the way.

2.7.3. The Rime Group WU (Xiao).

If we assume that Chaozhou and Ximen are in a sister relationship, and are both derived from the proto-Min system and also assume that in the course of historical development a system of seven tones was borrowed into and superimposed on the indegenous system of eight tones. The following systems of development can be conjectured:

	indigenous	alien
Proto-Min stage		
tone	3b	2b
a. violent 暴	po	pau
b. rob/steal 盜	to	tau
c. lead/guide 導	to	tau
d. summon 召	tio	tiau
e. number 號	ho/hou/hau	hau
f. sedan chair 轎	kio	kiau
g. effect 效	-	hau

In an early stage both pronunciations exist side by side and compete with each other for victory. In Chaoyang the alien pronunciations in items a, b, c and d edged out the indigenous ones. In item e both forms are still vying for eventual monopoly. For item f it is the indegenous pronunciation that squeezed out the alien. For item g there does not seem to be any indigenous form. The lacuna there is perhaps the cause of attracting hau from 2b to 3b. In Xiamen tone 2b and 3b have been merged. However, the development of segmentals is different. Unlike Chaozhou items a, b & c retain the indigenous pronunciations at the expense of the alien ones. Items d, f & g follow the same kinds of development.

In some cases such as GRASS 草 the distinction between the colloquial form tshau and the literary form tsho runs counter to the scheme of the prototypical difference set up for this rime group. The same is true of Xiamen, although there is a somewhat different pattern of distribution. This discrepancy needs our further probing.

2.7.4. The Rime Group NU (Liu).

In Grade one the literary form -ou corresponds to the colloquial forms -au or -o whereas in Grade three the literary form -iu corresponds to the colloquial form -au or -u. Of the items with MC voiced obstruent initials the 3b reflexes such as SMALLPOX 痘, BEAN 豆 and OLD 舊 conform to the colloquial pattern. The item OLD exhibits a rivalry between the colloquial (-u) and literary (-iu) patterns in dialects 1 and 2. SPAN OF LIFE 壽 is an exception. The 2b reflexes also follow the literary pattern withou exception. For the lexemes with the MC voiced sonorants LEAK 漏 with the final -au is expectedly a 3b reflex. But POMELO 柚 with the final -iu is contrary to expectation. As for the 2b reflexes all the examples available have the finals that tally well with the literary pattern.

The 3a reflexes such as SLEEVE 袖, TRADE 貿 and

SLIP AWAY 溜 deserve our attention, for they could very well be the intake of much later literary forms in a tone system witnessing the merger of MC IIIu and IIIv. A posited later literary layer is plausible in that SLEEVE in Chaozhou as well as SLEEVE and SLIP AWAY in Xiamen have 3b and 3a as two rival tones and TRADE in Chaozhou wavers between 2b and 3a.

2.7.5. The Rime Group NO (Yu).

Of the 3b items with the voiced obstruent initials (see 2.5.1. in Appendix 2), STEP 步 , DEGREE 度 , CROSS (RIVER) 渡 and TO PLATE 鍍 all share the final -ou. Since both the final -ou and Tone 3b are characteristic of the colloquial layer, we can consider them to be a result of regular development. In the light of evidence in the Xiamen dialect where these three items all share the final -o2 (mid back rounded) and have no literary counterparts, it can be assumed that no literary forms have been introduced and thus have no other competing forms so far as these three items are concerned. The lexeme CHOPSTICK 箸 , an archaic word only retained in southern dialects, furnishes an extremely intriguing case of mixture of layers: the initial (i.e. the Cheng (*dp-) initial realized as the dental stop rather than the palatal affricate) and tone belong to the colloquial system, while the final -u3/-u, according to the scheme

of colloquial and literary distinction, is aligned with the literary system.

For the 2b lexemes with the voiced obstruent initials CATCH/SEIZE 捕 and MUTUALLY 互 must be a result of competing change. In the initial stage when the extraforms (i.e. the forms introduced from an external system) were introduced, the native forms (with the final -ou) and the implanted forms (with the final -u) must have existed side by side, and then the -ou forms eventually gave away to the -u forms. This claim is supported by the fact that in Xiamen these two lexemes still survive in the -o2 forms in the sense that the introduced -u forms were ousted by the -o2 form. As regards BE ATTACHED 附 , INSTRUMENT 具 and FEAR 懼 there were simply no indigenous forms to compete with both in Chaozhou and Xiamen; Xiamen also have only the -o2 form as the reflex. HELP with its -o final could not have been in Tone 2b in the first place. Therefore, it must have diffused to 2b from 3b where it originated.

As can be seen from the prototypical final distinction between colloquial and literary styles there are more than one reflex in the colloquial layer. Of particular interest are the items showing a correlation of -o and -ou in Chaozhou to -o2 in Xiamen. Normally -ou in Chaozhou corresponds to -o2 in Xiamen. Because of

the correlation just touched on the lexemes with the final -o may have split off from those with -ou. Before pursuing this line of reasoning further let us now consider the reflexes of items with MC voiced sonorant initials. All the 3b reflexes except FOG fall into line with the colloquial pattern, and that needs no further ado; we will come back to FOG 霧 in a moment. The 2b reflexes are almost equially claimed by the -o forms (TOMB 墓 , ADMIRE 慕 , DUSK 暮 , COMPREHEND 悟 , MEET 晤 , RESIDE 寓 & RECLINE 臥) and the -u forms (BUSINESS , ANXIETY 慮 , FILTER 濾 , REPUTATION 譽 , ALLEGORY 譬 ABUNDANT 裕 , IMPERIAL 御 & PREPARE 預). Since the -o forms except ANGRY 怒 are only found in 2b and the -ou forms never occur in it, another way to look at it is to say that the -o forms are more literary than the -ou forms but more colloquial than the -u forms. One can assume that the -o forms used to be in 3b and then were being pulled into the orbit of the -u forms. One piece of supportive evidence is that COMPREHEND 悟 , MEET 晤 and RESIDE 寓 in dialect 1 have shed the -o form in favor of the -u form while dialects 0 and 3 still retain the -o form; dialect 2 shows an oscillation between -o and -ou. For Xiamen -o is kept only in COMPREHEND, with MEET and RESIDE adopting the -u form. For ANGRY there seems to be a tug of war going on between 3b and 2b. FOG with its -u, contrary to our expectation, occurs in 3b. We have no explanation for it beyond the observation

that in Xiamen at least there is a rival form bong 1b (MIST) which, being a colloquial word, is nevertheless less commonly used. The doublets such as FOG/MIST and TOMB embraced by the member with the plain final and the member with the nasal final merits further inquiry; this kind of alternation is also found in some Tibeto-Burman languages.

As for the multiple readings there are cases (RESIDE 宿, TREE 樹 FEED/CHEW 喙, ROAD 路 and DEGREE/SURMISE 度) where the line between the colloquial and literary forms is sharply drawn, but there are also cases showing an interaction between two tone categories as exemplified by DEW 露, GIVE 與 and MUTUALLY.

2.7.6. The Rime Group XO (Guo).

For this rime group the monophthong -o of the literary speech corresponds to the diphthongs -ua/-ue/ai of the colloquial speech. However, no lexemes except BIG in 3b, a tone category that supposedly only accommodates the lexemes from the colloquial layer, carry the diphthongs. Instead, the literary form -o occurs in 3b as well as in 2b. Since there is no phonological condition that can be evoked to explain its distribution in both tone categories, two possibilities suggest

themselves: the -o forms were first implanted in 2b and then spread to 3b, either (1) to replace the colloquial forms or (2) to fill the lacunae if it happened that there were after all no corresponding colloquial forms in it in the first place.

In the rime reflexes contrasted we put both -ua and -ai under the colloquial forms. In fact, -ua is more colloquial than -ai, and expectedly, -ua and -ai occur in 3b and 2b respectively. It should be borne in mind that the colloquial and literary distinction can only be understoood in relative, rather than absolute, terms. The occurrence of -uaz (LAZY懶) in 2b, a literary tone category, appears to be aberrant, since nasalized finals can be found only in 3b (see the nasalized reflexes in 2.7.14.). But this is not a case of irregular development. According to Guangyun, a rime book founded on the Qieyun system, LAZY has two alternative pronunciations, one belonging to MC Tone II and the other MC Tone III. Hence, one can not rule out the possibility that -ua is derived from Tone II rather than Tone III. If this is the case then it is not an exception, since 2b contains both colloquial and literary forms as reflexes of the lexemes with MC Tone II voiced obstruent initials. That is, there are no tonal correlates of the colloquial and literary distinction in rime patterns for the initials in

question.

2.7.7. The Rime Group WO (Jia).

With a minor exception (i.e. TILE 瓦) the contrast in the reflexes of this rime group between colloquial and literary forms is the one between the front mid vowel and low vowel. In 3b, a colloquial tone category, appears SHOOT 射 , SUMMER 夏 and THANK/NAME 謝 with the literary -ia form. Hia 3b used as a dynasty name, according to Guanyun, is a reflex of MC Tone IIv rather than IIIv from which he denoting SUMMER is derived. Since MC IIv is realized as 2b in Chaozhou, the occurrence of hia as a dynasty name is expected to be 2b, and yet it is in 3b. The -ia forms of SHOOT and THANK/NAME typical of the literary style could have been in 2b, but like hia (a dynasty name) it occurs in 3b. Here this phenomenon must be a result of spread from 2b to 3b. The rivalry between -ia and -e in NAME/SUMMER seems to develop in favor of -e, as the surname is pronounced he instead of hia. The doublets tsia:sia are of particular interest in that the former is made up of a colloquial initial and a literary final, whereas the latter is composed of a literary initial and a literary final, yet both forms occur in the colloquial tone category 3b, a phenonmenon not unlike the NAME/SUMMER case. Since no coresponding colloquial forms survive in

other southern Min dialects, we suspect that the influx of the -ia forms into 3b might have herded the -e out of the scene.

According to Guangyun, BELOW/DESCEND 下 is a doublet consisting of a IIv variant functioning as an adverb or adjective and a IIIv variant functioning as a verb. This lexeme is invariably realized as 2b whether it functions as an adjective or a verb or the final is -e or -ia. This kind of mixture of two strata in a tone category must be attributed to the interaction between them.

2.7.8. The Rime Group NG (Tong).

The colloquial and literary layers in this rime group are manifested in the contrast between -(u)av/-ev/-ioz/-v and -(i)ov. Unlike some rime groups this group yields an impressively neat correlation of tone categories and rime contrast: the colloquial forms -(u)av/-ev/-ioz/-v occur in 3b and the literary forms -(i)ov in 2b. There are, however, some sporadic cases where the cross-over of tone categories takes place, as in TOGETHER 共 kav/kov 3b and TOY WITH 弄 lov/lav 2b. Since TOGETHER is realized as kiov 2b in the Haifeng variety of Chaozhou dialects (see X-K Li 1979: 73), kov 3b kov in dialect 1 may well be the result of diffusion

from 2b. The direction of diffusion seems to be reversed for TOY WITH, as a comparison of the reflexes lav/lov 2b in dialects 1 & 5 and lov 2b: lov/lav 3b in dialect 2 suggests: lav which originated in 3b eventually moved to 2b.

The reflexes of RAINBOW 虹 need some comment. Guangyun lists three items for RAINBOW: (1) *kuv III, (2) *kov III and (3) *gruv I. Chaozhou boasts of a doublet, hov 1b: khev 2b. hov 1b must be a descendant of (3) *gruv I. But neither *kuv III nor *kov III can be the source for khev 2b, since from the lower tone category 2b we know that the initial kh- must have been derived from a voiced initial *g- or *gr-. RAINBOW in Kejia is a disyllabic word, thien 1a kjiuv 1a (SKY + RAINBOW); the second syllable must be etymologically related to khev in Chaozhou. Many Tone 1a lexemes in Kejia are reflexes of MC lexemes with MC II voiced obstruent intials. It follows that kjuv must have come from its antecedent in Tone IIv. Such being the case, we can assume that khev is derived from *guv II or *gruv II even though neither of these reconstructed forms can be found in Guangyun.

2.7.9. The Rime Group WG (Jiang).

As shown in the scheme, the rime in colloquial

layer is realized as -ev, -av or has its main vowel truncated as opposed to the rime -uav, a final with the medial -u-, or -ev in the literary layer. The examples in this rime group are few and far between. The two items available tally pretty well with the scheme of the distinction between the colloquial and literary pronunciations in all the dialects except dialect 2 which yields a literary pronunciation hov in 3b.

2.7.10. The Rime Group YG (Dang).

The scheme shows a contrast between the finals identified by the syllabic velar nasal, nasalized vowels or plain vowels in colloquial layer and the finals that do not undergo nasalization in literary layer.

Of the IIIvo reflexes CRAFTSMAN 匠 , CONDITION 状 and STILL/YET 尚 are doublets showing an unequivocal correlation between segmental and tonal distinctions. Note that the occurence of tshiez as a 2b reflex in version 0 is questionable. VISCERA and TREASURE have the literary pronunciations only.

The tonal reflexes of ABOVE/ASCEND tsioz 上 2b/tsioz 3b are rather tricky in that the first reflex may lead us to the misconception that the correlation of segmental and tonal contrast has been violated. However,

there is a semantic distinction between these two reflexes which can be traced back to their respective precursors as recorded in Guangyun where ABOVE/ASCEND is a doublet embracing the IIvo variant (shi 時 zhang 掌 切 qie) functioning as a verb and the IIIvo variant (shi liang qie 時亮切) functioning as a directional or temporal modifier. The reflexes of the *IIvo forms, unlike those of the *IIIvo forms, do not show a correlation of segmental and tonal differences between literary style and colloquial style; both the literary and colloquial segmentals occur in Tone 2b. Take the Chaoyang variety (S-Y Zhang 1979: 264-265). tshioz 2b as in ~ phuv 1b 墳 (sweep the tomb), tsioz 2b as in ~ tshia 1a 車 (get on the car) and siav 2b as in ~ su 3a 訴 (appeal to a higher court) are the reflexes of the IIvo rather than the IIIvo precursor, since they function as verbs. The true descendants of the IIIvo progenitor are the adjective tsioz 3b as in ~ puaz 3a 半 mez 1b 冥 (before midnight) as well as the adverb siav 2b as in ~ ho 2a 好 (best). It can thus be safely established that Chaozhou still sticks to the legacy of using the tonal alternation to signal the distinction of verb and modifier. Note that although the reflexes of ABOVE/ASCEND in dialect 2 (Gibson 1886) are not glossed other than the Chinese character given, the senses involved are adduced from Lim (1886) which, judging from the convention of marking the tones and the retention of

the dental nasal endings, must have been based on the same dialect.

Of the IIIvs reflexes LOOK TOWARDS 望, YIELD讓 and MANNER/SHAPE 樣 are doublets yielding a neat correlation between segmental and tonal contrasts, whereas BRIGHT 亮, WAVE 浪, FORGIVE 諒, QUANTITY量, PROSPEROUS 旺 and SICKNESS 恙 have only the literary pronunciations. Another reflex of QUANTITY 量 nioz 2b in version 1 may be a result of diffusion from 3b.

The tonal reflex of FORGET 忘 deserves our serious attention, since, as will be shown below, it can help our gain insight into aspects of dialect contact and sound change. FORGET is a doublet in Guangyun alternating between the Tone *I form (武方切 wu fang qie) and the Tone *III form (wu fang qie 巫放切), both sharing the *mv- initial (see Ding & Li 1958: 186). Both ancient forms have their own reflexes in modern dialects. According to Zihui (see Beijing 1962: 240) FORGET is realized as modern tone 3 in Mandarin dialects such as Beijing, Jinan, Xi'an, Taiyuan, Hankou & Chengdu, the Kan dialect like Nanchang, the Kejia dialect like Meixian, the Xiang dialect like Changsha and the Min dialect like Fuzhou, on the one hand; it is realized as 1b in the Xiang dialect like Shuangfeng, the Wu dialects like Suzhou and Wenzhou, the Yue dialect

like Guangzhou, and the Min dialects like Xiamen and Chaozhou, on the other hand.

From the above dialectal data we can detect a tendency for the tone 3 reflex to appear in northern dialects and the tone 1b reflex to occur in southern dialects. The doublet recorded in Guangyun can therefore be regarded as a pair of competing dialectal forms. Unlike northern dialects which uniformly yield the tone 3 reflex southern dialects turn up the Tone 1b reflex as well as the Tone 3 reflex. It can be safely assumed that the 1b reflex represents one layer and the 3 reflex another layer. Some southern dialects embrace both reflexes, as in the Linchuan variety of the Gan dialect (see C-P Lo 1940: 161) and the Yangzhou variety of the Wu dialect (see Beijing 1962: 240). The Xishui dialect in Hubei (Zhan 1981: 66) also boasts two reflexes <u>uav</u> 1b (lit.)/<u>uav</u> 3b (col.) where the literary form must have been borrowed from the southern source.

In the Kejia dialects FORGET shows interdialectal variation: it is realized as 1b in the Taoyuan (Hailu & Sixian) variety, the Yongding variety, the Lufeng variety and the Maciver's Meixian variety (cf. Zihui's version shown above), but as 3 in the Hong Kong (Shatoujiao) variety (Henne 1964: 112). This is also the case in Min dialects where versions 0, 1, 2 & 3 of

Chaozhou all yield the 1b reflexes while the reflex of the Xiamen variety as recorded in Xiamen (1982: 803) is in tone 3b and the reflex as registered in Douglas (1899: 16) is in 1b. In the Kejia case the more conservative one adheres to the 1b reflex and the more innovative one like the Hong Kong variety and Zihui's Meixian variety the 3 reflex takes over. In the Min case the 1b reflex of the Xiamen variety recorded in Douglas (1899) is eclipsed by the 3b reflex in its recent counterpart (Xiamen 1982). In fact, FORGET in Min involves three layers including the indigenous form <u>be</u> 3b <u>ki</u> 記 3a (not remember) vis-a-vis the two layers discussed here.

Lastly, the 2a reflex of CLASSIFIER (VEHICLE) is parrael to the 2a reflex in Shuangfeng (see Beijing 1962: 132) and Maciver (1926: 411)'s Meixian variety of Kejia dialects. However, the tonal reflex of the same item is 1b in Zihui's version of Chaozhou, comparable to the 1b reflex in the Zihui's Meixian variety of Kejia.

2.7.11. The Rime Group XG (Geng).

As given in the scheme, the reflexes of this rime group except for a portion of them in Grade 4 show a clear-cut distinction between the nasalized finals in the colloquial layer and the plain nasal finals in the

literary layer. The distinction is also manifested in the partial contrast in the main vowel between -a-, -o- or -e- in the colloquial layer and -i- or -e- in the literary layer. The tendency is for the mid or low back vowel to occur in the colloquial layer and the high or mid front vowel to appear in the literary layer. The main vowel -a- or -o- as a reflex of this rime group seems to be an areal feature of the colloquial speech of southern dialects like Min, Kejia, Kan, Yue and even some Wu varieties. The Go-on of Sino-Japanese which was implanted from some ancient dialects in southern China also shows this phenomenon. In short, the correlation between the contrasts in finals and tones is attested by the occurrence of the nasalized finals in 3b and the plain nasals in 2b.

Of the IIIvo reflexes DEFINITE 定 is a doublet alternating between the nasalized final in 3b and the plain final in 2b. DISEASE 病 and SURNAME 鄧 yield only the 3b nasalized finals, whearas CLEAN 淨 , COMPETE and FLOURISHING 盛 are realized by the 2b plain finals alone.

Of the IIIvs reflexes LIFE 命 is a doublet showing an alternation between the nasalized final in 3b and the plain final in 2b. No lexeme with the nasalized final survives in 3b alone, but many items with the plain

final such as SURNAME 孟 , HARD 硬 , ORDER 令 , SWIM 泳 and SING 詠 occur in 2b only.

All in all, this rime group does not show a deviation from the correlation of final and tonal contrasts.

2.7.12. The Rime Group OG (Zeng).

As shown in the scheme, the main vowel -e- of the finals in the literary layer corresponds to multiple vowels of the finals in the colloquial layer.

Like the rime group Jiang the reflexes in this rime group are rather scanty. Of the IIIvo reflexes PRESENT WITH 贈 with its main vowel -a- falls in line with the colloquial pattern. SURPLUS 剩 is recorded in version 2 as a doublet alternating between sev 2b and sin 3b parallel to the doublet represented by sev 3b (lit.) and sin 3b (col.) in Xiamen. The reflex sin 3b in version 2 and the reflex siv 3b in versions 1 & 3 and Y-M Li's version (1959) both sharing the main vowel -i- are in accord with the colloquial pattern. There are, however, two sources (version 0 and Cai 1976) that give the reflex sev 3b which, because of its vowel quality, could have occurred in 2b. Its occurrence in 3b must have been a result of migration of the segmental from tone

2b. As opposed to PRESENT WITH that occurs in 3b SURNAME with its main vowel -e- expectedly appears in 2b.

PREGNANT 孕 is the only lexeme available that has the IIIvs initial. It is a doublet in version 1 wavering between huv 3b and uev 2b, both differing in initial and final, and they do not violate the pattern given in the above scheme.

STARE 瞪 is a quartet in Guangyun sharing the initial *dp-: (1) zhi geng qie 直庚切 [*WG], (2) zhai geng qie 宅耕切 [*WG], (3) zhi ling qie 直陵切 [*OG], and (4) zhang zheng qie 丈證切 [*OG]. The first three source forms are in Tone I and the last one is in Tone III. This lexeme is a modern doublet alternating between thev 1b and tev 3a in versions 3 & 4 parallel to tev 1b and tev 3a in Xiamen (Douglas 1899: 493). The 3a reflex may well be a more recent borrowed form from northern Chinese where IIIu and IIIv have merged.

2.7.13. The Rime Group NN (Zhen).

As given in the scheme, the finals with the main vowel -i-, -e- or -u- in the literary pronunciation occur side by side with the finals with the main vowel -a- or the syllabic nasal -v in the colloquial pronunciation.

Of the IIIvo reflexes no items with the colloquial finals are found; all the items that appear in Tone 3b, a tone category assumed to accept only the colloquial segmentals, have the literary segmentals. The confusion of these two kinds of finals vis-a-vis the tonal distinction can be seen as an indication of the sound change in progress. One supportive example is FAVORABLE 順 suv which alternates between 2b and 3b, although it is expected to occur in 2b alone with its literary final.

Of the IIIvs reflexes the items mv 3b (ASK 問) and iav 3b (DIZZY 暈) show a correlation of segmental and tonal differences. The rest with tone 3b, however, have the literary finals. It can therefore be assumed that the occurrence in 3b is a result of difffusion of the segmentals from 2b. The 2b reflexes except for liav 2b all observe the distinction given in the scheme.

While ASK is a doublet showing tonal and segmental alternations, as in buv 2b/muv 3b and bun 2b/mv 3b, and SHARE 份 , also a doublet, alternates between piv 1a and huv SHARE 份 , also a doublet, alternates between piv 1a and BLU huv 3b, FAVORABLE 順 , STUFFY 悶 , CAUTIOUS 慎 , and but differ in tone.

2.7.14. The Rime Group WN (Shan).

Like the rime group Geng this rime group shows a clearly drawn demarcation line between the finals embracing the nasalized vowel, the syllabic velar nasal & the main voewel -u3-, -u-, -i- or -o- in the colloquial layer and the plain finals with the main vowel -a- in the literary layer.

Of the reflexes of IIIvo sources, COOKED RICE 飯, SECTION 段, PALACE HALL 殿, CHEAP/LOWLY 賤, HEALTHY 健 and SWEAT 汗 are doublets alternating between 3b and 2b which show an unmistakable correlation of tonal and segmental contrasts as given above. The 3b reflexes that give the colloquial finals only are SATIN 緞, COUNTY 縣 and THE WHORL OF THE HAIR ON THE HEAD 旋, whearas the 2b reflexes that give the literary finals alone are CONVENIENT 便, BUT 但, ELECTRICITY 電, WAREHOUSE, 棧 TIRED 倦, GRISTLE 腱, EUNUCH 宦 and SUFFER FROM 患.

Apart from the above cases where a correlation of tonal and segmental contrasts can be established there are a few examples showing a skewed relationship. As given below, there may be a carry-over of literary finals into the colloquial tone category. Version 2 records MANAGE/DO 辦 as a doublet alternating between <u>phoiz</u> 3b and <u>pien</u> 2b, whereas the doublet <u>paiz</u> and <u>pav</u> in version 1 or <u>phoiz</u> and <u>pav</u> in version 3 both bear

only 3b; version 0 gives phoiz 3b only. Versions 2 & 3 of BIOGRAPHY 傳 oscillates between tv 3b and tuan 3b; in contrast, versions 0 & 2 give the colloquial final tu3v 3b only while version 1 turns up a literary final which, however, bears a colloquial tone 3b. Likewise, version 2 of APPEAR/NOW 現 shows an alternation between hin and hien in 3b, on the one hand; versions 0 & 3 carry hiv 3b only whereas version 1 gives a literary final hiav in tone 3b, on the other hand.

There is also a spill-over of the colloquial final into the literary tone category. FARMER 佃 is a case in point. While the reflexes such as taiz 3b in version 1 and tiev 2b in version 0 & tien in version 2 show a correlation of tonal and segmental contrasts, toiz 2b in versions 2 & 3 is a shift of the colloquial final to a literary tone category. Of the reflexes of IIIvs lexemes SLOW 慢 , BANK/BEACH 岸 and ROTTEN 爛 are doublets alternating between 2b and 3b. On the one hand, FACE 面 , NOODLE 麵 , INK-STONE 硯 and COURTYARD 院 yield the colloquial finals in Tone 3b; on the other hand, CURTAIN , INUDATE 漫 , WILD GOOSE 雁 and DISORDERED 亂 bring the literary finals in Tone 2b, on the other hand. All these items show the correlation of segmental and tonal contrasts.

However, there are some items that do not show this

kind of correlation, as in TEN THOUSANDS 萬 , REFINE/SMELT 煉 , TO DRILL 練 and REFINE 鍊 yielding the literary finals in tone 3b. There are also examples that show substrata within the literary pronunciation, as in ngav 2b and gav 2b of ELEGANT 彥 and WILD GOOSE 雁 .

2.7.15. The Rime Group WM (Xian).

This rime group shows a contrast between the nasalized finals in colloquial layer and the nasal finals in literary layer. Of the reflexes of IIIvo items TO FALL/TRAP 陷 and TEMPORARILY 暫 observe the pattern of contrast given above. STUFFING 餡 of versions 0 & 1 also fits it well. However, version 3 yields a doublet embracing az 3b and ham 3b and version 2 gives ham 3b; this is a case of carry-over of the literary final to a colloquial tone category.

Of the reflexes of IIIvs items no nasalized finals occur in 3b. For example, READ ALOUD 念 is realized as a nasal final like niam, as in version 1, or liam, as in version 2, both boasting of two tone reflexes, 2b and 3b. This means that the literary final has been shifted to the colloquial tone. The reflex of EARN 賺 follows the above pattern of contrast, but the contrast between tsuav and thav/tham as shown in versions 3 & 5 is not matched by the tone 3a they share although there seems

to be a distinction between a more colloquial initial th- and a less colloquial initial ts-.

2.7.16. The Rime Group NM (Shen).

Like the rime group Xian there is a contrast between the nasalized finals in the colloquial layer and the nasal finals in the literary layer.

While zim of APPOINT 14 in versions 2 & 3 observe the pattern of contrast given above, the occurrence of zim in 2b and 3b in version 1 shows that there is a shift of the literary final to the colloquial tone category.

2.8. A Count of Lexemes in Each Tone Category.

In order to gain insight into the correlation of tonal and segmental contrasts here we attempt a statistical study of the lexemes in question. The interpretation of the statistical figures and the theoretical implication thereof are given after the charts.

As given in the following charts, X represents the number of lexemes that conform to the correlation of tonal and segmental contrasts, and Y means the number of

lexemes that violate such kind of correlation.

rime NI (Zhi)

in	ton	dia 0		dia 1		dia 2		dia 3	
		X	Y	X	Y	X	Y	X	Y
VO	3b	2	5	7	7	5	6	6	6
	2b	3	1	4	2	5	1	3	3
VS	3b	4	1	11	3	12	4	10	3
	2b	5	4	6	5	7	6	6	6

rime WI (Xie)

in	ton	dia 0		dia 1		dia 2		dia 3	
		X	Y	X	Y	X	Y	X	Y
VO	3b	5	3	8	4	9	5	8	4
	2b	4	6	3	7	6	7	4	6
VS	3b	3	3	6	3	6	2	4	2
	2b	8	1	12	1	10	5	8	2

rime WU (Xiao)

in	ton	dia 0		dia 1		dia 2		dia 3	
		X	Y	X	Y	X	Y	X	Y
VO	3b	3	2	4	1	3	3	3	2
	2b	3	0	5	1	5	1	5	1
VS	3b	3	2	4	1	3	5	3	3
	2b	5	0	6	1	5	1	6	0

rime NU (Liu)

in	ton	dia 0		dia 1		dia 2		dia 3	
		X	Y	X	Y	X	Y	X	Y
VO	3b	3	1	3	2	3	2	3	1

	2b	3	0	4	0	5	0	5	0
VS	3b	1	1	1	1	0	1	1	1
	2b	4	0	5	0	5	1	3	1

rime NO (Yu)

in	ton	dia 0		dia 1		dia 2		dia 3	
		X	Y	X	Y	X	Y	X	Y
VO	3b	4	0	5	1	5	4	5	1
	2b	3	1	8	1	8	1	8	1
VS	3b	5	2	4	1	5	2	5	1
	2b	7	6	12	5	9	14	9	7

rime XO (Guo)

in	ton	dia 0		dia 1		dia 2		dia 3	
		X	Y	X	Y	X	Y	X	Y
VO	3b	0	1	1	2	1	2	1	2
	2b	1	0	4	1	4	1	2	1
VS	3b	0	1	0	2	0	2	0	3
	2b	1	0	1	0	0	0	0	0

rime WO (Jia)

in	ton	dia 0		dia 1		dia 2		dia 3	
		X	Y	X	Y	X	Y	X	Y
VO	3b	1	2	1	4	1	4	1	3
	2b	1	0	2	2	1	2	1	1
VS	3b	1	0	1	0	1	1	1	0
	2b	0	0	0	0	0	0	0	0

rime NG (Tong)

in	ton	dia 0		dia 1		dia 2		dia 3	
		X	Y	X	Y	X	Y	X	Y

VO	3b	3	0	3	1	3	0	3	0
	2b	4	0	7	0	6	0	5	0
VS	3b	1	0	1	0	1	0	1	0
	2b	1	0	2	1	2	0	1	0

rime WG (Jiang)

in	ton	dia 0		dia 1		dia 2		dia 3	
		X	Y	X	Y	X	Y	X	Y
VO	3b	1	0	1	1	1	1	1	0
	2b	1	0	1	0	1	0	1	0

rime YG (Dang)

in	ton	dia 0		dia 1		dia 2		dia 3	
		X	Y	X	Y	X	Y	X	Y
VO	3b	1	0	5	0	4	0	3	0
	2b	4	1	5	1	6	1	6	0
VS	3b	3	0	3	0	2	0	3	0
	2b	6	0	9	1	9	1	7	0

rime XG (Geng)

in	ton	dia 0		dia 1		dia 2		dia 3	
		X	Y	X	Y	X	Y	X	Y
VO	3b	3	0	3	0	3	0	3	0
	2b	3	0	3	0	3	0	4	0
VS	3b	1	0	1	0	1	0	1	0
	2b	2	1	5	1	3	2	3	1

rime OG (Zeng)

in	ton	dia 0		dia 1		dia 2		dia 3	
		X	Y	X	Y	X	Y	X	Y
VO	3b	2	0	2	0	2	0	2	0

	2b	1	0	1	0	1	0	1	0
VS	3b	0	0	1	0	0	2	0	0
	2b	1	0	1	0	0	0	1	0

rime NN (Zhen)

in	ton	dia 0		dia 1		dia 2		dia 3	
		X	Y	X	Y	X	Y	X	Y
VO	3b	0	2	0	3	0	1	0	2
	2b	3	0	4	0	3	0	3	0
VS	3b	0	5	1	7	1	6	0	7
	2b	1	1	1	3	1	2	1	3

rime WN (Shan)

in	ton	dia 0		dia 1		dia 2		dia 3	
		X	Y	X	Y	X	Y	X	Y
VO	3b	10	1	12	3	12	2	12	1
	2b	8	0	13	0	14	1	11	1
VS	3b	3	6	6	7	5	9	5	8
	2b	6	1	9	1	12	0	10	0

rime WM (Xian)

in	ton	dia 0		dia 1		dia 2		dia 3	
		X	Y	X	Y	X	Y	X	Y
VO	3b	1	1	1	1	0	2	1	2
	2b	1	0	1	0	1	0	1	0
VS	3b	0	1	0	2	0	2	0	1
	2b	0	2	1	1	0	1	1	0

rime NM (Shen)

in	ton	dia 0		dia 1		dia 2		dia 3	
		X	Y	X	Y	X	Y	X	Y

VS	3b	0	0	0	1	0	0	0	0
	2b	1	0	1	0	1	0	1	0

Remember our assumption that at the very beginning when the alien phonological system was introduced and superimposed on the indigenous system, there was a neat correlation of tonal and segmental contrasts: the literary segmentals occurred in the literary tone 2b, whearas the colloquial segmentals appeared in the colloquial tone 3b. As time went on, this kind of correlation became more and more blurred and the schedule of its attrition seems to vary with rime categories, as attested by the following pattern gleaned from the above charts (the rime groups JIANG, ZENG, XIAN & SHEN are excluded due to scant examplea):

a.	b.	c.	d.
LIU	XIAO	GUO	ZHI
TONG	YU	JIA	XIE
DANG	ZHEN		
GENG	SHAN		

This pattern is a cline of attrition which proceeds leftward from d to a. In short, the rime groups in d are the most advanced in losing the correlation, those in a are the most tenacious in maintaining it, and those in b & c stand between them. In the intermediate cases (those

in b & c) there are violations of the correlation, as in the 3b reflexes in XIAO, the 2b reflexes with vs initials in YU, the 3b reflexes with vs initials in ZHEN and SHAN, the 3b reflexes in GUO and the reflexes with vo initials in JIA. Here we establish a case of sound change that does not affect every instance of a set of lexmes in a single stroke. In the case under discussion the spill-over of the literary segmentals into the colloquial tone or the colloquial segmentals into the literary tone is infiltrating through a chunk of the lexemes gradually and is still in the process of completing its course. This phenomenon lends support to the claim of lexical diffusion that sound change is implemented in a lexically gradual manner.

If we do the over-all counting in terms of the type of initials disregarding the rime groups we arrive at a sum total as given below which is then converted into a percentage count for the sake of easy comprehension.

total

in	ton	dia 0		dia 1		dia 2		dia 3	
		X	Y	X	Y	X	Y	X	Y
VO	3b	30	18	47	30	52	32	52	24
	2b	43	9	54	14	69	15	58	14
VS	3b	25	22	40	28	37	36	34	29
	2b	48	16	53	20	64	33	56	20

percentage

in	ton	dia 0		dia 1		dia 2		dia 3	
		X	Y	X	Y	X	Y	X	Y
VO	3b	63	37	61	39	62	38	68	32
	2b	83	17	80	20	82	18	81	19
VS	3b	53	47	59	41	51	49	54	46
	2b	75	25	73	27	66	34	74	28

We can tell from a comparison of the per cents of X and Y in each tone category the degree of deviation from the correlation of segmental and tonal contrasts. Take the VO 3b reflexes of dialect 0. 38 per cents of the total lexemes deviate from the corelation. A comparison of the figures of the four rows gives us some general ideas about the relative strength of the two competing forces: 2b, the literary tone that holds the literary segmentals and 3b, the colloquial tone that holds the colloquial segmentals. We can see that both VS 2b and VO 2b show much lower percentage of deviation from the correlation than both VS 3b and VS 3b. The discrepancy shows that the literary force seems to be a lot stronger than the colloquial force. (cf. Karlgren's point at the outset of 2.3.).

2.9. The Count of Doublets Embracing Colloquial Pronunciation and Literary Pronunciation.

The symbol @ means that the doublet differ in initial and/or final; the symbol # means that the doublet share both initial and final. Each pattern is followed by the number designating the instances of its occurrence.

Rime NI (Zhi).

@2b/3b 6, #2b/3b 6, @2a/3b 2, @2a/3a 1, #2b/3a 1, @2b/2b 1,

@3b/3b 1, @3b/4b 1

Rime WI (Xie).

@2b/3b 6, #2b/3b 1, @2b/2b 3, @3b/3b 2, @2b/3a 2, @3b/3a 1,

#1b/2b 2, @3b/4b 1

Rime WU (Xiao).

@2b/3b 1, #2b/3b 0, @2b/3a 2, @1a/3b 2, @2b/2b 2,

@3b/3b 1, @3a/3b 1.

Rime NU (Liu).

@2b/3b 1, #2b/3b 0, @3b/3b 1, #3a/3b 1, @2b/2b 1.

Rime NO (Yu).

@2b/3b 5, #2b/3b 1, #2a/2b, #3a/3b 1, @4b/3b 1,

#1b/2b 1.

Rime XO (Guo).

@2b/3b 3, #2b/3b 0.

Rime WO (Jia).

@2b/3b 0, #2b/3b 0, @ 3b/3b 1, @ 2b/2b 2.

Rime NG (Tong).

@2b/3b 1, #2b/3b 0, @1b/3b 1, @2b/2b 1, @3b/3b 1.

Rime WG (Jiang).

@2b/3b 1, #2b/3b 0.

Rime YG (Tang).

@2b/3b 7, #2b/3b 1, @2b/2b 2.

Rime XG (Geng).

@2b/3b 2, #2b/3b 0.

Rime OG (Zeng).

@2b/3b 1, #2b/3b 0, @1b/3a 1.

Rime NN (Zhen)

@2b/3b 1, #2b/3b 2, #2a/2b 2, #1b/2b 1, @1a/3b 1.

Rime WN (Shan)

@2b/3b 9, #2b/3b 2, @2a/3b 1, @3b/3b 3, @2b/2b 2,

@3a/3b 1.

Rime WM (Xian)

@2b/3b 0, #2b/3b 1, @3a/3a 1, @3b/3b 1.

Rime NM (Shen)

@2b/3b 0, #2b/3b 1, #2a/2b 1.

total

@2b/3b 44, #2b/3b 15, @3b/3b 11, @2b/2b 14,

#1b/2b 4,

#2b/3a 1, #2a/2b 3, #3a/3b 2, @2a/3b 3,

@2a/3a 2, @1b/3a 1,

@1a/3b 3, @3b/3a 3, @3b/4b 3, @2b/3a 4,

@3a/3a 1, @1b/3b 1

2.10. The Interaction between the Colloquial and Literary Layers.

The following figures featuring a count of the types of doublets show the frequency of various types of interaction between colloquial and literary layers.

a1 26,	b1 27,	c1 3,	d1 5
a2 2,	b2 2,	c2 1,	d2 2
a3 3		c3 0,	d3 1
		c4 4,	
e1 3,	f1 8,	g1 14	
e2 0,	f2 5,	g2 6	
e3 6,	f3 0,	g3 4	
e4 1,	f4 1,	g4 3	
		g5 1	

CHAPTER III

THE DEVELOPMENT OF THE IIv LEXEMES IN KEJIA

3.1. Introduction.

This chaper looks into the competing systems as manifested in the development of the Tone II lexemes with the MC voiced initials in Kejia. 3.2. gives a tone classification of Kejia dialects. 3.3. deals with the development of Tone II lexemes with voiced obstruent initials and 3.4. the development of Tone II lexemes with voiced sonorant initials. The discussion of competing systems in both sections is organized in terms of rime groups. 3.5. offers a comparison between Kejia and Cantonese in the developement of the IIvo lexemes. 3.6. and 3.7. cover two extreme cases of competition between two tone systems. 3.8. discusses the coexistence of System B and System C as revealed in a comparison between Hailu and Haifeng.

3.2. The Tone Classification of Kejia Dialects.

The unique tone trait of Kejia dialects is that a portion of MC Tone IIvo and a large part of IIvs are realized as modern 1a. A tonal development that Kejia shares with northern dialects is the merger of some

lexemes with IIvo initials with those with IIIv initials. With the exception of the Changting variety which loses its Tone IV (see Luo 1982 <8>) Kejia dialects uniformly keep the subtonal distinction of Tone I and Tone IV. However, they fall into two major subgroups in terms of the development of Tone II and Tone III: (1) Group one, where 3a and 3b as a reflex of Tone III are retained, and (2) Group two, where the two subtones are coalesced into one tone. Group one can be further classified into three types: (1a) a large portion of IIvo merges with IIIv, (1b) the merger of IIu and IIIu takes place along with the merger given in (1a), and (1c) the coalesced IIvo and IIIv further merged with IIu as opposed to IIIu as a distinct category.

(1a) Hailu (Yang 1957) <2>, Haifeng (Schaank 1897) <5>, Yangcun (Yu Li 1984) <9a>.

(1b) Yongding (Huang 1982, 1983 & 1895) <3>.

(1c) Liangshuijing (Tung 1948) <7a>, Longtanshi (Huang 1986) <7b> and Dapeng (Yu Li 1984) <9c>.

(2) Meixian (see Zihui <0>, Maciver (1926) <1>, Anonymous (1954) <4>, Yuan 1983 <6>, Yu Li (1984) <9b>).

Each symbol in angular bracelets is the abbreviation used to designate a variety of Kejia in Appendix 3.

3.3. The Development of Tone II Lexemes with Voiced Obstruent Initials

The following discussion is based on the data pool given in Appendix 3 (i.e. 3.1, 3.2. & 3.3). We arrange the tone development of IIvo lexemes by rime categories. + means that the lexeme occurs in only one tone invariably in subvarieties of the Kejia dialect group. - means that the subvarieties differ in the tonal realization of the lexeme. * means that the lexeme is a member of a doublet. Not infrequently the second and third type occur at once in a lexeme. In that case * will be used. The lexemes in question will be put under each modern tone category that they fall under. In the interest of easy reference the lexemes grouped under each modern tone category they are associated with will be given in the form of English glosses and Chinese characters at the end of each section.

3.3.1. The Rime Group Ni (Zhi).

As shown in the following chart, 3 items remain in 1a, whereas 10 items have been taken over by 3a. As a single instance of intradialectal variation QUILT/PASSIVE MARKER被 is a doublet realized as 1a and 2a respectively, as in phi 1a/phi 3b in subdialect 2 and

phi 1a/phi 3 in subdialect 4. Four items show interdialectal variation.

1a	3	2a
+ 3	+ 10	- 4
* 1	* 1	
- 4	- 3	

PERSIMMON, a telltale protean word revealing dialectal contact and linguistic stratum, wavers among 1a, 3 and 2a. In subdialect 4 it is realized as si2 1a and in the Lufeng variety si2 1a is eclipsed by si2 3b, and in subdialects 0, 6 & 7a si2 3b yields to si2 3, a form from Northern Mandarin where the distinction between IIIu and IIIv has been obliterated. In the Taoyuan (Hailu) variety it is realized as khi 3b, an obviously implanted lexeme from the Fujian variety of Southern Min. Another form that appears in the Yongding (Xiayang) variety is tshu3 3, which reminds us of tshi 2b/2a in Cantonese. tshu3 could very well be a borrowed item, since it occurs in the compound tshu3 3 柿 fa 1a 花 (dried persimmon) alongside of pi 1a 柹 tsu3 2 子 (persimmon). Another form registered in subdialects 1 & 4 as a colloquial pronunciation is sai 2a, a lexeme parallel to sai 2b in the Chaozhou variety of Southern Min. As an intercalary note I believe that the modern final -ai as a reflex of rime groups such as NI and XO

is a relic of the indigenous stratum. Residual forms of such a stratum are better preserved in southern Min, in particular the Chaozhou variety, and they only survive in a few cases in Kejia. Apart from PERSIMMON sai 2a there are I/ME ngai 1b 我 (*XO) and YOUNGER BROTHER 弟 thai 1a (*WI).

KNEEL 跪 alternates between 3/3b in some subdialects and 2a in others. They can be traced back to two MC forms registered in Guangyun as well as Huilin's Yiqie Jingyinyi (Huang 1931), one with the IIvo initial *g- and another with the IIu initial *kh-.

SKILL 技 and PROSTITUTE 妓 vary from 1a to 2a, whereas CLEVERNESS oscillates between 3 and 2a.

1a	3	2a
+ maidservant 婢	+ piles 痔	- persimmon 柿
+ ringed pheasant 雉	+ an official 仕	- prostitute 妓
+ to stand 倚	+ scholar/warrior 士	- to kneel 跪
* quilt 被	+ offer sacrifice 祀	- skill 技
- persimmon 柿	+ market 市	
- prostitute 妓	+ to be, this 是	
- cleverness 伎	+ clan name/maiden name 氏	

- skill 技
+ islet 屿
+ similar 似
* passive marker 被
- persimmon 柿
- to kneel 跪
- cleverness 伎

3.3.2. The Rime Group WI (Xie).

YOUNGER BROTHER 弟 and EXIST/BE AT 在 are two doublets that alternate between 1a and 3. CRAB is uniformly realized as 2a. According to [R.] Li (1982: 133-134) it may not be derived from a MC II source form with the *gr- initial recorded in Guangyun, but a MC II precursor with the *x- [XIAO 曉] initial recorded in Cao Xian's Bo Ya Yin. Intriguely enough, as he points out, the reflex in Northern Mandarin, Northwestern Mandarin, Min and Yue is the descendant of the *gr- source, whereas the reflex in the Lower Yangtze Mandarin, Southwestern Mandarin, Wu, Gan, Kejia and Xiang is the descendant of the *x- form.

1a	3	2a
+ wife of 婧 younger brother	+ times/-fold 倍	+ crab 蟹
* younger brother 弟	+ to finish 罷	+ water 蕨 chestnut
* exist, be at 在	+ wait for 待	
	+ negligent 怠	

+ crime 罪
+ 9-11 p.m. 亥
+ love and respect to one's brother 悌
+ almost 迨
+ remit 匯
* younger brother 弟
* exist, be at 在

3.3.3. The Rime Group WU (Xiao).

HOLD IN THE ARMS 抱 is a doublet in subdialect 5 (the Lufeng variety), pau 1a (col.) and phau 3a (lit.); in the Taoyuan (Hailu) variety only pau 1a appears. This lexeme is realized as phau 1a, phou 1a, pho2 1a in subdialects 9a, 9c & 9d respectively whereas it emerges as phau 3 in subdialects 0, 1, 4, 6 & 9b.

RICE (PLANT) 稻 and PRINCIPLE/ROAD 道 take on 2a in subdialect 9c (the Dapeng variety) in that IIv and IIIv have been merged with IIu. RICE (PLANT) is realized as vo 1b in colloquial speech vis-a-vis thau 3 in literary speech in Kejia as well as the tau 3 in Mandarin and tiu 2b in Chaozhou. The three reflexes vo禾, thau/tau 稻 and tiu 粩 are etymologically unrelated. Since vo 1b and tho 1b, both meaning RICE (PLANT), form a semantic field, it is probable that 1b is acquired by

tho in the Taoyuan variety by anology with the tone of its counterpart vo. Note that in other varieties of Kejia thau, tho or tho2 bear only tone 3, 3a or 3b.

1a	3
* hold in the arms 抱	+ abalone 鮑
	+ air bladder 鰾 (of a fish)
	+ rice (plant) 稍
	+ road/principle 道
	+ omen/trillion 兆
	+ originate 肇
	+ surname 趙
	+ black 皂
	+ make/build 造
	+ connect/introduce 紹
	* hold in the arms 抱

3.3.4. The Rime Group NU (Liu).

khiu 1a MATERNAL UNCLE 舅 as a reflex of the IIvo form is a Kejia lexeme par excellence that remains in a modern tone category distinct from the tone category that khiu 3 OLD 舊 as a reflex of the IIIvo form falls under. In Peking Mandarin MATERNAL UNCLE and OLD have become a pair of homophones, both bearing Tone 3. However, even this stronghold was lost in Li Yu (1984)'s

version of the Changting variety where it is realized as tsphie3u 3 with an affricate initial (cf. M-Z. Luo (1982)'s version of the Changting variety where it emerges as tsphiu2 1a even though its initial is also palatalized).

In the Yongding variety both WOMAN 婦 and THICK厚 are doublets: phei 1a/fu 3 and kheu 1a/heu 3; the realization of *v- and *gr- as ph- and kh- is atypical of general trends of the modern initial system of Kejia and thus both reflexes must be the relics of the archaic system. For WOMAN except for Li Yu's 9b (the Meixian variety) the initial and tonal developments seem to follow the same schedule: labiodentalization is coincident with the merger of 1a with 3. For THICK this does not seem to be the case. Although only the reflexes with the fricative initial occur in 3 or 3a, not all of them occur in it: some occur in 1a along with the reflex that retain the velar stop initial.

1a	3
+ mortar 臼	+ to bear/lose 負
+ maternal uncle 舅	+ name of an emperor 紂
* woman 婦	+ blame 怨
* thick 厚	+ back/behind 後
	+ recieve 受
	* woman 婦

* thick 厚

3.3.5. The Rime Group NO (Yu).

As shown in the following table, the first three lexemes PILLAR 柱 , REGISTER 簿 and RAMIE 苧 still stick to 1a in most dialects. PILLAR remains in 1a in 11 dialects except for Li Yu's version of the Meixian variety where it takes on Tone 3. REGISTER stays in 1a in 8 dialects except for Li Yu's 9a, b & d as well as the Changting variety. RAMIE survives in 1a in all 8 dialects, but changes to 2a in the Lufeng variety. GIGANTIC 巨 , REJECT 拒 and TORCH 炬 with the velar initial waver among 1a, 3 and 2a. The occurrence in 2a is unique of these three lexemes.

	pillar	register	ramie	gigantic	reject	torch
1a	11	8	8	1	1	
3	1	4		3		1
2a		1	1	4	3	1

1a	3	2a
+ pillar 柱	+ section 部	+ torch 炬
- register 簿	+ father 父	+ distance 距
- ramie 苧	+ decayed 腐	+ villa 墅
* gigantic 巨	+ fabricate 杜	- register 簿
- to reject 拒	+ gather 聚	- ramie 苧

+ door 戶
+ Shanghai 滬
+ narrate 敘
+ clues 緒
+ preface 序
+ vertical 豎
- register 簿
- gigantic 巨

* gigantic 巨
- to reject 拒

3.3.6. The Rime Group XO (Guo).

SIT 坐 is the only lexeme in this category that survives in 1a. But it is a doublet showing variation between 1a and 3, as in tsho 1a/tsho 3 in subdialect 1. This kind of variation must have started very early (see Jia 1939: 149).

1a
* sit 坐

3
+ to fall 墮
+ rudder/helm 舵
+ calamity 禍
* sit 坐

3.3.7. The Rime Group WO (Jia).

It is gleanable from the semantic and sound glosses in Jia (1939: 149) that the lexeme BELOW/DESCEND

takes on Tone II as a modifier, and Tone III as a verb. In Kejia, the situation is just reversed: as given in dialect 1, the lexeme functions as a verb in Tone 1a and as a modifier in Tone 3, although in this case the tonal distinction does not involve a dialectal contact, but a grammatical function or rather the product of a morphological process in an earlier stage.

CLUB oscillates between 1a in subdialects 019ace and 3/3a/3b in subdialects 2459b.

1a	3
- club 社	+ summer/name 夏
* descend 下	+ house 廈
	- club 社
	* below/lower 下

3.3.8. The Rime Group NG (Tong).

Both MOVE 動 and HEAVY 重 show a variation between 1a and 3. MOVE is a doublet embracing thuv 1a/thuv 3b/3 in subdialects subdialects 2, 3 & 6. HEAVY is a doublet alternating between tsphuv 1a and tsphuv 3a/3 in subdialects 256, and between tshuv 1a and tsuv 3 in subdialect 7a. The initial distinction in aspiration in 7a lends support to the hypothesis of dialectal strata. Since in sharp contrast with Mandarin where the lexemes

with the MC voiced obstruent initials developed into the unaspirated series in the checked tones (Tones II, III & IV) Kejia yields the aspirated series under the same condition. One can conceive, therefore, that Mandarin stratum came much later and was superimposed onto the indigenous stratum.

	move	heavy
1a	8	7
3	12	4

1a
* move 動
* heavy 重

3
+ offer, recieve 奉
* move 動
* heavy 重

3.3.9. The Rime Group WG (Jiang).

CLUB (WEAPON)棒 is realized as 3 subdialects 07a7b and as 3b in subdialect 2, while it changes to 2a in subdialects 14.

1a
+ oyster 蚌

3
+ item 項
- club (weapon) 棒

2a
- club (weapon) 棒

3.3.10. The Rime Group YG (Dang).

ABOVE/ASCEND 上 is a triplet in subdialect 1 embracing spiov 1a, as in ~ san 1a 山 (go up hill), spiov 2a, as in ~ si2 3 訴 (appeal to a higher tribunal), and spiov 3, as in ~ thien 1a 天 (Heaven) and ~ v 2a 午 (forenoon). Both the first and the second reflexes function as a verb, the second one being taken in a more metaphorical sense. The third one is a directional or temporal modifier. The first and third reflexes can be traced back to the grammatical and tonal correlates of this lexeme in Guangyun and Jia (1939: 149)'s Qun Jing Yin Bian 羣經音辨. This kind of distinction is also preserved in the Chaoyang variety of Southern Min (see [S-Y] Zhang 1979: 264-265 and the discussion in 2.7.10).

DISSOLUTE 蕩 is realized as a 2a item as opposed to the 3 reflex in other subdialects.

1a	3	2a
* ascend 上	+ agitate 盪	+ sway 晃
	+ ten feet 丈	- dissolute 蕩
	+ battle 仗	* above/upper 上
	+ cane 杖	
	+ resemble/image 像	
	+ oak 橡	
	+ elephant 象	

- dissolute 蕩
* ascend 上

3.3.11. The Rime Group XG (Geng).

No reflexes survive in 1a in this category.

3	2a
+ and/also 並	+ straight/
+ ingot 錠	stiff 挺
+ pacify 靖	+ small boat 艇
+ quiet 靜	
+ lucky 倖	
+ fortunate 幸	
+ apricot 杏	

3.3.12. The Rime Group NN (Zhen).

NEAR/CLOSE 近 is a doublet in subdialects 125, as in khiun 1a/khiun 3/3b, and in subdialect 3, as in khun 1a/khun 3. Although the correlation of tonal distinction and grammatical function becomes blurred here, it is still detectable that the 1a reflex tends to be used as a verb and the 3 reflex as a modifier, as shown in a minimal pair like khiun 1a npen 1b 近 年 (near the close of the year) and khiun 3 npen 1b (a recent year) (MacIver 1926: 305-306). Jia (1939: 149) also registers

NEAR/CLOSE as a doublet alternating between the IIvo form and the IIIvo form. However, one cannot infer a grammatical distinction from the semantic gloss in it couched in somewhat vague terms that the first item denotes the nearness in a purely spatial dimension and the second item the closeness in a more abstract, emotional dimension.

STUPID/THICK 笨 is a doublet in subdialects 1 & 3, as in phun 1a/pun 3, and in 7a, as in phe3n 1a/pe3n 3. The 1a variant means THICK (cf. another synonymous but etymologically unrelated item kheu/heu 厚), and the 3 variant STUPID, an extended sense of THICK. The contrast of aspiration in each pair of doublets is a telltale segmental alternation in support of the theory of dialectal strata. That is, the 3 variant with its unaspirated initial must have been introduced from northern Mandarin where all the voiced obstruents developed into unaspirated series in the checked tones.

The realization of A SHIELD 盾 and MUSHROOM 菌 in 2a is also the case in the Chaoyang variety of Southern Min.

1a	3	2a
+ suck 吮	+ vehement 忿	+ a shield 盾
* near/近	+ indignant 憤	+ mushroom 菌

close

* stupid/笨 + turbid 沌

thick + exhuast 盡

+ confused 混

+ kidney 腎

* near/close 近

* stupid 笨

3.3.13. The Rime Group WN (Shan).

As shown in the following chart, DROUGHT 旱 is realized as a 1a lexeme in all subdialects except for the Huayang variety where the 3a reflex is a result of merger of IIvo with IIIu rather than IIIv. EEL 鱣 sticks to 1a in the three dialects listed. COMPANION 伴 is a doublet in subdialects 1 & 4. It is realized as Tone 1a only in subdialect 2 and Tone 3 only in dialects 0, 5, 6 & 9abde; note that the 2a reflex in subdialect 9c is the result of a merger of IIvo, IIu and IIIv.

BREAK 斷 is a doublet alternating between thon 1a and ton 3 in subdialects 1 & 4, and between thon 1a and ton 3a in subdiaelct 2. The contrast in aspiration here is parallel to that of STUPID/THICK in subdialect 3, HEAVY in subdialect 7a and YOUNGER BROTHER in subdiaelct 2. It provides a clue to dialect contact (see Chang 1987). The above doublet is different from the 2a reflex

found in subdialect 4 in the sense that the latter is derived from the IIu precursor with the *t- initial recorded in Guangyun. The 2a reflex functions as a transitive verb as opposed to the 1a and 3 reflexes that serve as intransitive verbs. The contrast of transitivity in terms of presence of voicing may be a vestige of an early morphological process.

	drought	eel	companion	break
1a	10	3	3	5
3	1	0	9	5

1a

+ drought 旱
+ Chinese yellow eel 鱓
* companion 伴
* break 断

3

+ mix 拌
+ distinguish 辨
+ trip over 绊
+ debate 辩
+ birthday 诞
+ seal character 篆
+ lowly 贱
+ tread 踐
+ write 撰
+ food/delicacies 馔
+ item (clothes) 件
+ key 鍵
+ go slow 缓

+ limit 限
+ good 善
* companion 伴
* break 斷

3.3.14. The Rime Group WM (Xian).

INSIPID淡 is a triplet embracing the Tone I, Tone II & Tone III variants all with the *d- initial in Guangyun. The doublet tham 1a/tham 3/3b in subdialects 1, 2 & 6 or thav 1a/thav 3 in the Changting variety can be traced back to the II and III variants in Guangyun. There is no grammatical distinction between the two reflexes, but there seems to be a discernible difference in the degree of concreteness, as in ham 1b tham 1a (salty and insipid) and lav 1a tham 3b (cold/indifferent) in the Taoyuan (Hailu) variety.

1a	3	2a
*insipid 淡	+ model 範	+ deep/clear 湛
	+ surname 范	+ chin 頷
	+ violate 犯	
	+ fine woven grass mat 簟	
	+ gradually 漸	
	+ frugal 儉	
	+ door sill 檻	

* insipid 淡

3.3.15. The Rime Group NM (Shen).

No reflexes survive in 1a in this category.

3	2a
+ very 甚	+ I/we 朕 (imperial use)

3.3.16. Summing-up.

By way of summing up the general trends of the development of the IIvo lexemes as given in the following table, of the total of the lexemes listed only 6 % survives in 1a, a little over 50 % is claimed by the tone 3 reflexes, about 9 % invloves the doublets alternating between 1a and 3, and less than 4 % shows an interdialectal variation between 1a and 3; the remaining items that occurs in 2a alone account for about 6 %, and those that are doublets that alternate between 2a and 1a or 3 take up only 2 % and those that show an interdialectal variation between 2a and 1a or 3 occupy 5 %.

tone	1a	3	2a

NI	+3	*1	-4	+9	*1	-3			-4
WI	+1	*2		+9	*2		+2		
WU		*1		+10	*1				
NU	+2	*2		+5	*2				
NO	+1	*1	-3	+11		-2	+3	*1	-3
XO		*1		+3	*1				
WO		*1	-1	+2	*1	-1			
NG		*2		+1	*2				
WG	+1			+1		-1			-1
YG		*1		+7	*1	-1	+1	*1	-1
XG				+7				*2	
NN	+1	*2		+6	*2		+2		
WN	+2	*2		+15	*2				
WN		*1		+7	*1		+2		
NM				+1			+1		
	+11	*17	-8	+94	*16	-8	+11	*4	-9
%	6.2	9.6	4.5	52.8	9.0	4.5	6.2	2.2	5.1

total 178

3.4. The Development of Tone II Lexemes with Voiced Sonorant Initials

The following deliberation is based on the data pool given in Appendix 3 (i.e. 3.4 & 3.5.). Symbols used: - means the varieties differ in the tonal realization of the lexeme. * means that the lexeme is a member of the doublet in question. No symbols means that the lexeme occurs in only one tone category invariably in varieties of Kejia. More often than not both the first type and the second type occur in the lexeme in question. In that case the symbol * will be used. As in 3.3. the discussion of each rime group is followed by a list of the lexemes involved arranged under each modern tone category they carry

3.4.1. The Rime Group NI (Zhi).

The pronoun YOU 你 with Tone 1b as a colloquial pronunciation is reported in subdialects 1, 2, 3, 4 and 7a. However, Tone 1a is registered in subdialects 1, 4, 7a and 9abcde. In 7a, for example, both pronunciations are found, but a cursory look at the conversational texts reveals that 1b occurs more frequently than 1a. INSIDE 里 & 裏 waver between 1a and 2a. 1b is also registered in 5. ANT 蟻 is mostly realized as 2a, but it also takes on 3a, as in subdialects 2 & 4, the Kejia

varieties that still maintain the distinction of 3a and 3b.

1a	2a	1b
pretty 美	ear 耳	* you 你
tail 尾	stamen/pistil 蕊	- inside 里
husband's 娌	rampart 壘	3a
brother.s wife	plum/name 李	- ant 蟻
texture/reason 理	great 偉	
carp 鯉	already 已	
to use/because 以	weed 葦	
* you 你	- ant 蟻	
- inside 里	- pile up/implicate 累	
- inside 裏	- inside 里	
	- inside 裏	

3.4.2. The Rime Group WI (Xie).

ETIQUETTE 禮 is realized as 1a as well as 2a. Except for subdialect 1 where 1a as a colloquial form and 2a as a literary form occur side by side, most subdialects (012345) have 1a as the reflex. The reflex 2a as found in subdialects 1, 3 & 6 must have been the result of innovation.

1a	2a
every 每	rice 米

buy 買　　* etiquette 禮

be/so 乃

milk/breast 奶

* etiquette 禮

3.4.3. The Rime Goup WU (Liu).

In the subdialect 3 (Yongding) BIRD鳥 has two variants: (1) tieu 1a (col.) and (2) ngieu 2a (lit.). The rime book Guangyun gives only the sound gloss (du liao qie 都了切, ie. *tieu II) which can be the precursor of tieu but not ngieu. In northern Mandarin the reflex of BIRD uniformly has a nasal initial like niau 2a in Peking Mandarin. To account for the difficulty of deriving niao 2a from *tieu, some traditional philologists put forward the theory, perhaps a little prematurely, that the form with the nasal initial was created to avoid the collision between two homophones, BIRD and PENIS, a taboo form. But if the avoidance of homophony is the motivation of change, why were not other words than niao chosen? As Xing (1983: 318-322) rightly pointed out, this is an improbable hypothesis. He instead proposes that the proto-form of BIRD in Archaic Chinese must be reconstructed with a nasal initial. This conjecture may turn out to be right in that the two variants in the Kejia dialect are related tonally as well as segmentally. Both forms may

well be derived from a proto-from with a consonant cluster like *sn-. The modern n- form results from the loss of the prefix and the modern t- form develops through two steps: the denasalization of the initial induced by the prefix s- and the loss of the prefix. It is interesting to note that BIRD in southern Min like Xiamen is tsiau 2a [col.] vis-a-vis niau 2a [lit.] instead of tiau. Xiamen then differs from Kejia only in the second step: instead of the loss of the prefix it derives ts- through the metathesis of the prefix and the root-initial. This is the rationale for including for discussion the lexeme BIRD which would otherwise fall outside the scope of our concern given the sound value in Guangyun.

While, as shown above, the variant tiau 1a, a native form, occurs alongside of ngieu 2a, an alien form, in Yongding, the doublet tiau 1a and niau 1a is found in subdialects 2 (Sixian, Taoyaun) and 5 (Lufeng) where the literary form changes its tone to 1a. In still other subdialects such as 1 and 4 only the colloquial form is reported.

1a	2a
5-7 a.m. 卯	vague/remote 渺
bite 咬	subtle/minute 眇
* bird 鳥	second 秒

get mad 惱
brain 腦
disturb 擾
to wind 繞
particle (of completion) 了
old 老
to scoop 舀
* bird 鳥

3.4.4. The Rime Group NU (Liu).

From the count of the following table we can see that for some subdialects the lexemes except HAVE 有 as shown below have undergone in various degrees a change of 1a to 2a. The lexemes with the *J- or *0- initials such as FRIEND 友 and HAVE 有 seem to pattern with the voiced obstruent initials in changing to Tone 3.

	a certain	mother	1/6 acre	lotus root
1a	6	4	3	3
2a	3	6	3	6
3			1	

	willow	friend	have
1a	3	4	10
2a	4	2	
3		3	1

1a	2a	3b
- a certian 某	wring 扭	- 1/6 acre 畝
- have 有	button 紐	3
- 1/6 acre 畝	button 鈕	- friend 友
- mother 母	pair/image 偶	3a
- lotus root 藕	lure 誘	- have 有
- friend 友	- lotus root 藕	
- willow 柳	- a certain 某	
	- have 有	
	- 1/6 acre 畝	
	- mother 母	
	- friend 友	
	- willow 柳	

3.4.5. The Rime Group NO (Yu).

For this rime category there is more interdialectal agreement on the separation of 1a and 2a. Tone 1a in LANGUAGE 語 have changed to 2a in some subdialects. The same is true of MILK/BREAST 乳 where 1a has been changed to 2a except that the tonal reflex 3 or 3a indicated as being colloquial may not etymologically be related to the lexeme in question since the segmental reflex has a nasal ending.

1a	2a	3

stew in soy sauce/gravy 滷	insult 侮	- milk/breast 乳
surname 李	dance 舞	
travel 旅	martial 武	
crass 魯	dilligent 努	
take captive 擄	woman 女	
sculling oar 櫓	five 五	
give/and 與	five 伍	
- milk/breast 乳	noon 午	
* language 語	universe 宇	
	rain 雨	
	feather 羽	
	- milk/breast 乳	
	* language 語	

3.4.6. The Rime Group XO (Guo).

If we look at the first person, the second person and the third person pronouns in the colloquial speech, as shown below, we find that they are all in Tone 1b, even though the first person and the second person are derived from MC IIvs whereas the third person comes from Ivs as recorded in Jiyun. The tone development of I and YOU are irregular in the sense that IIvs is generally realized as 1a or 2a. I 我 and YOU 你 may take on 1b under the impact of the tone value of HE/SHE. This constitutes a case of paradigmatic pressure that

accounts for the exceptions in tonal development.

I	You	He/She
ngai 1b 我	npi 1b 你	ki 1b 渠
	hn	

In the subdialects 1, 6 & 7a the literary pronunciation ngo 1a occurs vis-a-vis the colloquial pronunciation ngai 1b, whereas it is the literary ngou 2a that is contrasted with ngai 1b. However, it is hard to explain the occurrence of the colloquial ngai 2a as opposed to the literary ngo 1a in the Taoyuan (Hailu) variety of Kejia where YOU is npi 1b and HE/SHE is ki 1b.

1a	2a	1b
* I	* I	* I

3.4.7. The Rime Group WO (Jia).

For the items ALSO 又 and THE OPEN 野 the subdialect 1 believed to represent the Meixian variety shows an intradialectal variation between 1a (col.) and 2a (lit.). The rest is characterized by a clear-cut demarcation line drawn between the 1a items and the 2a items.

1a	2a
agate 瑪	tile 瓦
yard 碼	* also 也
horse 馬	* the open 野
refined 雅	
court/cause 惹	
* also 也	
* the open 野	

3.4.8. The Rime Group NG (Tong).

CAGE/BASKET 籠 is a doublet identified by luv 1a (col.) and luv 2a (lit.) in subdialects 1, 2 & 4. Both pronunciations differ tonally from their counterpart lov 1b in Peking Mandarin.

1a	2a
* cage/basket 籠	reach/add up 攏
	short name for Gansu 隴
	brave 勇
	gush/surge 湧
	5 pecks 甬
	* cage/basket 籠

3.4.9. The Rime Group YG (Dang).

As shown in the following table, LOOK UP 仰 and

ITCH 癢 are instances of merger of 1a with 2a found in some subdialects. On the contrary, all the subdialects exhibit an intradialectal, as in TAEL 1a/TWO兩 2a. Since the two reflexes differ in meaning, it remains to be clarified whether or not the senses are etymologically related. We include them here as they show the tonal alternation typical of IIvs lexemes. It is interesting to note that this kind of alternation is also reflected in Southern Min, for example the Xiamen variety, as in TAEL niuz 2a/TWO nv 3b, where unlike Kejia, the relation between the tone reflexes and their associated senses is reversed.

	look up	tael/two	itch
1a	8	11	4
2a	4	11	2

1a	2a
towards 往	rude 莽
raise/cultivate 養	python 蟒
- look up 仰	net 網
* tael 0357 兩	yell 嚷
- itch 癢	- look up 仰
	* two 0357 兩
	- itch 癢

3.4.10. The Rime Group XG (Geng).

The 1a items except for ALWAYS 永 in this rime category seems to balk at displacement by the 2a counterparts from northern dialects.

1a	2a
violent 猛	* always 永
vessel 盂	
cold 冷	
collar/lead 領	
mountain range 嶺	
* always 永	

3.4.11. The Rime Group NN (Zhen).

Unlike the above category all the items in this category experience diffusion in various degrees to 2a in a portion of subdialects (see the following table). ENDURE 忍 embraces two coexistent forms in subdialects 1 & 3.

	surname	sensitive	permit	lead/pull	endure
1a	2	2	3	3	10
2a	1	4	4	2	3
3b	1				

1a 2a 3b

- surname 尹	- surname 尹	- surname 尹
- sensitive 敏	- sensitive 敏	
- to permit 允	- to permit 允	
- lead/pull 引	- lead/pull 引	
* endure 忍	* endure 忍	

3.4.12. The Rime Group WN (Shan).

Of all the 1a items half have given way to their 2a counterparts in some subdialects, as shown below:

	pull/pluck	late	warm	soft
1a	2	8	10	4
2a	5	3	2	2

1a	2a
exempt 免	give birth to 娩
encourage 勉	send funeral ode 輓
full 滿	drive out 攆
lazy 懶	eye 眼
- pull/pluck 挽	egg/testicles 卵
- late 晚	emperor's carriage 輦
- warm 暖	far 遠
- soft 軟	perform 演
	- pull/pluck 挽
	- late 晚
	- warm 暖

- soft 軟

3.4.13. The Rime Group WM (Xian).

For the first three items the 1a reflexes have been eclipsed by the 2a reflexes. The Lexeme DYE aberrantly wavers betweem 2a in varieties and 3/3b in other varieties.

2a	3/3b
seize/monopolize 攬	- dye 染
olive 欖	
look over 覽	
- dye 染	

3.4.14. The Rime Group NM (Shen).

In this rime category the 2a reflexes from the alien source have edged out the native 1a reflexes.

2a
ripe grain 荏
cold/chilly 凜

3.4.15. Summing-up.

By way of closing this section a few words are in order on the overall picture of the rivalry of two sets

of lexemes each bearing Tone 1a and Tone 2a. First, consider the following table featuring a count of occurrence of three types of lexemes in each tone category.

	1a			2a			3a	3b	3	1b	1b
NI	6	-2	*1	7	-4		-1			*1	-1
WI	4		*1	1		*1					
WU	2		*1	10		*1					
NU		-7		5	-7		-1	-1	-1		
NO	7	-2		11	-2						
XO			*1			*1				*1	
WO	5		*2	1		*2					
NG			*1	5		*1					
YG	2	-2	*1	4	-2	*1					
XG	5		*1			*1					
NN		-4	*1		-4	*1		-1			
WN	4	-4		8	-4						
WM				3	-1			-1	-1		
NM				2							
total	35	-21	*10	57	-24	*9	-2	-3	-2	*2	-1

If for the sake of simplicity we disregard the modern reflexes 1b, 3, 3a & 3b, and focus on solely on 1a and 2a, we obtain the following sum total:

tonal reflex	raw figure	percentage

1a only	35	27.8
2a only	57	45.1
both	21	16.1
doublets	9	7.1
total lexemes	126	

Note that the total lexemes also include other tonal reflexes than 1a and 2a. It is obvious from the above chart that nearly half of the IIvs lexemes have been taken over by the 2a reflexes bearing the imprint of nothern influence, a little bit over a quarter still stick tenaciously to 1a, and less than a quarter embracing the interdialectal variation [16.1 %] and the intradialectal variation [7.1 %] show oscillation between 1a and 2a, an on-going tone change in which the indigenous 1a reflexes will eventually yield to the alien 2a reflexes under the overwhelming impact of northern Chinese.

3.5. A Comparison of Kejia and Cantonese in the Realization of Tone II Lexemes with Voiced Obstruent Initials.

In the following list of lexemes 1a and 3 represent the tone reflexes of Kejia while 2b and 3b stand for the tone reflexes of Cantonese. Other tone reflexes will be indicated by the name of the dialect in question. The Cantonese data are drawn from O-K Yue Hashimoto (1972), Huang (1940) and Deng (1981).

3.5.1. The Rime Group NI (Zhi).

sameness

1a/2b maidservant 婢, to stand 倚, quilt 被, persimmon 柿

difference

1a ringed pheasant 雉, prostitute 妓, cleverness 伎

2b piles 痔ar似, market 市

sameness

3/3b piles 痔, an official 仕, scholar/warrior 士, offer sacrifice to 祀, skill 技, kneel 跪, to be/this 是, passive marker 被

difference

3 similar 似, persimmon 柿, cleverness 伎

, market 市

3b prostitute 妓 , ringed pheasant 雉 , skill 技

sameness

2a persimmon 柿

difference

2a (Kejia) clevernes 伎 , prostitute 妓 , kneel 跪

3.5.2. The Rime Group WI (Xie).

sameness

1a/2b younger brother 弟 , wife of younger brother 娣 ,

difference

1a exist/be at 在

2b times/-fold 倍 , crab 蟹 , wait for 待, negligent 怠 , almost 迨

sameness

3/3b to finish 罷 , love and respect to one's brother 悌 , exist/be at 在 , 9-11 p.m. 亥 , crime 罪 , remit 罷 , younger brother 弟

difference

3 times/-fold 倍

3b wife of younger brother 娣 , wait for 待 , negligent 怠 , almost 迨

difference

2a (Kejia) crab 蟹

3.5.3. The Rime Group WU (Xiao).

sameness

1a/2b hold in the arms 抱

difference

2b air bladder (of a fish)鰾, make/build 造

sameness

3/3b rice (plant)稻, road/principle道, omen/trillion 兆, originate肇, surname趙, black 皂, make/build造, connect/introduce紹, hold in the arms抱, abalone鮑, difference

3 air bladder (of a fish)鰾

difference

2a (Cantonese) black 皂, abalone 鮑

1a (Cantonese) abalone 鮑

3.5.4. The Rime Group NU (Liu).

sameness

1a/2b mortar臼, maternal uncle舅, woman婦, thick厚

sameness

3/3b to bear/lose 負, name of an emperor紂,

blame 咎, back/behind 後, recieve 受

difference

3 woman 婦, thick 厚

3.5.5. The Rime Group NO (Yu).

sameness

1a/2b pillar 柱, ramie 苧, reject 拒

difference

1a register 簿, gigantic 巨

2b distance 距

sameness

3/3b section 部, father 父, decayed 腐, fabricate 杜, gather 聚, door 戶, Shanghai 滬, narrate 敍, clues 緒, preface 序, vertical 豎

difference

3b gigantic 巨, register 簿

difference

2a (Kejia) distance 距, gigantic 巨, reject 拒

2a (Cantonese) register 簿

3.5.6. The Rime Group XO (Guo).

sameness

1a/2b sit 坐

difference

2b rudder/helm 舵 , calamity 禍

sameness

3/3b to fall 墮 , calamity 禍 , sit 坐

difference

3 rudder/helm 舵

3.5.7. The Rime Group WO (Jia).

sameness

1a/2b below/descend 下 , club 社

sameness

3/3b summer/name 夏 , house 廈 , below/descend 下

difference

3 club 社

3.5.8. The Rime Group NG (Tong).

sameness

1a/2b heavy 重

difference

1a move 動

sameness

3/3b offer/receive 奉 , move 動 , heavy 重

3.5.9. The Rime Group WG (Jiang).

sameness

1a/2b oyster 蚌

difference

2b club (weapon) 棒

sameness

3/3b item 項, club (weapon) 棒

difference

2a (Kejia) club (weapon) 棒

3.5.10. The Rime Group YG (Dang).

sameness

1a/2b above/ascend 上

sameness

3/3b agitate 盪, ten feet 丈, battle 仗, cane 杖, resemble/image 像, oak 橡, elephant 象, above/ascend 上

difference

2a (Kejia) above/ascend 上

2a (Cantonese) cane 杖

3.5.11. The Rime Group XG (Geng).

difference

2b small boat 艇

sameness

3/3b and/also 並, ingot 錠, pacify 靖, quiet 靜, lucky 倖, fortunate 幸,

apricot 杏

difference

2a (Kejia) small boat 艇

2a (Cantonese) and/also 並

3.5.12. The Rime Group NN (Zhen).

sameness

1a/2b suck 吮, near/close 近

difference

2b vehement 忿, indignant 憤, kidney 腎, a shield 盾

sameness

3/3b stupid 笨, turbid 沌, exhaust 盡, confused 混, kidney 腎, near/close 近

difference

3 vehement 忿, indignant 憤

sameness

2a mushroom 菌

difference

2a (Kejia) a shield 盾

3.5.13. The Rime Group WN (Shan).

sameness

1a/2b companion 伴, drought 旱, break 斷

difference

2b tread 踐

sameness

3/3b mix 拌, distinguish 辨, trip over 絆, debat 辯, birthday 誕, seal character 篆, lowly 賤, tread 踐, write 撰, food/delicacies 饌, item (clothes) 件, key 鍵, go slow 緩, limit 限, companion 伴, break 斷

3.5.14. The Rime Group WM (Xian).

sameness

1a/2b insipid 淡

difference

2b fine woven grass mat 簟

sameness

3/3b model 範, surname 范, violate 犯, gradually 漸, frugal 儉, insipid 淡

difference

3 fine woven grass mat 簞

3.5.15. The Rime Group NM (Shen).

sameness

3/3b very 甚

difference

3 I (imperial use) 朕

difference

2a (Cantonese) I (imperial use)

	1a/2b	1a	2b	3/3b	3	3b	2a	2a
NI	4	3	2	8	4	3	1	3 (k)
WI	2	1	5	7	1	4		1 (k)
WU	1		2	10	1			1 (C)
NU	4			5	2			
YU	3	2	1	11		2		3 (K) 1 (C)
XO	1		2	3	1			
WO	2			3	1			
NG	1	1		3				
WG	1		1	2				1 (K)
YG	1			8				1 (K) 1 (C)
XG			1	7				1 (K) 1 (C)
NN	2		4	6	2		1	1 (K)
WN	3		1	16				
WM	1			6	1			
NM				1				1 (C)
total	26	7	19	96	13	9	2	11 (K) 5 (C)

From the above count of tone reflexes of each category one can have some general idea about the development of Tone IIvo. Tone reflexes 1a and 2b are fewer than 3 and 3b. Compared with a southern Wu dialect like Wenzhou that realizes practically all the II lexemes with voiced obstruent initials as 2b, Kejia and

Cantonese have only a small percentage of the IIvo lexemes realized as 1a or 2b. If we disregard the difference between Kejia and Cantonese for simplicity sake and focus on what they share, the reflexes of 1a and 2b (26 tokens) are roughly 21 percent as opposed to the reflexes of 3 and 3b (96 tokens) which occupy 79 percent of the total count (122 tokens). It is easily discenible from a comparison of the count of 1a (7 tokens) and 2b (19 tokens) as well as 3 (13 tokens) and 3b (9 tokens) that more items of Tone IIvo are retained as 2b in Cantonese than as 1a in Kejia. Viewed in overall terms Kejia and Cantonese (see the above list) show a significant high degree of parallelism in maintaining two distinct modern tone categories as reflexes of IIvo. The development of IIvo or IIIvo for that matter can be best captured by viewing it as a rivalary between two tone systems, system C where the reflexes of IIvo are kept apart from the reflex of IIIvo and System B where the distinction of the reflexes of IIvo and IIIvo is obliterated. Wenzhou is a System C dialect par excellence, while System B is represented by Mandarin dialects which invariably experienced the merger of IIvo and IIIvo. Many southern dialects are intermediate cases such as Jiqi, Guangzhou, Kejia and Linchuan with the rightmost one being the most advanced in undergoing the merger of IIvo and IIIvo. Due to the overwhelming influence of Mandarin dialects System C is

gradually losing ground to System B. Linchuan, for example, is a good case in point in that it only retains a handful of modern 1a lexemes as a reflex of IIvo, all the rest having been merged with the reflex of IIIvo. The positing of the two coexistent systems C & B in Cantonese is in part supported by the different paths of development MC IIvo in each system experienced: like Kejia and Gan MC Tone II voiced obstruents developed into the voiceless aspirated series (modern tone 2b) in system C, the native and colloquial layer, whereas like Mandarin dialects they yielded the voiceless unaspirated series (modern tone 3b) in system B, the alien and literary layer (see X-L. Huang 1940: 82-85). In temporal plane the implanting of System B could not occur until the development of IIvo into the aspirated series had been completed in System C. For an overview of the posited coexistent systems see 1.2.

3.6. The Development of IIvo Lexemes in the Jiqi Dialect.

As discussed in 3.4 & 3.5, in the Kejia dialects about half of the lexemes with IIvo initials are realized as Tone 3 vis-a-vis the 6 % of the 1a reflexes, and about 45 % of the lexmes with the IIvs initials take on 2a while only 28 % of them stick to 1a. Like the Kejia dialects a Huizhou dialect like Jiqi (Lingbei)(Chao & Yang 1965) has two sets of reflexes of IIv lexemes, but it differs from Kejia in that one set merge with IIu (2a) rather than Iu (1a), although, like Kejia, another set merge with IIIv (3b). Another difference is that while only a relatively smaller percentage of the IIv lexemes still survives in 1a in Kejia, most of the IIv lexemes which have merged with 2a still remain distinct from 3b in Jiqi, as observed in (Chao & Yang 1965: 73). Jiqi therefore experiences a lesser degree of impact of northern Chinese than Kejia as far as the development of IIv lexemes are concerned. In a sense, southern dialects undergo various degrees of northern influence in this regard (cf. the Pingjiang dialect, Hunan, as discussed in Chang 1987).

The two sets of reflexes (2a and 3b), as shown below, are all that we can glean from Chao & Yang (1965).

3.6.1. The Rime Group NI (Zhi).

			quilt 被	pi 3b	
			similar 似	si2 3b	
			scholar/ 士	si2 3b	
			warrior		
			market 市	si2 3b	
			be/this 是	si 3b C	
				si2 3b L	
			clan name/	si2 3b	
			maiden name 氏		
			prostitute 妓	tsphi 3b	
kneel 跪	khue 2a		skill 技	tsphi 3b	

3.6.2. The Rime Group WI (Xie).

younger brother 弟	thi 2a	wait for 待	thae 3b
be at/exist	tshae 2a	be at/exist 在	tshae 3b
crab 蟹	ha 2a		

3.6.3. The Rime Group WU (Xiao).

road/principle	the3 2a	road/principle 道	the3 3b
		make/build 造	tshe3 3b

3.6.4. The Rime Group NU (Liu).

woman	婦	fu 3b			
back/behind	後	he 3b			

3.6.5. The Rime Group NO (Yu).

belly	肚	thu 2a	belly	肚	thu 3b
pillar	柱	tcphy 2a			
decayed	腐	fu 2a	decayed	腐	fu 3b

3.6.6. The Rime Group XO (Guo).

sit	坐	tsho 2a	sit	坐	tsho 3b

3.6.7. The Rime Group WO (Jia).

below/	下	ho 2a L	below/	下	ho 3b C
descend			descend		cpio 3b L
			club	社	tcphia 3b

3.6.8. The Rime Group NG (Tong).

move	動	thuae 2a
heavy	重	tshuaez 2a

3.6.9. The Rime Group WG (Jiang).

item 項 hoz 3b

3.6.10. The Rime Group YG (Dang).

resemble/image 像 tcpioz 3b

oak 橡 tcpioz 3b

3.6.11. The Rime Group XG (Geng).

and/also 並 phaez 3b

apricot 杏 haez 3b

3.6.12. The Rime Group NN (Zhen).

exhaust 盡 tshiaez 2a

near/close 近 tcphiaez 2a

confused 混 huaez 3b

suck 吮 yaez 2a

3.6.13. The Rime Group WN (Shan).

trip over 絆 phaz 2a

companion 伴 phaz 2a

break 斷 tuaz 2a

break 斷 thae 3b

food/delicacies 饌 tshaz 3b

good 善 cpyez 3b

item 件 tcphiez 2a
(clothes)
go slow 缓 huaz 2a

3.6.14. The Rime Group WM (Xian).

door sill 槛 khaz 2a

3.7. The Development of IIvo in the Linchuan dialect.

For most Gan dialects the replacement of the 1a reflexes by the 3b reflexes has been completed, but Linchuan (Lo 1940) still retains relics of the indigenous tone trait; it has an overwhelming majority of IIvo lexemes merged with IIIv lexemes leaving only a handful of items realized as 1a or 2a, as in REGISTER phu 1a, PILLAR 柱 Thu 1a, MAIDSERVANT 婢 pi 1a, PLAIT pie2n 1a, KNEEL 跪 khui 2a, INTRODUCE/ CONNECT 绍 se2:u 2a, MORTAR 臼 tcphiu 2a, SMALL BOAT 艇 thin 2a, INDIGNANT 愤 fe3n 2a, and DECAYED 腐 fu 2a. One can regard the 1a reflexes as residue of a sound change stunted by another competing sound change 3b.

3.8. The Fate of the MC IIvo Words.

In discussed in 3.3 & 3.4, there are two sets of reflexes of IIvo: one set merges with Iu and another set

with IIIv and/or IIIu. The second set falls into two subtypes: subtype 1 merges with IIIv and subtype 2 with IIIu. For the second set of reflexes we will include for discussion only the dialect where the reflexes of IIIu and IIIv are kept apart disregarding whether or not each undergoes further merger with other tone categories. Here we take Haifeng (Schaank 1897) and Hailu (Yang 1957) for comparison (see the following data are drawn from Appendix 3.6).

3.8.1. The 3b lexemes shared by Lufeng and Hailu.

persimmon 柿, kneel 跪, younger brother 弟, wait for 待, crime 罪, surname 趙, make/build 造, recieve 受, decayed 腐, move 動, ten feet 丈, near/close 近, lowly 賤, tread 踐, item (clothes) 件, limit 限

3.8.2. The 3a lexemes shared by Lufeng and Hailu.

market 市, times/-fold 倍, woman 婦, to bear/lose 負, father 父, gigantic 巨, door 戶, narrate 敍, clues 緒, preface 序, calamity 禍, heavy 重, war 仗, resemble/image 像, confused 混, break 斷, good

3.8.3. The lexemes realized as 3b in Lufeng but as 3a

in Hailu

scholar/warrior 士 , to be/this 是 , negligent 怠 , 9-11 p.m. 亥 , fabricate 杜 , back/behind 後 , summer/name 夏 , below/descend 下 , offer/ receive 奉 , cane 仗 , elephant 象 , quiet 靜 , fortunate 幸 , apricot 杏 , exhaust 盡 , model 範 , violate 妃 , surname 范

3.8.4. The lexemes realized as 3a in Lufeng but as 3b in Hailu

exist/be at 在 , road/principle 道 , club 社

3.8.5. The 3b lexemes found only in Lufeng.

an official 仕 , similar 似 , islet 嶼 , love and respect to one's brother 悌 , almost 迨 , rice (plant) 稌 , originate 肇 , sit 坐 , house 廈 , item 項 , agitate 盪 , dissolute 蕩 , ingot 錠 , lucky 倖 , distinguish 辨 , seal character 篆 , food delicacies 饌 , fine woven grass mat 簟

3.8.6. The 3a lexemes found only in Lufeng

hold in the arms 抱 , abalone 鮑 , omen/

trillion 兆, name of an emperor 紂, blame 咎, kidney 腎, companion 伴, write 撰

3.8.7. The 3b lexemes found only in Hailu

passive marker 被, club (weapon) 棒, above 上, debate 辯, insipid 淡, gradually 漸, frugal 儉

3.8.8. The 3a lexmes found only in Hailu

black 皂, thick 厚, resemble 似, indignant 憤, go slow 緩

Below is a count of the lexemes in each category.

category	1	2	3	4	5	6	7	8
total	16	17	18	3	18	8	7	5

(Here , for example, category 1 stands for category 3.8.1. given above)

One can reasonably assume that the merger of IIvo with IIIv is the first step, and the merger of IIvo with IIIu is a step beyond, in the eventual obliteration of the distinction of IIvo and III. Another way to view it is to regard the first type of merger to be one stratum and the second type to be another stratum unique of Mandarin dialects where IIIu and IIIv have been

coalesced into 3 and the merger of IIvo and III consummated.

Haifeng and Hailu share a set of IIvo lexemes realized as 3b (see category 1.) and another set realized as 3a (see category 2.). But Haifeng is more conservative than Lufeng in that it retains more IIvo lexemes realized as 3b (compare categories 3. and 4.). The sum total of the 3b and 3a lexemes as reflexes of IIvo lexemes as shown below also supports this claim:

	Haifeng	Hailu
3b	52	28
3a	26	40

The tone development as discussed here can be seen as a competition between two coexistent tone systems: A where IIvo, IIIv and IIIu have merged, and B where the merged IIvo and IIIv are still distinct from IIIu (see 1.2). In Kejia system A was, of course, introduced into the native system C much later than system B.
The Hunan dialects like Changsha, Hanshou, Nanxian, Xiangyin and Yuangjiang also characterized by the coexistence of A and B might have had system C at an earlier stage.

3.8.9. The Change of Tone 1a Lexemes to Tone 3 Lexemes.

With three sets of reflexes of IIvo being established (i.e., 1a, 3b & 3a), we are ready to conduct an interdialectal comparison to capture instances of on-going sound change. A quick check of Appendix 3.1. featuring 1a as a reflex of IIvo turns up the following examples of sound change in progress.

GLOSS	DIAL	REF	DIAL	REF
hold in the 抱	256	pau 1a	01469b	phau 3
arms	9c	phou 1a	5	phau 3a
	9d	pho2 1a		
	9a	phau 1a		
woman 婦	39d	phei 1a	01346	fu 3
	7a9ac	phu 1a	25	fu 3a
			9e	fu3 3b
maternal uncle 舅	0123456	khiu 1a	9d	tsphie3u 3b
	9bce			
	89a	tsphiu 1a		
	7a	tsphieu 1a		
thick 厚	3	kheu 1a	2	heu 3a
	9be	heu 1a	6	heu 3
	9ac	hey/ 1a		
		ho3y 1a		
	9d	ho 1a		
	8	hu2 1a		
register 簿	01234	phu 1a	89ad	phu 3b

		567a				
				9b	phu	3
				9c	phu	2
pillar	柱	07ab	tshu 1a	9b	tshu	3
		1245	tsphu 1a			
		89ad				
		9c	tsphy 1a			
ramie	苧	12489ad	tsphu 1a	5	tsphu	2a
		9b	tshu 1a			
		9c	tshy 1a			
drought	旱	09e	ho2n 1a	7a	xon	3
		12349bc	hon 1a			
		9d	huz 1a			
		9a	xon 1a			

The variation between 1a reflexes and 3 or 2 reflexes is not of doublets, since only one form is found in each dialect. These are the cases where the 3 or 2 variants are the result of a diffusion from Tone 1a to Tone 3 or 2. Such kind of interdialectal variations is different from the intradialectal variations as shown below.

CH	GLOSS	DIAL	REF
被	quilt/	4	phi 1a
	passive marker		phi 3
		2	phi 1a
			phi 3b
笨	stupid	7a	phe3n 1a

			pe3n 3
抱	hold in the arms	5	pau 1a C
			phau 3a
腐	decayed	2	fu 1a
			fu 3b
動	move	236	thuv 1a
			thuv 3b/3
嫂	wife of a younger brother	3	thai 1a
			ti 3
弟	younger brother	2	thai 1a
			ti 3b
		3	thei 1a
			thi 3
斷	break	2	thon 1a
			ton 3a
淡	insipid	126	tham 1a
			tham 3/3b
		3	thav 1a
			thav 3
肚	belly	2	tu 2
			thu 3b
重	heavy	256	tsphuv 1a
			tsphuv 3a/3
		7a	tshuv 1a
			tsuv 3
丈	ten feet	3	tshov 1a
			tshov 3

在	exist, be	1237a	tshoi 1a
			tshai 3/3b
		5	tshoi 1a
			tshai 3a/3b
坐	sit	1	tsho 1a
			tsho 3
		5	tsho 1a
			tsho 3b
坐	sit	1	tsho 2
			tsho 3
柿	persimmon	1	si2 3
			se 1b
			sai 2
虹	rainbow	1	fuv 1b
			kiuv 1a
近	near/close	125	khiun 1a
			khiun 3/3b
		3	khun 1a
			khun 3
下	below/ descend	26	ha 1a
			ha 3a
下	below/ descend	3	ha 1a
			ka 1a
			ha 3b
厚	thick	3	kheu 1a
			heu 3b
上	above/	1	spiov 1a

	ascend		spiov 2/3
		5	spiov 1a
			spiov 3b
鳥	bird	25	tiau 1a
			npiau 1a
我	I	2	ngai 2
			ngo 1a
兩	two/tael	2	liov 1a
			liov 2
籠	cage/basket	2	luv 1a
			luv 3
與	give/and		ji 1a
			ji 3a

CHAPTER IV CONCLUSION

4.1. Summary.

In Chapter I we state the objective and orientation of the present work (1.1.). As a point of departure we give an overview of coexistent tone systems in Chinese dialects (1.2) and sketch the tonal development in historical perspective focusing on the well-documented evidence of merger of IIvo and IIIv (1.3.). Then we touch on the dispute over sound change between the Neogrammarian hypothesis and the theory of lexical diffusion (1.4.) as well as issues related to langauge contact and coexistent sound systems (1.5.). Finally, we spell out the organization of the discussion in the body and the conclusion (1.6.).

The main bulk of Chapter 2 is devoted to the discussion of the development of MC Tone IIIv lexemes in Chaozhou. First, we outline the organization of Chapter 2 (2.1.) and then try to unpack three types of coexistent tone systems in southern Min and point out the dilemma in the Quanzhou case (2.2.). In 2.3 we reopen the Chaozhou case and resolve the dispute involved by adopting a dynamic model of sound change. Contrary to the traditional phonologists's criticism we argue that the Chaozhou Tone IIIv development is a case

of genuine lexical diffusion if the concept of dialectal strata is accepted. In a way, this theoretical focal point sets the tone for the following deliberation and the viability of our contention partially hinges on the notion of bidirectional diffusion between colloquial layer and literary layer (2.6) supported by the statistical result obtained in 2.8. In 2.4. the distinction between the colloquial layer and the literary layer as manifested in the initials is unpacked. The unpacking of the layers of the initial system attempted as well as the final system given in the outset of each rime group (see Appendix 2) forms an indispensible basis for the discussion in the body. 2.5 tries to capture a very complicated system of layers as shown in the segmental and tonal makeup of a syllable. Because of the difficulty in relying on the initial system to extract the layers our stratey is to look for the distinction of layers in the reflexes of the MC rime groups (2.7.). Each section under 2.7. is a detailed examination of the lexemes in each rime group to see if they show a correlation or violation of the correlation of segmental and tonal contrasts. As encapsulated in 2.8., the rime groups show a cline in the the observance of the correlation of segmental and tonal contrasts: some rime groups show good correlation, some groups a very low degree of correlation, and some groups stand in between. We take this to be an indication of sound

change in progress in support of the thesis that sound change propagates itself gradually across the lexicon. 2.9. gives a count of doublets which may be integrated into a profile of on-going sound change. The same is true of a statistical sum-up of types of interaction between the colloquial and literary layers as given in 2.10.

Chapter III is a study of competing tone systems as exhibited in the development of IIv lexemes in Kejia. Following the introduction (3.1.) 3.2. presents in bold contour the tone classification of Kejia dialects as a groundwork for the following discussion. Although our lexically-oriented inquiry into tone change, as in Chapter II, is based on the rime groups, our discussion in this chapter falls into two major parts in terms of the nature of the initial system: 3.3. looks into the development of Tone II lexemes with voiced obstruent initials and 3.4., the development of Tone II lexemes with voiced sonorant initials. In the end of both parts (i.e., 3.3.16) and (3.4.15) we sum up the relative strength of the coexistent tone systems showing the general tendency that system C is in the process of being engulfed by system B (for a discussion of the overall picture of posited coexistent tone systems see 1.2.). The high degree of parallelism in the two-way realization of IIvo lexemes between Kejia and Cantonese

shows that the two types of the reflexes in question are not a result of system-internal development, but a mixed system produced by superimposing a later and alien system on an indigenous system (see 3.5). The following two sections introduce two extreme cases of the rivalry between System B and System C. In Jiqi System B is in an emergent state and on its way to encroach on the territory once held by System C (3.6), whereas in Linchuan the replacement of System C by System B is virtually completed leaving only a handful of C survivals(3.7). Besides the competition between B and C Kejia also exhibits the rivalry between B and C in some varieties where the distinction between 3a and 3b is still retained. This is treated in some detail in 3.8. All in all one can see clear evidence of the coexistence of three tone systems in Kejia, each of which is anchored at different points on a chronological plane. This accumulated tone system is undoubtedly a result of waves of migration from the north through many centuries.

4.2. Theoretical Implications.

A pure and monolithic language as spoken by a homogeneous community is an implicit assumption in the framework of structural linguistics and the generative theory. But in a real life situation no language is

immune from contact. A picture that is much closer to the reality is that language is a multi-dimensional system which owes its many layers to the agency of language contact. If a linguistic system is so richly diversified, a more sensible approach will be to examine the orderly heterogeneity in a language (Weinreich et al 1968).

Our study of coexistent tone systems in Chinese dialects is in line with the above approach. The assumption of coexistence of two systems enables us to unpack the mixed system and reconstruct the three consecutive steps of development: implanting, coexistence and fusion. When each system is isolated, it becomes possible to arrive at relative chronology or even absolute chronology. Take the development of IIvo and IIIv. On the basis of historical documents it is safe to assume that the implanting of system B into system C must have occurred roughly after 800 or 900 AD. Or take the development of IIvo in Kejia. Apart from the opposition between system C and system B there is also the competition between system B and system A. Both systems B and C embrace the modern reflexes of aspirated series while system A is featured by the unaspirated series in some variety of Kejia. In this case system A must have been taken in after the Kejia-specific wholesale development of the IIvo

initials into the aspirated series had been completed.

Recently there has been a renewed interest in dialect grouping. Much ink has been spilled over what constitutes the single most reliable criterion in the identification of a dialect group. But whenever a criterion is proposed, there are always loopholes and exceptions. The fact that no watertight criterion can be found shows a very important aspect of language change. Language not only evolves vertically from a progenitor. Most important of all, it is also subject to horizontal interaction. Unlike biological evolution no language can be free of horizontal contact, and whenever there is contact there are always common features shared by the languages in contact. A natural consequence is that one never finds the best criterion to tell a dialect from the rest. One wants to attain an impossible goal on the assumption of a family-tree type of development. The insight gained from our study of coexistent tone systems can help us reorient our focus of interest. Instead of asking what is the best watertight criterion which is impossible to get, one should ask what are the features shared by the contact dialects. The shared features thus uncovered can help us get some idea about the history and the extent of interdialectal contact.

4.3. Some Residual Problems.

There are some recalcitrant problems that we do not address ourselves to due to the limited scope of the present endeavor. First, we do not pretend to be able to solve the problem of actuation, namely what motivates a sound change. Throughout this exploration we are only concerned with the problem of how a sound change implements itself across the lexicon. The present writer's infatuation with the tone behavior of Chinese dialects started with a naive attempt to find a solution to a question of actuation: why did IIvo merge with IIIv? Now I realize how difficult it is to solve the problem. Perhaps one can never hope to find the answer. Pulleyblank (1978) represents a bold conjecture in this regard, but that has to be attested by historical evidence.

Second, we do not concern ourselves with the external history of the dialects under discussion. It will be a challenging yet intriguing task to find correlates of coexistent tone systems and patterns of southward migrations. Third, although we are fully aware of the coexistence of more than two tone systemes in the Chaozhou case, we simply talked as if there were only two coexistent systems for the most part of our discussion. But a more real-life picture would be that

there are sublayers within the literary layer or the colloquial layer, and it is more realistic to assume that the literary layers were not introduced into the native layer en bloc. It is certainly worth our effort to undertake a much finer spadework to map out the subtlety of the systems.

APPENDIX 1.

Coding Convention - Dialect and Middle Chinese finals and Initials.

1. Table of Vowels and Consonantal Endings.

1.1. Vowels.

	Front		Central		Back	
	Unround	Round	Unround	Round	Unround	Round
High	i	y			u3	u
Half High	i1	y2				u1
Upper Mid	e, e7	o3	e6	o4	o1	o
Mid	e1		e3			
Lower mid	e2	oe	e5		u2	o2
Half Low	ae		a4			
Low	aa, a		a3		a1	a2

apical vowels

front	retroflex	retroflex schwa
i2 y2	i3	e4

1.2. Consonantal Endings.

	bilabial	dental	palatal	velar	glottal
nasal	m	n		v	q

Nasalized vowel indicated by -z

2. Chart of Initials.

	labial	dental	palatal	retroflex	velar	glottal
stop	p ph	t th	tp tph		k kh	q
	b	d	dp		g	
affr.		ts tsh	tcp tcph	tsr tsrh		
		dz		dzr		
			tsp tsph			
			dzp			
fric	f fh	s	cp sp	sr	x	
	v	z	zp zz	zr	gr	
nasal	m mv	n	np		ng	
later.		l				
flap				r		
semiv.				j		

3. Middle Chinese Voiced Initials.

Labial

BING 並 = b FENG 奉 = v

MING 明 = m WEI 微 = mv

Dental

DING 定 = d CHENG 澄 = dp NI 泥 = n

Velar

QUN 羣 = g YI 疑 = ng

Fricative and Affricate

CONG 從 = dz CHONG 崇 = dzr CHUAN 船 = dzp

XIE 邪 = z SI 俟 = zr CHAN 禪 = zp

Glottal

XIA 匣 = gr YUN 云 = j YI 以 = 0

Liquid

LAI 來 = l RI 日 = np

APPENDIX 2.

The Development of MC Tone III Words.

Abbreviations and Symbols used:

CH Chinese characters, IN initial, KH kai he, GD grade, RM rime (for what the numbers stand for see Streeter 1971 & 1977), 0 (Beijing 1962), 1 (Zhang 1982a, b & c), 2 (Gibson 1886), 3 (X-K, Li 1979), 4 (Y-M, Li 1959) & 5 (Cai 1976 & 1979), TP type of initial, final and final (C = colloquial & L = literary); the items marked * are doublets, - means under TP that the distinction between colloquial layer and literary layer can not be determined.

2.1. The Rime Group NI (Zhi).

A Scheme of the Prototypical Difference in the Realization of Rime Categories.

Abbreviations used:

KH kai he, GR grade, COL colloquial, LIT literary, EG examples

KH	GR	RM	COL	LIT	EG
K	3	Zhi11	oi	i	change 易
			ai	i	the litchi 荔
			ia	i	ride on (horse) 騎, send 寄, strange 奇, ant 蟻, steep 崎
			ua	i	incline to 倚
			ue	i	skin 皮
			u/v	i	pierce 刺
K	3	Zhi21	ai	i	sharp/benefit 利
			o	i	earth 地
			ue	i	pretty 美
			ai	u/i2	teacher 師
			ai/i	u/i2	private 私
			i	u/i2	four 四
			ui	u/i2	porcelain 瓷
k	3	Zhi31	ai(z)	i	toe 足止
			ai	u/i2	history 史
			i	u/i2	ear 耳, seed/son 子
k	3	Wei41	ui	i	garment 衣
			ua	i	how many 幾
h	3	Zhi11	ui	ue	droop/on the point of 垂
h	3	Zhi21	ui	i	season 季

h	3	Wie41	ue	i	not yet/the 8th double hour 未
			ue	ui	tail 尾, fly 飛
			ui	i	waste/name 費

2.1.1. 3b as a modern reflex of voiced obstruents

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
避	avoid	b	k	3	13	pei	pi	pi	pi	-LC
鼻	nose	b	k	3	23	phiz	phiz	phiz	phiz	CLC
備	prepare*	b	k	3	23	-	pi	-	-	-LC
地	earth	d	k	3	23	ti	ti	ti	ti	-LC
治	heal	dp	k	3	33	ti	ti	ti	ti	-LC
字	character	dz	k	3	33	zi	zi	dzi/	zi/	-CC
						-	-	zi2	zi2	-LC
事	affair*	dzr	k	3	33	si2	su/	si2	si2	-LC
						-	-	tai	-	CCC
示	show	dzp	k	3	32	si	si	si	si	-CC
櫃	cupboard	g	h	3	23	-	kuiz	kui	kui	-CC
忌	abstain from*	g	k	3	33	-	ki	-	-	-LC
寺	Buddist temple	z	k	3	33	-	tsi	dzi	dzi	-CC
穗	ear of grain	z	h	3	23	-	sui	sui	sui	-CC
飼	to feed*	z	k	3	33	tshi	tshi	tshi	tshi	-CC

2.1.2. 2b as a Modern Reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
備	prepare*	b	k	3	23	pi	pi	pi	pi	-LL

自	self	dz	k	3	23	tsi2	tsu	tsi2	tsi2	-LL
事	affair*	dzr	k	3	33	-	-	si2	-	-LL
墜	drop/fall	z	h	3	23	-	-	tui	tui	-CL
飼	to feed*	z	k	3	33	-	su	su2	-	LLL
睡	sleep	zp	h	3	13	sui	sui	sui	sui	-CL
視	look*	zp	k	3	23	-	si	-	si	-CL
忌	abstain from*	g	k	3	33	ki	ki	ki	ki	-LL

2.1.3. 3b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
未	not yet	mv	h	3	43	bue	bue/	bue/	bue/	-CC
						-	bi/	bi	bi	-LC
						-	-	mui	-	-CC
味	taste	mv	h	3	43	bi	bi	bi/	bi	-LC
						-	-	mue	-	-CC
膩	tired of*	n	k	3	23	-	zi	zi	-	-CC
二	two*	np	k	3	23	zi	zi	zi	zi	-CC
餌	bait*	np	k	3	33	-	zi	-	zi	-CC
						-	-	zi2	-	-LC
魏	surname	ng	h	3	43	-	gui	gui	gui	-CC
吏	official	l	k	3	33	-	li	li	li	-LC
利	benefit*	l	k	3	23	-	lai	lai	lai	-CC
淚	tear*	l	h	3	23	-	-	lui	-	-CC
累	tired*	l	h	3	13	lui	-	lui	lui	-CC
位	seat	j	h	3	23	ui	ui	ui	ui	-CC
為	act as	j	h	3	13	-	ui	-	-	-CC
胃	stomach	j	h	3	43	-	ui	ui	ui	-CC

緯	latitude*	j	h	3	43	-	-	hui	hui	CCC
易	change*	0	k	3	33	-	koi	koi	koi	CCC

2.1.4. 2b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
膩	tired of*	n	k	3	23	ni	-	-	ni	-CL
						-	-	zi2	zi2	-LL
二	two*	np	k	3	23	-	-	no	no	-CL
						-	zi	zi	zi	-CL
						-	-	zi2	-	-LL
义	regulate	ng	k	3	13	ngi	ngiz	ngi	ngi	-LL
僞	bogus	ng	h	3	13	ngui	nguiz	ngui	ngui	-CL
議	discuss	ng	k	3	13	ngi	ngiz	-	-	-LL
義	meaning	ng	k	3	13	-	ngiz	ngi	ngi	-LL
利	benefit*	l	k	3	23	li	li	li	li	-LL
淚	tear*	l	h	3	23	lui	lui	lui	lui	-CL
累	tired*	l	h	3	13	-	-	lui	lui	-CL
痢	dysentery	l	k	3	23	li	li	li	li	-LL
類	class	l	h	3	23	-	lui	lui	-	-CL
謂	tell	j	h	3	43	ui	ue	-	-	-CL
易	change*	0	k	3	33	i	i	i	i	-LL

2.1.5. 1b as a Modern Reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
遂	fulfil	z	h	3	23	sui	-	sui	sui	-CL

2.1.6. Multiple Readings.

As far as the dental and dental palatal initials are concerned, the final shows a pronounced difference: the high back rounded /u/ or unrounded vowel /u3/ for the literary

pronunciation and the high front vowel /i/ for the colloquial pronunciation. If there is no distinction in vowels the literary pronunciation tends to keep the Middle Chinese initial value.

CH	GLOSS	DIAL	IN	KH	GD	RM	2b (L)	3b (C)	TP
忌	abstain from	5	g	k	3	33	ki	khi	a2
飼	feed	1,2	z	k	3	33	su/si2	tshi	a1
利	benefit	1,2,3	l	k	3	23	li	lai	b1
易	change	1,2,5	0	k	3	33	i	koi	a1
二	two	2,3,5	np	k	3	23	no/	zi	a1
							zi2		b1
膩	tired of	3	n	k	3	23	zi2	zi	b1
備	prepare	1	b	k	3	23	pi	pi	g1
事	affair	2,5	dzr	k	3	33	si2	si2	g1
二	two	1,2	np	k	3	23	zi	zi	g3
淚	tear	2,5	l	h	3	23	lui	lui	g3
累	tired	2,3,5	l	h	3	13	lui	lui	g3
忌	abstain from	1	g	k	3	33	ki	ki	g1

CH	GLOSS	DIAL	IN	KH	GD	RM	2a (L)	3b (C)	TP
餌	bait	2	np	k	3	33	zi2	zi	b1
		3					ni	zi	d2
緯	latitude	3,5	j	h	3	43	ui	hui	b1

TLCD	GLOSS	DIAL	IN	KH	GD	RM	3b	4b	TP
易	change	2,3, 5	0	k	3	13	koi	ek/iaq	a1

TLCD	GLOSS	DIAL	IN	KH	GD	RM	2a	3a	TP

緯	latitude	1	j	h	3	43	ui	hui	e4
TLCD	GLOSS	DIAL	IN	KH	GD	RM	2b	3a	TP
視	look	3	zp	k	3	23	si	si	g2
TLCD	GLOSS	DIAL	IN	KH	GD	RM	2b (L)	2b (C)	TP
賦	tired of	3	n	k	3	23	zi2	ni	c4
TLCD	GLOSS	DIAL	IN	KH	GD	RM	3b (L)	3b (C)	TP
事	affair	1	dzr	k	3	33	su	tai	c1

2.2. The Rime Group WI (Xie).

A Scheme of the Prototypical Difference in the Realization of Rime Categories.

KH	GR	RM	COL	LIT	EG
k	1	Tai11	oi/o	ai	replace 代
			o	ai	foetus/birth 胎
			o/i	ai	wear (hat) 戴
			ui	ai	open 開
k	1	Tai01	ua	ai	belt 帶
			iaz	aiz	artemisia 艾
k	2	Jie31	ua	ai(z)	lid 蓋 , leaf mustard 艾
			oi	ai	the scabies 疥
k	2	Jia41	oi	ai(z)	untie 解
			ez	aiz	milk/breast 奶
k	3	Ji03	oi	iz	art 藝
k	4	Qi51	oi	i	even 齊
			ai	i	west 西
h	1	Hui21	oi	ue	match 配
			o	ue	retreat/return 退
			i	ue	back 背

			ui	ue	ashes 灰	
			ai	uez	conceal 昧	
h	1	Tai01	oi	ue	meeting/able 會	
h	2	Jie31	o	uai	a chunk 塊	
			ui	uai	ash tree 槐	
h	2	Guai02	ue	uai	fast 快	

2.2.1. 3b as a modern reflex of voiced obstruents

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
敗	defeated	b	k	2	02	pai	pai	pai	pai	-LC
稗	weed	b	k	2	43	phoiz	-	phoiz	phoiz	CCC
	seed*					-	phaiz	-	-	CLC
						-	-	pai	pai	LLC
吠	to bark	v	h	1	04	-	pui	pui/	pui	CCC
						-	-	hui	-	LCC
袋	bag	d	k	1	13	to	to	to	to	-CC
代	replace*	d	k	1	13	-	to	to	to	-CC
隊	team	d	h	1	23	tui	tui	tui	tui	-CC
寨	stockade	dzr	k	3	02	-	tse	tse	tse	-CC
害	harm	gr	k	1	01	hai	hai	hai	hai	-LC
畫	paint/	gr	h	2	43	ue	ue	ue/	ue	CCC
	draw*					-	-	ua	-	CLC
語	language	gr	h	2	02	ue	ue	ue	ue	CCC
誓	oath*	zp	k	3	03	si	si	si	si	LLC
						-	tsua	-	-	CCC

2.2.2. 2b as a Modern Reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
第	-st/-nd*	d	k	4	53	toiz	toi	toiz/	toiz	-CL

						-	-	ti	-	-LL
兌	to cash	d	h	1	01	tue	tue	tue	tue	-LL
坏	bad	gr	h	2	33	huai	huai	huai	huai	-LL
惠	favor	gr	h	4	53	hui	hui	hui	hui	-CL
慧	intel-	gr	h	1	01	hui	hui	hui	hui	-CL
	ligent									
會	society*	gr	h	1	01	hui	hui/	hui/	-	-CL
						-	-	hue	hue	-LL
						-	oi	oi	oi	CCL
繪	painting*	gr	h	1	o1	hue	-	hui	-	-LL
械	tools*	gr	k	2	33	hai	hai	hai	hai	LLL
潰	break	gr	h	1	23	khui	khui/	khui	khui	-CL
	down					-	kui	-	-	-CL
系	be	gr	k	4	53	hi	hi	hi	hi	-CL

2.2.3. 3b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
妹	younger	m	h	1	23	mue	mue	mue/	mue	-LC
	sister					-	-	mui	-	-CC
賣	sell	m	k	2	43	boi	boi	boi	boi	CCC
昧	conceal*	m	h	1	23	-	bai	-	-	CCC
						bi	-	-	-	CLC
艾	mugwort*	ng	k	1	01	-	hiaz	hiaz	hiaz	CCC
外	outside	ng	h	1	01	gua	gua	gua	gua	CCC
礙	hinder*	ng	k	1	13	gai	gai	gai	gai	CLC
藝	art*	ng	k	3	03	goi	goi	goi	goi	CCC
顏	surname*	l	k	1	01	-	lua	lua	-	-CC
隸	scribe*	l	k	4	53	-	li	-	-	LLC

2.2.4. 2b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
昧	conceal*	m	h	1	23	-	muez	mue/	mue	-LL
						-	-	mui	-	-CL
乃	rhetor. marker	n	k	1	01	nai	naiz	nai	nai	LLL
耐	endure	n	k	1	13	nai	naiz	nai	nai	LLL
艾	mugwort*	ng	k	1	01	ngai	ngaiz	ngai	ngai	LLL
礙	hinder*	ng	k	1	13	-	ngaiz	-	-	LLL
藝	art*	ng	k	3	03	-	ngiz	ngi	-	LLL
厲	severe	l	k	3	03	li	li	li	li	-LL
	surname*	l	k	1	01	lai	lai	lai	-	-LL
						-	-	nai	nai	CLL
隸	scribe*	l	k	4	53	ti	-	ti	ti	CLL
						-	li	-	-	LLL
						-	loi	-	-	LCL
俐	glamorous*	l	k	4	53	li	li	li	li	LLL
衛	protect	j	h	3	03	ue	ue	ue/	ue	LLL
						-	-	ui	-	LCL
銳	acute	0	h	3	03	zue	zue	zue/	zue	LLL
						-	-	zui	-	LCL

2.2.5. 3a as a Modern Reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
代	replace*	d	k	1	13	thoi	thoi	thoi	thoi	-CL
						-	tai	tai	-	-LL
劑	doze	dz	k	4	53	tsi	-	-	tsi	-LL
						-	-	tso	-	-CL

會	society*	gr	h	1	01	-	-	kuai	kuai	-LL
绘	painting*	gr	h	1	o1	-	kue	kuai	kuai	-LL

2.2.6. Multiple Readings.

CH	GLOSS	DIAL	IN	KH	GD	RM	2b (L)	3b (C)	TP
艾	mugwort	1,2,3,5	ng	k	1	01	ngaiz	hiaz	a1
藝	art	1,2	ng	k	3	03	ngiz	goi	a1
賴	surname	1,2,5	l	k	1	01	lai/ nai	lua	b1
隸	scribe	1	l	k	4	53	loi	li	b2
	scribe	1	l	k	4	53	li	li	g1
礙	hinder	1	ng	k	1	13	ngaiz	gai	e1
晦	conceal	1	m	h	1	23	muez	bai	a1
CH	GLOSS	DIAL	IN	KH	GD	RM	2b	2b	TP
會	meeting/ be able	1,2,3,5	gr	h	1	01	hui	oi	c4
賴	surname	2	l	k	1	01	nai	lai	e3
第	prefix for the ordinary number	1,2	d	k	4	53	ti	toi/toiz	f2
CH	GLOSS	DIAL	IN	KH	GD	RM	3b	3b	TP
稗	weed seed	2,3	b	k	2	43	pai	phoiz	f1
誓	vow	1	zp	k	3	03	tsua	si	f1
CH	GLOSS	DIAL	IN	KH	GD	RM	2b	3a	TP
會	meeting/ be able	2,3,5,	gr	h	1	01	hui/ oi	kuai	a3 a3
繪	painting	2	gr	h	1	01	hui	kuai	a3
CH	GLOSS	DIAL	IN	KH	GD	RM	3b	3a	TP
代	replace	1,2,3	d	k	1	13	to	tai/	b1

									thoi	b1
CH	GLOSS	DIAL	IN	KH	GD	RM	1b		2b	TP
械	tools	1	gr	k	2	33	hai		hai	g2
丽	glamorous	1,2,3	l	k	4	53	li		li	g2
CH	GLOSS	DIAL	IN	KH	GD	RM	3b		4b	TP
畫	draw	2,3,5	gr	h	2	43	ue		ueq	b1

2.3. The Rime Group WU (Xiao).

A Scheme of the Prototypical Difference in the Realization of Rime Categories.

KH	GR	RM	COL	LIT	EG
k	1	Hao11	o	auz	padded coat 襖
			o	au	make 造
			o/a	au	buttocks 尻
k	2	Yao21	a	au	dutiful/mourning 孝
			a	iau	deft/timely 巧
k	3	Xiao31	io	iau	small 小
			io	iauz	seedling 苗
k	4	Xiao41	io	iau	choose/carry on a pole 挑

2.3.1. 3b as a Modern Reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
葩	hatch*	b	k	3	13	pu	pu	pu	pu	-CCC
调	turn/ move*	d	K	4	43	tie3u	-	tiau	tiou	-LC
轎	sedan-chair	g	k	3	33	kie	kio	kie	kio	-CC
效	effect	gr	k	2	23	hau	hau	hau	hau	-LC

號	number/	gr	k	1	13	ho	ho/	ho/	ho	-CC
	call*					-	hou	-	-	-CC
						-	-	hau	-	-LC

2.3.2. 2b as a Modern Reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
暴	violent	b	k	1	13	pau	pau	pau	pau	-LL
盜	rob/	d	k	1	13	tau	tau	tau	tau	-LL
	steal									
導	lead/	d	k	1	13	-	tau	tau	tau	-LL
	guide									
召	summon/	dp	k	3	33	-	tiau	tiau	tiou/	CLL
	surname*					-	-	-	siou	LLL
号	number/	gr	k	1	13	-	hau	hau	-	-LL
	cry*									
校	school*	gr	k	2	23	hau	hau	hau	hau	-LL

2.3.3. 3b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
帽	hat	m	k	1	13	bo	bo	bo/	bo	CCC
						-	-	mau	-	LLC
亂	noisy*	n	k	2	32	nau	-	-	nau	LLC
						-	-	lau	lau	CLC
廟	temple	m	k	3	33	bie	bio	bie/	bio	CCC
						-	-	miau	-	LLC
尿	urine	n	k	4	43	zie	zio	zie/	zio	CCC
						-	-	niau	-	LLC
料	material	l	k	4	43	lie3u	liau	liau	liou	-LC
耀	illumine*	0	k	3	33	-	tshio	-	-	CCC

2.3.4. 2b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
冒	to brave	m	k	1	13	mau	mauz	mau	mau	LLL
妙	wonderful	m	k	3	33	mie2u	miauz	miau	miou	LLL
貌	appearance	m	k	2	23	mau	mauz	-	mau	LLL
						-	-	mov	-	LCL
鬧	noisy*	n	k	2	32	nau	nauz/	nau	nau	LLL
						-	lau	-	-	CLL
傲	haughty	ng	k	1	13	ngau	ngau	ngau	ngau	LLL
耀	illumine*	0	k	3	33	-	iau	iau	iou	LLL

2.3.5. Multiple Readings.

CH	GLOSS	DIAL	IN	KH	GD	RM	2b (L)	3b (C)	TP
号	number/ call	1, 2, 5	gr	k	1	13	hau	ho	b1
鬧	noisy	2,3,5	n	k	2	23	nau	lau	d1
耀	illumine	1	0	k	3	33	iau	tshio	d1
CH	GLOSS	DIAL	IN	KH	GD	RM	2b (L)	3a (C)	TP
校	school	2,5	gr	k	2	23	hau	ka	a1
号	name/cry	1,5	gr	k	1	13	hau	khau	d1
CH	GLOSS	DIAL	IN	KH	GD	RM	1a	3b	TP
号	number/ call	2,3,4,5	gr	k	1	13	hau	ho	b1
苞	hatch	3,5	b	k	3	13	hu	pu	d2
CH	GLOSS	DIAL	IN	KH	GD	RM	2b	2b	TP
鬧	noisy	1	n	k	2	23	nauz	lau	e3
召	summon/ surname	3,5	dp	k	3	33	tiau/ tiou	siau siou	3 e3

CH	GLOSS	DIAL	IN	KH	GD	RM	3b	3b	TP
鬧	noisy	3	n	k	2	23	nau	lau	e1
CH	GLOSS	DIAL	IN	KH	GD	RM	3a	3b	TP
調	tune/move	3	d	k	4	43	tioz	tiou	b2

2.4. The Rime Group NU (Liu).

A Scheme of the Prototypical Difference in the Realization of Rime Categories.

KH	GR	RM	COL	LIT	EG
k	1	Hou11	o	ou	mother 母
			au	ou	struggle 鬥
k	3	You21	au	iu	flow 流
			u	iu(z)	have 有 , cattle 牛

2.4.1. 3b as a modern reflex of voiced obstruents

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
痘	smallpox	d	k	1	13	tau	tau	tau	tau	-CC
豆	bean*	d	k	1	13	tau*	tau	tau	tau	-CC
舊	old*	g	k	3	22	ku	ku/	ku/	ku	-CC
						-	kiu	kiu	-	-LC
壽	span of life	zp	k	3	23	siu	siu	siu	siu	-LC

2.4.2. 2b as a Modern Reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
豆	bean*	d	k	1	13	-	-	tou	tou	-LL
就	at once/ then	dz	k	3	23	tsiu	tsiu	tsiu	tsiu	-LL
驟	suddenly	dzr	k	3	23	tsou	tsou	tsou	tsou	-LL
柩	bier	g	k	3	23	-	kiu	kiu	kiu	-LL

	give	zp	k	3	23	-siu	siu	siu	siu	-LL

2.4.3. 3b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
漏	leak	l	k	1	13	lau	lau	-	lau	-CC
柚	pomelo	0	k	3	23	iu	iu	iu	iu	-LC

2.4.4. 2b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
茂	luxuriant*	m	k	1	13	mou	mouz	-	mou/	-LL
						-	-	mov	mov	-CL
貿	trade	m	k	1	13	mou	-	mov	-	-LL
陋	low/ humble	l	k	1	13	-	lou	lou	lou	-LL
又	again	j	k	3	23	iu	iuz	iu	-	-LL
右	right	j	k	3	23	iu	iuz	iu	iu	-LL
祐	protect	j	k	3	23	-	iuz	iu	-	-LL

2.4.5. 3a as a Modern Reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
袖	sleeve*	z	k	3	23	-	siu	siu	siu	-LL

2.4.6. 3a as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
貿	trade	m	k	1	13	-	mouz	-	mouz/	-LL
									mov	-CL
溜	slip away	l	k	3	23	liu	liu	liu	liu	-LL

2.4.7. 1b as a Modern Reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
售	sell	zp	k	3	23	tshiu	tshiu	tshiu	tshiu	CLL

2.4.8. 1b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
釉	glaze	0	k	3	23	-	-	iu	iu	-LL

2.4.9. Multiple Readings.

CH	GLOSS	DIAL	IN	KH	GD	RM	2b (L)	3b (C)	TP
豆	bean	2,3	d	k	1	13	tou	tau	b1
CH	GLOSS	DIAL	IN	KH	GD	RM	3b (L)	3b (C)	TP
舊	old	1,2	g	k	3	23	kiu	ku	f1
CH	GLOSS	DIAL	IN	KH	GD	RM	3a (L)	3b (C)	TP
袖	sleeve	3	z	k	3	23	siu	siu	g1
CH	GLOSS	DIAL	IN	KH	GD	RM	2b	2b	TP
茂	luxuriant	3	m	k	1	13	mou	mov	f2

2.5. The Rime Group NO (Yu).

A Scheme of the Prototypical Difference in the Realization of Rime Categories.

KH	GR	RM	COL	LIT	EG
h	1	Mo11	ou	u	drum 鼓
			o	u	Buddha 菩
			iau	u	heron 鷺
h	3	Yu21	ou	u	permit 許
			o	u	to hoe/purge 鋤
			i	u	travel 旅
h	4	Yu31	o	u	not to have 無
			ou	u	rain 雨
			iu	u	tree 樹
			iau	u	number 數, pillar 柱

2.5.1. 3b as a Modern Reflex of Voiced Obstruents

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
哺	to feed/ chew	b	h	1	13	-	pou	-	-	-CC
						-	-	pu	-	-LC
步	step	b	h	1	13	pou	pou	pou/	pou	-CC
						-	-	pu	-	-LC
度	degree/* surmise	d	h	1	13	tou	tou	tou/	tou	-CC
						-	-	tu	-	-LC
渡	cross (river)	d	h	1	13	tou	tou	tou	tou	-CC
鍍	to plate	d	h	1	13	-	tou	tou	tou	-CC
箸	chopstick	dp	h	3	23	-	tu	tu3	tu3	-LC
樹	tree*	zp	h	3	33	tshiu	tshiu	tshiu	tshiu	CCC

2.5.2. 2b as a Modern Reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
哺	to feed/ chew*	b	h	1	13	-	pu	pu	pu	-LL
捕	catch/ seize	b	h	1	13	-	pu	pu	pu	-LL
附	be attached	v	h	3	33	-	hu	hu	hu	-LL
住	reside*	dp	h	3	33	tsu	tsu	tsu	tsu	LLL
助	help	dzr	h	3	23	tso	tso	tso	tso	-CL
具	instrument	g	h	3	33	ku	ku	ku	ku	-LL
懼	fear	g	h	3	33	-	ku	ku	ku	-LL
互	mutually*	gr	h	1	12	hu	hu	hu	hu	-LL
樹	tree*	zp	h	3	33	-	su	su	su	LLL

2.5.3. 3b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
霧	fog	mv	h	3	33	bu	bu	bu	bu	-LC
怒	angry	n	h	1	13	nouz		no	no	-CC
誤	delay	ng	h	1	13	gou	gou	gou	gou	CCC
路	road*	l	h	1	13	lou	lou	lou	lou	-CC
露	dew*	l	h	1	13	lou	lou	lou	lou	-CC
						-	-	lu	-	-LC
	taro	j	h	3	33	-	ou	ou	ou	-CC

2.5.4. 2b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
墓	tomb	m	h	1	13	mo	moz	mo	mo	-CL
慕	admire	m	h	1	13	mo	moz	mo	mo	-CL
暮	dusk	m	h	1	13	mo	moz	mo	mo	-CL
務	business	mv	h	3	33	bu	bu	bu	bu	-LL
怒	angry	n	h	1	13	-	noz	-	-	-CL
悟	comprehend	ng	h	1	13	ngo	-	ngo/	ngo	LCL
						-	-	gu	-	CLL
						-	nguz	-	-	LLL
晤	meet	ng	h	3	33	ngo	-	ngo/	ngo	LCL
						-	nguz	u		LLL
寓	reside	ng	h	3	33	ngo	-	ngo/	ngo	-CL
						-	ngu	u	-	-LL
臥	recline	ng	h	1	23	-	oz	o	o	-CL
慮	anxiety	l	h	3	23	l̥u3	lu	lu3/	lu3	-LL
						-	-	li	-	-CL
濾	filter	l	h	3	23	lu3	lu	-	lu3	-LL

							-	-	li	-	-CL
路	road*	1	h	1	13		-	lu	lu	-	-LL
誉	reputa-	0	h	3	23		u3	u	u3/	u3	-LL
	tion						-	-	i	-	-CL
譬	allegory	0	h	3	33		zu	zu	zu	zu	-LL
裕	abundant	0	h	3	33		zu	zu	zu	zu	-LL
御	imperial*	ng	h	3	23		-	nguz	gu3/	gu3	-LL
							-	-	gi	-	-CL
預	prepare	0	h	3	23		u3	-	u3/	u3	-LL
							-	-	i	-	-CL
與	give*	0	h	3	23		-	u	u	u3	-LL

2.5.5. 1a as a reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
埠	port	b	h	1	13	pou	pou	pou/	pou	-CL
						-	-	pu	-	-LL

2.5.6. Multiple Readings.

CH	GLOSS	DIAL	IN	KH	GD	RM	2b (L)	3b (C)	TP
住	reside	1	dp	h	3	33	tsu	tiu	a
樹	tree	1,2,3	zp	h	3	33	su	tshiu	a
路	road	1,2,5	l	h	1	13	lu	lou	b1
御	imperial	1	ng	h	3	23	nguz	gu	d1
哺	feed	1	b	h	1	13	pu	pou	b1
露	dew	1	l	h	1	13	lou	lou	g4
CH	GLOSS	DIAL	IN	KH	GD	RM	2a (L)	2b (L)	TP
與	give	1,2,5	0	h	3	23	u/	u/	g2
		5					u3	u3	g2
CH	GLOSS	DIAL	IN	KH	GD	RM	3a (L)	3b (C)	TP

露	dew	1,3,4,5	l	h	1	13	lou	lou		g4
CH	GLOSS	DIAL	IN	KH	GD	RM	4b (C)	3b (L)		TP
度	degree/ surmise	3,4,5	d	h	1	13	tak	tou		b1
CH	GLOSS	DIAL	IN	KH	GD	RM	1b (L)	2b (L)		TP
互	mutually	3	gr	h	1	31	hu	hu		g3

2.6. The Rime Group XO (Guo).

A Scheme of the Prototypical Difference in the Realization of Rime Categories.

KH	GR	RM	COL	LIT	EG
k	1	Ge11	ua	o	song 歌, I 我
			ua/ai	o	helm/helmsman 舵
h	1	Ge21	ua	o	rather 頗
			ue	o	spinach/pineapple 菠

2.6.1. 3b as a Modern Reflex of Voiced Obstruents

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
大	big*	d	k	1	13	-	tua	tua	tua	-CC
賀	congra- tulate	gr	k	1	13	ho	ho	ho	ho	-LC
座	seat	dz	h	1	22	-	tso	tso	tso	-LC

2.6.2. 2b as a Modern Reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
大	big*	d	k	1	13	tai	tai	tai	tai	-LL
						-	ta	ta	-	-LL
惰	lazy	d	h	1	23	-	to/	to/	-	-LL
						-	tuaz	tuaz	tuaz	-CL
和	mix	gr	h	1	23	-	ho	ho	ho	-LL

together

2.6.3. 3b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
磨	grind-	m	h	1	23	-	bo	bo	bo/	CLC
	stone*					-	-	-	mo	LLC
餓	hungry	ng	k	1	13	go	go	go	go	CLC

2.6.4. 2b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
糯	gluti-	n	h	1	23	no	noz	-	-	-LL
	nous rice									

2.6.5. Multiple Readings.

CH	GLOSS	DIAL	IN	KH	GH	RM	2b (L)	3b (C)	TP
大	big	1,2,3,4,5	d	k	1	13	tai	tua	b1
大	big	1,2,	d	k'	1	13	ta	tua	b1

TLCD	GLOSS	DIAL	IN	KH	GH	RM	2b (L)	3b (C)	TP
	grindstone	1	m	h	1	23	mo	bo	d1

2.7. The Rime Group WO (Jia).

A Scheme of the Prototypical Difference in the Realization of Rime Categories.

KH	GR	RM	COL	LIT	EG
k	2	Ma11	e	a(z)	horse 馬, to guard/ handful 把
			e	ia	add 加, framework 架
k	3	Ma31	e	ia	older sister 姐
h	3	Ma31	ue	ua	flower 花
			ia	ua	tile 瓦

2.7.1. 3b as a Modern Reflex of Voiced Obstruents

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
射	shoot	dzp	k	3	13	sia	sia	-	sia	-LC
夏	summer*	gr	k	2	13	he	he/	he/	he	-CC
						-	hia	hia	-	-LC
谢	thank/*	z	k	3	13	sia	sia/	sia/	sia/	LLC
	surname					-	tsia	tsia	tsia	CLC
						-	-	se	-	LCC

2.7.2. 2b as a Modern Reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GH	RM	0	1	2	3	TP
仨	suddenly	dzr	k	2	13	-	tsa	-	-	-LL
下	down/*	gr	k	2	13	hia	hia/	hia/	hia/	-LL
	descend					-	ke/	-	ke	CCL
						-	e	e	-	CCL
						-	he	-	-	LCL

2.7.3. 3b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GH	RM	0	1	2	3	TP
骂	scold	m	k	2	13	me	mez	me/	me	-CC
						-	-	ma	-	-LC

2.7.4. Multiple Readings.

CH	GLOSS	DIAL	IN	KH	GH	RM	3b	3b	TP
谢	thank/ surname	1,2,3,4,5	z	k	3	13	sia	tsia	e1

CH	GLOSS	DIAL	IN	KH	GH	RM	2b (L)	2b (C)	TP
下	below	1,2,,4,5	gr	k	2	13	hia	e	c4
夏	summer	1	gr	k	2	13	hia	he	f2

2.8. The Rime Group NG (Tong).

A Scheme of the Prototypical Difference in the Realization of Rime Categories.

KH	GR	RM	COL	LIT	EG
h	1	Dong11	av	ov	red 紅
			ev	ov	elderly person/surname 翁
h	1	Dong21	av	ov	loose 鬆
h	3	Dong31	av	ov/iov	central 中
			ev	ov/iov	hit/be hit by 中
			ev	iov	poor 窮
			uav	ov	wind 風
			av/v	ov	maple 楓
h	3	Zhong31	ev	ov	dragon 龍
			ev	iov	gush 湧
			ev/uav	iov	again/place name 重
			av	ov	heavy 重
			uav	ov	seal 封
			ioz	iov	melt 溶

2.8.1. 3b as a Modern Reflex of Voiced Obstruents

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
縫	seam	v	h	3	33	phav	phav	phav	phav	CCC
	crack									
洞	cave*	d	k	1	23	tav	tav	tav	tav	-CC
共	share/	g	h	3	33	kav	kav/	kav	kav	-CC
	together*					-	kov	-	-	-LC

2.8.2. 2b as a Modern Reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP

鳳	pheonix	v	h	3	13	-	hov	hov	hov	-LL
仲	2nd in seniority	dp	h	3	13	tov	tiov	tov	tov	-LL
訟	liti-gation	z	h	3	33	sov	siov	sov	sov	-LL
誦	chant*	z	h	3	33	sov	sov/	sov	sov	-LL
						-	siov	-	-	-LL
頌	praise	z	h	3	33	sov	siov	sov	sov	-LL
用	use*	0	h	3	33	-	iov	iov	-	-LL

2.8.3. 3b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
用	use*	0	h	3	33	ev	ev	ev	ev	-CC

2.8.4. 2b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
弄	fix/	l	h	1	13	lov	lov/	lov	lov	-LL
	toy with*					-	lav	-	-	-CL
用	use*	0	h	3	33	-	iov	iov	-	-LL

2.8.5. 2a as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
俸	salary	v	h	3	33	-	hov	hov	hov	-LL

2.8.6. Multiple Readings.

CH	GLOSS	DIAL	IN	KH	GD	RM	2b (L)	3b (C)	TP
用	use	1,2,5	0	h	3	33	iov	ev	b1
CH	GLOSS	DIAL	IN	KH	GD	RM	1b (L)	3b (C)	TP
洞	cave	3,5	d	h	1	13	thov	tav	a1
CH	GLOSS	DIAL	IN	KH	GD	RM	2b (L)	2b (C)	TP
弄	toy with	1,5	l	h	1	13	lov	lav	f2

誦	chant	1	z	h	3	33	siov	sov	f4
CH	GLOSS	DIAL	IN	KH	GD	RM	3b (L)	3b (C)	TP
共	share	1	g	h	3	33	kav	kov	f1

2.9. The Rime Group WG (Jiang).

A Scheme of the Prototypical Difference in the Realization of Rime Categories.

KH	GR	RM	COL	LIT	EG
k	2	Jiang11	v	uav	bump into 撞
k	2	Jiang11	ev	ov	rainbow 虹
K	2	Jiang13	av	ov	deep red 绛

2.9.1. 3b as a Modern Reflex of Voiced Obstruents

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
巷	lane/	gr	k	2	13	hav	hav	hav/	hav	-CC
	alley					-	-	hov	-	-LC
撞	bump	dp	k	2	13	-	tv	-	-	CCC
	into*									

2.9.2. 2b as a Modern Reflex of Voiced Obstruents.

CH	GROSS	IN	KH	GH	RM	0	1	2	3	TP
撞	bump	dp	k	2	13	tsuav	tsuav	tsuav	tsuav	LLL

2.9.3. Multiple Readings.

CH	GLOSS	DIAL	IN	KH	GH	RM	2b (L)	3b (C)	TP
撞	bump into	1	dp	k	2	31	tsuav	tv	a1

2.10. The Rime Group YG (Dang).

A Scheme of the Prototypical Difference in the Realization of Rime Categories.

KH	GR	RM	COL	LIT	EG
k	1	Tang11	v	av	vat 缸

			v	av/iav	walk 行	
k	3	Yang21	v	iav	central 央	
			v/ioz	iav	Chinese ten feet 丈	
			io	iav	sing 唱	
			o/ioz	iav	two/tael 兩	
			v	av/uav	frost 霜	
			v	uav	load 裝	
			v/o	uav	condition 狀	
h	1	Tang11	v	uav	light 光	
			uaz	uav	waste/neglect 曠	
h	3	Yang21	v	uav/av	square/surname 方	
			ev	uav	king/surname 王	
			oz	uav	look towards 望	

2.10.1. 3b as a Modern Reflex of Voiced Obstruents

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
匠	craftsman*	dz	k	3	23	-	tshioz	tshioz	tshioz	-CC
狀	condition*	dzr	k	3	23	-	tsv	tsv	tsev	-CC
尚	still/yet*	zp	k	3	23	-	sioz	siez	-	-CC
上	up/above*	zp	k	3	22	tsioz	tsioz/	tsiez	tsioz	-CC
						-	sioz	-	-	-CC

2.10.2. 2b as a Modern Reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
臟	viscera	dz	k	1	13	tsav	tsav	tsav	tsav	-LL
藏	treasure	dz	k	1	13	tsav	tsav	tsav	tsav	-LL
匠	craftsman*	dz	k	3	23	-	-	tshiav	tsiav	-LL
						tshiez	-	-	-	-CL
狀	condition*	dzr	k	3	23	tsuav	tsuav	tsuav	tsuav	-LL

						-	tso	tso	-	-CL
尚	still/yet*	zp	k	3	23	siav	siav	siav	siav	-LL
上	up/above*	zp	k	3	22	-	siav	siav	siav	-LL

2.10.3. 3b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
望	look towards*	mv	h	3	23	moz	moz	moz	mo	CCC
讓	yield*	np	k	3	23	niez	nioz	-	niaz	CCC
樣	manner/ shape*	0	k	3	23	iez	ioz	iez	ioz	-CC

2.10.4. 2b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
望	look towards*	mv	h	3	23	-	buav	buav	-	LLL
讓	yield*	np	k	3	23	-	ziav	ziav	ziav	LLL
亮	bright	l	k	3	23	liav	liav	liav	liav	LLL
浪	wave*	l	k	1	13	lav	lav	lav	lav	LLL
諒	forgive	l	k	3	23	liav	liav	liav	liav	LLL
量	quantity*	l	k	3	23	liav	liav/ nioz	liav	liav	LLL CCL
旺	properous	j	h	3	23	uav	uav	uav	uav	LLL
恙	sickness	0	k	3	23	iav	iav	iav	iav	LLL
樣	manner/ shape*	0	k	3	23	- -	iav -	iav iez	- -	LLL -CL

2.10.5. 1b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
忘	forget	mv	h	3	23	buav	buav	buav	buav	LLL

2.10.6. 2a as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
輛	classifier (vehicle)	1	k	3	23	-	liav	liav	liav	LLL

2.10.7. Multiple Readings.

CH	GLOSS	DIAL	IN	KH	GD	RM	2b (L)	3b (C)	TP
望	look towards	1,2,5	mv	h	3	23	buav	moz/ mo	a1
匠	cratsman	2	dz	k	3	23	tshiav	tshiez	b1
		3					tsiav	tshioz	a1
狀	condition	1,2,3,4,5	dzr	k	3	23	tsuav	tsv/	f1
								tse3v	f1
尚	still/yet	1,2,5	zp	k	3	23	siav	sioz	b1
樣	manner/ shape	1,2	0	k	3	23	iav	ioz/ iez	b1
讓	yield	1,3,5	np	k	3	23	ziav	nioz/ niaz	a1
上	up	1,3,4,5	zp	k	3	23	tsioz	tsioz	g5
浪	wave	1	l	k	1	13	lav	nv	a1

CH	GLOSS	DIAL	IN	KH	GD	RM	2b	2b	TP
狀	condition	1,2,4	dzr	k	3	23	tsuav	tso	f2
量	quantity	1,5	l	k	3	23	liav	nioz/ nio	c4

2.11. The Rime Group XG (Geng).

A Scheme of the Prototypical Difference in the Realization of Rime Categories.

KH GR RM COL LIT EG

k	2	Geng11	iaz	ev	walk 行
			iaz/ez	ev	violent 猛
k	2	Geng21	ez	ev	vie 爭
k	3	Geng31	ez	ev	even 平
			ez/iaz	ev	bright 明
			iaz	ev	frightened 驚
			iaz	ev/iv	life 命
			iaz	iv	spirit 精
k	3	Qing31	ez	ev	nature 性
			iaz/ioz	uev	win 贏
k	4	Qing41	ez	ev	blue 青
			ez/iaz	ev	classic 經
			iaz	ev	definite 定
			ov	ev	bell 鈴
			av	ev	zero 零
			av	iv	vase 瓶

2.11.1. 3b as a Modern Reflex of Voiced Obstruents

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
病	disease	b	k	3	13	pez	pe	pez	pez	-CC
定	definite*	d	k	4	43	tiaz	tiaz	tiaz	tiaz	-CC
鄧	surname	dp	k	3	33	tez	tez	tez	tez	-CC

2.11.2. 2b as a Modern Reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
定	definite*	d	k	4	43	-	-	tev	tev	-LL
淨	clean	dz	k	3	33	tsev	tsev	tsev	tsev	-LL
竟	compete	g	k	3	13	kev	kev	-	kev	-LL
盛	flourish-	zp	k	3	33	sev	sev	sev	sev	-LL

ing

2.11.3. 3b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
命	life*	m	k	3	13	mia	miaz	mia	miaz	-CC

2.11.4. 2b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
命	life*	m	k	3	13	-	mev	mev	mev	-LL
孟	surname	m	k	2	13	mev	mev	mev	mev	-LL
硬	hard	ng	k	2	13	ngez	ngez	ngez/	ngez	-CL
						-	-	ngaz	-	-CL
令	order	l	k	3	33	lev	lev	lev	lev	-LL
泳	swim	j	h	3	13	-	uev	-	-	-LL
咏	sing	j	h	3	13	-	uev	-	-	-LL

2.11.5. Multiple Readings.

CH	GLOSS	DIAL	IN	KH	GD	RM	2b (L)	3b (C)	TP
定	definite	2,3	d	k	4	43	tev	tiaz	b1
命	life	1,2,3,4,5	m	k	3	13	mev	miaz/ mia	b1

2.12. The Rime Group OG (Zeng).

A Scheme of the Prototypical Difference in the Realization of Rime Categories.

KH	GR	RM	COL	LIT	EG
k	1	Deng11	av	ev	wait 等
k	3	Zheng21	iv	ev	carry/undertake 承
			uv	uev	pregnant 孕

2.12.1. 3b as a Modern Reflex of Voiced Obstruents

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP

贈	present	dz	k	1	13	tsav	tsav	tsav	tsav-CC
	with								
剩	surplus	dzp	k	3	23	sev	siv	sin	siv -CC

2.12.2. 2b as a Modern Reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
鄧	surname	d	k	1	13	tev	tev	tev		tev-LL

2.12.3. 3b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
孕	pregnant*	0	k	3	23	-	huv	-	-	CCC
						-	-	zev/	-	LLC
						-	-	ev	-	LLC

2.12.4. 2b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
孕	pregnant*	0	k	3	23	ev	uev	-	ev	LLL

2.12.5. 3a as a Modern Reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
瞪	stare*	dp	k	3	23	tev	-	-	tev	-LL

2.12.6. Multiple Readings.

CH	GLOSS	DIAL	IN	KH	GD	RM	2b (L)	3b (C)	TP
孕	pregnant	1	0	k	3	23	uev	huv	a1

CH	GLOSS	DIAL	IN	KH	GD	RM	1b	3a	TP
瞪	stare	3,4	dp	k	3	23	thev	tev	d3

2.13. The Rime Group NN (Zhen).

A Scheme of the Prototypical Difference in the Realization of Rime Categories.

KH	GR	RM	COL	LIT	EG
k	3	Zhen41	av	iv	person 人

			iav	iv	believe/letter 信	
				uv/iv	stretch 伸	
				uv/ev/iv	dust 塵	
h	1	Hun21	v	uv	twilight 昏	
h	3	Wen71	iav	uv	dizzy/halo 暈	
			uav	uv	to order 吩	

2.13.1. 3b as a Modern Reflex of Voiced Obstruents

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
份	a share*	v	h	3	73	huv	huv	hun	huv	LLC
陣	battle array	dp	k	3	43	tiv	tiv/	-	tiv	-LC
	favorable*	dzp	h	3	53	-	siv	-	-	LLC

2.13.2. 2b as a Modern Reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
鈍	blunt/ stupid*	d	h	1	23	tuv	tuv	tun	tuv	-LL
順	favorable*	dzp	h	3	53	suv	suv	sun	suv	LLL
恨	hate	gr	k	1	13	hu3v	hiv	hu3v	hev	LLL
慎	cautious*	zp	k	3	43	-	siv	-	-	LLL

2.13.3. 3b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
悶	stuffy*	m	h	1	23	-	buv	-	buv	CLC
問	ask*	mv	h	3	73	-	mv	mv/	-	CCC
						muv	-	-	muv	CLC
						-	-	bun	-	CLC
認	recog- nize	np	k	3	43	ziv	ziv	ziv	ziv	LLC

閏	inter-calary	np	h	3	53	zuv	zuv	zun	zuv	LLC
暈	dizzy	j	h	3	73	-	iav/	-	-	LCC
						-	uv	un	iv	LLC
運	transport	j	j	3	73	uv	uv	un	uv	LLC
韵	rime	j	h	3	73	uv	uv	un	uv	LLC

2.13.4. 2b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
悶	stuffy*	m	h	1	23	buv	buv	-	buv	CLL
問	ask*	mv	h	3	73	-	-	bun	buv	CLL
嫩	tender	n	h	1	23	-	luv	-	-	CLL
吝	stingy	l	k	3	43	-	liav	lien	liav	LCL
論	discuss	l	h	1	23	luv	luv	lun	luv	LLL

2.13.5. 2a as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
刃	edge of blade	np	k	3	43	ziv	zim	zim	zim	LLL

2.13.6. Multiple Readings.

CH	GLOSS	DIAL	IN	KH	GD	RM	2b	3b	TP
順	favorable	1	dzp	h	3	53	suv	suv	g1
問	ask	3	mv	h	3	73	buv	muv	d1
		2					bun	mv	a1
悶	stuffy	3	m	h	1	23	buv	buv	g1

CH	GLOSS	DIAL	IN	KH	GD	RM	2a	2b	TP
慎	cautious	1	zp	k	3	43	siv	siv	g2

CH	GLOSS	DIAL	IN	KH	GD	RM	1a	2b	TP
鈍	blunt/	1	d	h	1	23	tuv	tuv	g1

	stupid	2					tun	tun	
CH	GLOSS	DIAL	IN	KH	GD	RM	1a	3b	TP
份	a share	3	v	h	3	73	piv	huv	a2
		2					pin	hun	

2.14. The Rime Group WN (Shan).

A Scheme of the Prototypical Difference in the Realization of Rime Categories.

KH	GR	RM	COL	LIT	EG
k	1	Han11	uaz	av	morning 旦
k	2	Shan41	uaz	av	produce 產
			aiz	av	room/interval 間
k	2	Shan31	aiz	av	board 板
			uaz	av	late 晏
			iaz	uav	surname/color 顏
k	3	Xian51	iaz	iav	connect/surname 連
			uaz	iav	lowly 賤
			iz	iav	change 變
			iv	iav	unfold 展
k	3	Yuan61	iaz	iav	healthy 健
k	4	Xian71	iz	iav	see 見
			aiz	iav	thousand 千
			aiz/iv	iav	first 先
			iv	iav	once/throughout 遍
			i	iav	swallow 燕
h	1	Huan21	iz	iav	meat ball/pellet 丸
			v	av	egg 卵
			v	uav	sour 酸

			uaz	uav	broad/wide 寬
			o	uav	short 短
h	2	Shan31	aiz	uav	return 還
			uez	uav	to close 閂
			uaiz	uav	bent 彎
h	3	Xian51	uaiz	uav	circle 圈
			v	uav	wear (clothes) 穿
			uv	uav	ship 船
			iz	uav	round 圓
			iz	uav/iav	along 沿
h	3	Yuan61	aiz	uav	in reverse/revolt 反
			v	uav	meal 飯
			v	uav/iav	far 遠
h	4	Xian71	uaiz	iav	high/hang over 懸
			iv	iav	dizzy 眩

2.14.1. 3b as a Modern Reflex of Voiced Obstruents

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
辦	manage/do*	b	k	2	43	phoiz	paiz/	phoiz	phoiz/	-CC
						-	pav	-	pav	-LC
飯	cooked rice*	v	h	3	63	puv	pv	pv	puv	CCC
佃	farmer	d	k	4	73	-	taiz	-	-	-CC
彈	bullet	d	k	1	13	-	tuaz	-	tuaz	-CC
段	section*	d	h	1	23	-	tv	tv	tu3v	-CC
						tuev	-	-	-	-LC
殿	palace hall*	d	k	4	73	toiz	taiz	toiz	toiz	-CC

緞	satin	d	h	1	23	tu3v	tv	tv	tu3v	-CC
賤	cheap/ lowly*	dz	k	3	53	-	tsuaz	tsuaz	tsuaz	-CC
傳	biography*	dp	h	3	53	tu3v	-	tv/	tu3v	-CC
						-	tuav	tuan	-	-LC
健	healthy*	g	k	3	63	-	khiaz	kiaz	-	-CC
換	exchange*	gr	h	1	23	uaz	uaz	uaz	uaz	CCC
現	appear/now	gr	k	4	73	hiv	-	hin/	hiv	-CC
						-	-	hiav	hien	-LC
縣	county	gr	h	4	73	khuiz	kuaiz	kuiz	kuiz	-CC
汗	sweat*	gr	k	1	13	khuaz	kuaz	kuaz	kuaz	-CC
旋	the whorl of the hair on the head	z	h	3	53	tsv	-	-	-	CCC

2.14.2. 2b as a Modern Reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
辦	manage/ do*	b	k	2	43	-	-	pien	-	-LL
便	conve- nient	b	k	3	53	piev	piav	pien	piav	-LL
飯	cooked rice*	v	h	3	63	-	huan	huan	huav	-LL
但	but	d	k	1	13	-	tav	tav	tav	-LL
段	section*	d	h	1	23	-	-	tuan	tuav	-LL
佃	farmer	d	k	4	73	tiev	-	tien	-	-LL
						-	-	toiz	toiz	-CL
彈	bullet	d	k	1	13	-	-	tan	-	-LL
殿	palace	d	k	4	73	-	tiav	tien	tiav	-LL

	hall*									
電	electri-city	d	k	4	73	tie3v	tiav	tien	tiav	-LL
賤	cheap/ lowly*	dz	k	3	53	-	tsiav	tsien	-	-LL
棧	warehouse	dzr	k	2	33	-	tsav	-	-	-LL
倦	tired	g	h	3	53	kuev	kuav	-	kuav	-LL
腱	gristle	g	k	3	63	khie3v	kiav	kien	kiav	-LL
健	healthy*	g	k	3	63	kiev	kiav	kien	kiav	-LL
汗	sweat*	gr	k	1	13	-	hav	-	-	-LL
宦	eunuch	gr	h	2	33	huam	huav	huan	uav	-LL
患	suffer from	gr	h	2	33	huam	huav	huam	huav	-LL

2.14.3. 3b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
慢	slow*	m	k	2	33	mav	mav	-	mav	-LC
面	face	m	k	3	53	miv	miv	min/	miv	-CC
						-	-	mien	-	-LC
麵	noodle	m	k	3	53	-	miz	miz/	miz	-CC
						-	-	mien	-	-LC
萬	ten thousand*	mv	h	3	63	buev	buav/	buan	buav	-LC
						-	mav	-	-	-LC
難	disaster	n	k	1	13	-	-	lan	lav	-LC
硯	ink-stone	ng	k	4	73	iz	ngiz	iz/	iz	-CC
						-	-	ien	-	-LC
岸	bank/ beach*	ng	k	1	13	-	huaz	-	-	-CC

願 wish* ng h 3 63 - nguav nguan nguav-LC
鍊 refine/ l k 4 73 liev liav lien liav -LC
smelt
練 to drill l k 4 73 liev liav lien liav -LC
煉 refine l k 4 73 liev liav lien liav -LC
爛 rotten* l k 1 13 - nuaz nuaz nuaz/-CC
lav - - lav -LC
院 courtyard j h 3 53 iz ngiz iz iz -CC

2.14.4. 2b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
幔	curtain	m	h	1	23	mav	buav	buan	buav	-LL
漫	inudate	m	h	1	23	mav	buav	buan	buav	-LL
慢	slow*	m	k	2	33	-	-	buan	buav	-LL
難	disaster	n	k	1	13	-	nav	-	-	LLL
						lav	-	-	-	CLL
岸	bank/	ng	k	1	13	ngav	ngaiz	ngaiz/	ngai	LLL
	beach*					-	-	ngan	-	LLL
彥	elegant*	ng	k	3	53	-	ngav	ngan/	ngav/	LLL
						-	-	ien	gav	
雁	wild	ng	k	2	33	ngav	ngav	ngan/	ngav	LLL
	goose					-	-	ien	-	LLL
願	wish*	ng	h	3	63	nguev	nguav	nguan	nguav	LLL
亂	disordered	l	h	1	23	luev	luav	luan	luav	LLL
爛	rotten*	l	k	1	13	-	lav	lan	lav	LLL

2.14.5. 2a as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
棧	warehouse	dzr	k	2	33	tsav	-	tsan	-	-LL

	sweat*	gr	k	1	13	-	hav	-	hav -LL

2.14.6. Multiple Readings.

CH	GLOSS	DIAL	IN	KH	GD	RM	2b (L)	3b (C)	TP
便	convenient	1	b	k	3	53	piav	piav	g1
飯	cooked rice	1,2,3,4,5	v	h	3	63	huav/ huan/huam	pv/puv	a1
段	section	2,3,5	d	h	1	23	tuav/ tuan	tv/ te3v	b1
佃	palace hall	1,2,3,5	d	k	4	73	tiav/ tiev	taiz/ toiz	b1
賤	cheap/lowly	1,2	dz	k	3	53	tsiav/ tsien	tsuaz	b1
健	healthy	1,2,4,5	g	k	3	63	kiav/ kiev/kien	kiaz	b1
汗	sweat	1	gr	k	1	13	hav	kuaz	a1
慢	slow	3,4	m	k	2	33	buav/ buev	mav	a1
岸	bank	1,4,5	ng	k	1	13	ngaiz/ ngai	huaz	a1
願	wish	1,2,3	ng	h	3	63	nguav/ nguan	nguav/ nguan	g1
爛	rotten	1,2,3,4,5	l	k	1	13	lav	nuaz/ nua lua	a1
		3,5					lav	lav	g1

CH	GLOSS	DIAL	IN	KH	GD	RM	2a (L)	3b (C)	TP
汗	sweat	1,3,4,5	gr	k	1	13	hav	kuaz	a1

CH	GLOSS	DIAL	IN	KH	GD	RM	3b (L)	3b (C)	TP
辦	manage/do	1	b	k	3	13	pav	paiz	f1
		3					pav	phoiz	
傳	biography	2	dp	h	3	53	tuav	tv	f1
萬	ten thousand	1	mv	h	3	63	mav	buav	c1
CH	GLOSS	DIAL	IN	KH	GD	RM	2b (L)	2b (L)	TP
彥	elegant	3	ng	k	3	53	ngav	gav	e3
雁	wild goose	3	ng	k	2	33	ngav	gav	e3
CH	GLOSS	DIAL	IN	KH	GD	RM	3a (L)	3b (C)	TP
換	exchange	3,4,5	gr	h	1	23	huav/ huev	uaz	a1

2.15. The Rime Group WM (Xian).

A Scheme of the Prototypical Difference in the Realization of Rime Categories.

KH	GR	RM	COL	LIT	EG
k	1	Tan11	az	am	south 南
k	1	Tan21	az	am	three 三
k	2	Xian41	az	am	hold in the mouth 銜
k	3	Yan51	iz	iam	dye 染
k	4	Tian81	iz	iam	add 添

2.15.1. 3b as a Modern Reflex of Voiced Obstruents

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
陷	to fall/ trap	gr	k	2	33	ham	ham	ham	ham-	LC
餡	stuffing*	gr	k	2	33	az	az	-	az/	CCC
						-	-	ham	ham-	LC

2.15.2. 2b as a Modern Reflex of Voiced Obstruents.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
暫	temporari-ly	dz	k	1	23	tsie3m	tsiam	tsiam	tsiam	-LL

2.15.3. 3b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
驗	examine	ng	k	3	53	ngie3m	ngiam	ngiam	ngiam	-LC
念	read	n	k	4	83	-	niam	-	-	LLC
	aloud*					-	-	liam	-	CLC

2.15.4. 2b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
斂	gather	l	k	3	53	nie3m	niam	-	-	CLL
念	read	n	k	4	83	-	niam	-	niam	LLL
						lie3m	-	liam	-	CLL

2.15.5. 3a as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
賺	earn*	dp	k	2	33	thav	thav	-	-	CCL
						-	-	-	tham	CLL

2.15.6. Multiple Readings.

CH	GLOSS	DIAL	IN	KH	GD	RM	2b (L)	3b (C)	TP
念	read aloud	1,2	n	k	4	83	niam/ liam	niam/ laim	g1

CH	GLOSS	DIAL	IN	KH	GD	RM	3a (L)	3a (C)	TP
賺	earn	3,5	dp	k	2	33	tsuav	thav/tham	c2

CH	GLOSS	DIAL	IN	KH	GD	RM	3b (L)	3b (C)	TP
餡	stuffing	3	gr	k	2	33	ham	az	c1

2.16. The Rime Group NM (Shen).

A Scheme of the Prototypical Difference in the Realization of Rime Categories.

KH	GR	RM	COL	LIT	EG
k	3	Qin11	az	im	grove/woods 林
			iaz	im	modern/today 今
				im/am	drink/rice-water 飲
				im/iam	face/on the point of 臨

2.16.1. 3b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
任	appoint*	np	k	3	43	-	zim	-	-	LLC

2.16.2. 2b as a Modern Reflex of Voiced Sonorants.

CH	GLOSS	IN	KH	GD	RM	0	1	2	3	TP
任	appoint*	np	k	3	43	im	zim	zim	zim	LLL

2.16.3. Multiple Readings.

CH	GLOSS	DIAL	IN	KH	GD	RM	2b (L)	3b (C)	TP
任	appoint	3,4,5	np	k	3	13	zim	zim	g1

CH	GLOSS	DIAL	IN	KH	GD	RM	2a (L)	2b (C)	TP
任	rent	3	n	k	3	13	zim	zim	g2

APPENDIX 3.

The Development of the IIv Lexemes in Kejia.

Abbreviations and Symbols Used:

CH Chinese Character, IN initial, KH kai he, GD grade, RM rime, DIAL (Dialects), [0 (Beijing 1962, <the Meixian variety, Guangdong>), 1 (MacIver 1926), 2 (Yang 1957 <the Hailu variety, Taoyuan, Taiwan>, 3 (Huang 1982, 1983, 1984 & 1985 <the Yongding variety, Fujian>), 4 (Anonymous 1954), 5 (Schaank 1897 <the Lufeng variety, Guangdong>), 6 Yuan et al 1983 <the Meixian variety, Guangdong>), 7a (Tung 1948 <the Huayang variety, Sichuan>), 7b (Huang 1986 <the Chengdu variety, Sichuan>), 8 (Lo 1982 <the Changting Variety,Fujian>), 9 (Li 1984 <9a Yangcun, 9b Meixian, 9c Dapeng, 9d Changting & 9e Xiayang>), REF reflexes.

3.1. Tone 1a as a modern reflex of MC *IIvo.

3.1.1. The Rime Group NI (Zhi).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
婢	maidservant	b	k	3	12	234	phi
						15	pi
						7b	pei
被	quilt	b	k	3	12	01234567b9	phi
狉	mythical animal	dp	k	3	12	1	tsphi2
雉	ringed	dp	k	3	22	13	tsphi2

	pheasant					45	tsphi
						46	tspi2
						2	tsphi2 (1B)
梯	persimmon	dzr	k	2	32	4	si2
						14	si2 (1b)
妓	prostitute	g	k	3	12	026	khi
						1	khi/ki (2a)
技	skill	g	k	3	12	6	khi
						14	khi (2a)
						5	ki (2a)
伎	cleverness	g	k	3	12	24	khi
						1	ki
倚	to stand	g	k	3	12	123459bcd	khi
						7ab9ad	tsphi

3.1.2. The Rime Group WI (Xie).

CH	GLOSS	IN	KH	GD	RM	DIA	REF
娣	wife of	d	k	4	52	1	tai
	younger brother					3	thei
弟	younger	d	k	4	52	247b9abc	thai
	brother					389d	thei/the
在	exist, be at	dz	k	1	12	12457ab	tshoi

3.1.3. The Rime Group WU (Xiao).

CH	GLOSS	IN	KH	GD	RM	DIA	REF
抱	hold in the	b	k	1	12	25	pau
	arms					9a	phau
						9c	phou
						9d	pho2

灝	vast (of water	gr	k	1	12	1	hau
昊	vast, clear summer sky	gr	k	1	12	1	hau

3.1.4. The Rime Group NU (Liu).

CH	GLOSS	IN	KH	GD	RM	DIA	REF
婦	woman	v	k	3	22	39d	phei/phe
						7a9ac	phu
						9b	fu
臼	mortar	g	k	3	22	13456	khiu
舅	maternal uncle	g	k	3	22	0123456	khiu
						9bce	
						9a	tsphiu
						8	tsphiu2
						7a	tsphieu
						9d	tsphie3u
							(3b)
厚	thick	gr	k	1	12	3	kheu
						9be	heu
						9ac	hey/ho3y
						9d	ho
						8	hu2
						5	heu (1b)

3.1.5. The Rime Group NO (Yu).

CH	GLOSS	IN	KH	GD	RM	DIA	REF
簿	register	b	h	1	12	01234567a	phu
						89ad	phu (3b)

						9b	phu (3)
						9c	phu (2)
柱	pillar	dp	h	3	32	07ab	tshu
						124589ad	tsphu
						9c	tsphy
						9b	tshu (3)
苧	ramie	dp	h	3	22	12489ad	tsphu
						9b	tshu
						9c	tsphy
						5	tsphu (2a)

3.1.6. The Rime Group XO (Guo).

CH	GLOSS	IN	KH	GD	RM	DIA	REF
坐	sit	dz	h	1	22	0	tsho2
						12457a8	tsho
						9abcde	
						3	tshou

3.1.7. The Rime Group WO (Jia).

CH	GLOSS	IN	KH	GD	RM	DIA	REF
下	below/	gr	k	2	12	123457a	ha
						9abde	
						9c	he
	descend					3	ka
						85	ha (3b)
社	club	zp	k	3	12	019ace	spa

3.1.8. The Rime Group NG (Tong).

CH	GLOSS	IN	KH	GD	RM	DIA	REF
動	move	d	h	1	12	12347ab9a	thuv

						8	thu2v
重	heavy	dp	h	3	32	037a	tshuv
						124	tsphuv
						8	tspu2v

3.1.9. The Rime Group NG (Jiang).

CH	GLOSS	IN	KH	GD	RM	DIA	REF
蚌	oyster	b	h	1	12	1	phav
						24	phov

3.1.10. The Rime Group YG (Dang).

CH	GLOSS	IN	KH	GD	RM	DIA	REF
上	above	zp	k	2	22	12459acd	spov
						37a9b	sov
						8	spov (3)
						5	spov (3b)
						9e	sov (3b)
						6	sov (3)

3.1.11. The Rime Group NN (Zhen).

CH	GLOSS	IN	KH	GD	RM	DIA	REF
吮	suck	dzp	h	3	52	124	tshion
						3	tshien
						1	tsion
近	near/close	g	k	3	62	125	khiun
						9a	tsphien
						7a	tsphyn
						9c	khan
						89d	khev

3.1.12. The Rime Group WN (Shan).

CH	GLOSS	IN	KH	GD	RM	DIA	REF
伴	companion	b	h	1	22	124	phan
斷	break	d	h	1	22	0	tho2n
						1347a	thon
						8	thuv (3b)
旱	drought	gr	k	1	12	09e	ho2n
						12349bc	hon
						9d	huz
						9a	xon
						7a	xon (3)
						3	han
鱔	Chinese	zp	k	3	52	25	span
	yellow eel					1	spen

3.1.13. The Rime Group WM (Xian).

CH	GLOSS	IN	KH	GD	RM	DIA	REF
淡	insipid	d	k	1	32	12359abc	tham
						89de	thav
						7a	than

3.2. Tone 3 as a Modern Reflex of MC IIvo.

3.2.1. The Rime Group NI (Zhi).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
被	passive	b	k	3	12	2	phi (b)
	marker					4	phi
痔	piles	dp	k	3	32	147a	tspi2
						3	tshu
						4	tsphi
仕	an official	dzr	k	3	32	14	si2

						5	si2 (b)
士	scholar/ warrior	dzr	k	3	32	0146	si2
						3	su
						2	si2 (a)
						58	si2 (b)
						7a	si2 (2)
柿	persimmon	dzr	k	2	32	0167a	si2
						5	si2 (b)
						2	khi (b)
						3	tshu
						14	sai (2a) (colı)
俟	wait for/ until	dzr	k	3	32	14	si2
伎	cleverness	g	k	3	12	1	khi
跪	kneel	g	k	3	12	2589a	khui (b)
						9b	khui
						3	khuei
						0149c	khui (2a)
						7a	khuei (2a)
娣	wife of old brother	z	k	3	32	1	si2
祀	offer sacrifice to	z	k	3	32	014	si2
						15	si2 (a)
似	similar	z	k	3	32	15	si2 (b)

						2	si2 (a)
嶼	islet	z	k	3	32	145	si2 (b)
市	market	zp	k	3	32	0	si2
						14	spi
						28	spi2 (a)
						3	su
						5	spi (a)
恃	rely on	zp	k	3	32	0	si2
						1	spi
是	to be, this	zp	k	3	12	1	spi
						5	spi (b)
						2	spi2 (a)
						4	spi2
氏	clan name/	zp	k	3	12	1	spi
	maiden name					4	spi2
						7a	si2

3.2.2. The Rime Group WI (Xie).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
倍	times/-fold	b	h	1	12	049b	phi
						14	phui
						1	phoi
						2	phoi (a)
						9e3	pei (1a)
						7a	pei
						89d	pe
						9ac	phui
							(2a)

						7b	pei (2a)
罷	to finish	b	k	2	42	01346	pha
						29b	pha (a)
						9ae	pha (b)
						9c	pha (2a)
娣	wife of younger brother	d	k	4	52	1	thi
弟	younger brother	d	k	4	52	013467a	thi
						259	thi (b)
待	wait for	d	k	1	12	136	thai
						19b	thoi
						29de	thai (b)
						59a	thoi (b)
						9c	thoi (2a)
怠	negligent	d	k	1	12	3469b	thai
						5	thai (b)
						29e	thai (2a)
						9ac	thoi (1a)
悌	love and respect to one's brother	d	k	4	52	1	thi
						5	thi (b)
迨	almost	d	k	1	12	1	thai
						5	thai (b)
	exist, be at	dz	k	1	12	014	tshai
						2	tshai

							(b)
						5	tshai
							(a)
							tsai (b)
薺	water	dz	k	4	52	1	tsi/tshi
							(2a)
	chestnut					3	tshi
							(1b)
罪	crime	dz	h	2	22	0149b	tshui
						259a	tshui
							(b)
						89d	tshue
							(b)
						7ab9c	tshui/
							tshuei
蟹	crab	gr	k	2	42	012345	hai (2a)
亥	9-11 p.m.	gr	k	1	12	146	hoi
						2	hoi (a)
						5	hoi (b)
匯	remit	gr	h	1	22	0	fi
						14	fui

3.2.3. The Rime Group WU (Xiao).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
抱	hold in the	b	k	1	12	01469b	phau
	arms					5	Phau (a)
鮑	abalone	b	k	2	22	01	phau
						1	pau

						5	phau (a)
鰾	air bladder (of a fish)	b	k	3	32	01	phiau
稏	rice (plant)	d	k	1	12	01469b	thau
						9a	thau (b)
						39e	thou (b)
						5	tho (a)
						2	tho (1b)
						89d	tho2 (b)
						9c	tho2 (2a)
道	principle/ road	d	k	1	12	01469b	thau
						1	tho
						2	tho (b)
						89d	tho2 (b)
						5	tho (a)
						9a	thau (b)
						9d	thou (b)
						9c	thou (2a)
兆	omen/ trillion	dp	k	3	32	0	tshau
						14	tsphau
						1	tspheu
						4	spau
						5	spau (a)
						6	sau

肇	originate	dp	k	3	32	14	spau
						5	spau (b)
						6	sau
趙	surname	dp	k	3	32	067a	tshau
						15	tsphau (b)
						2	tsphau (b)
						3	tsheu
皂	black	dz	k	1	12	14	tshau
						2	tsho (a)
造	make/build	dz	k	1	12	014	tshau
						258	tsho (b)
紹	connect/ introduce	zp	k	3	32	0	sau
						146	spau
						25	spau (a)

3.2.4. The Rime Group NU (Liu).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
婦	woman	v	k	3	22	0134	fu
						25	fu (a)
						9e	fu3 (b)
負	to bear/lose	v	k	3	22	01	fu
						258	fu (a)
紂	name of an emperor	dp	k	3	22	14	tsphiu
						4	tsphu
						5	tsphiu (a)

咎	blame	g	k	3	22	14	kiu
						5	kiu (a)
厚	thick	gr	k	1	12	01346	heu
						2	heu (a)
後	behind/ after	gr	k	1	12	14	heu
						2	heu (a)
						5	heu (b)
						3	heu (1a)
受	receive	zp	k	3	22	039b	siu
						14	spiu
						259a	spiu (b)
						9e	siu (b)
						9d	spa4u (b)
						9c	spiu (2a)

3.2.5. The Rime Group NO (Yu).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
部	section	b	h	1	12	01469bc	phu
						2	phu (a)
						9ad	phu (b)
						5	phu (1a)
父	father	v	h	3	32	01346	fu
						25	fu (a)
腐	decayed	v	h	3	32	01346	fu
						258	fu (b)
杜	fabricate	d	h	1	12	0146	thu

						2	thu (a)
						5	thu (b)
聚	gather	dz	h	3	32	0	tsi
						134	tshi
						2	tshi (a)
						5	tshi (b)
拒	reject	g	h	3	22	14	khi (2a)
						014	ki (2a)
						2	khi (1a)
炬	torch	g	h	3	22	24	ki (2a)
						5	ki (a)
巨	gigantic	g	h	3	22	14	khi
						5	ki (a)
						2	khi (1a)
						014	ki (2a)
拒	reject	g	h	3	22	14	khi/ki (2a)
						0	ki (2a)
						2	khi (1a)
炬	torch	g	h	3	22	24	ki (2a)
						5	ki (3a)
戶	door	gr	h	1	12	0146	fu
						25	fu (a)
						7a	fu (2a)
						8	phu (1a)
滬	Shanghai	gr	h	1	12	14	fu
敘	narrate	z	h	3	22	0146	si

						2	si (a)
						5	si2 (a)
緒	clues	z	h	3	22	016	si
						2	si (a)
						5	si2 (a)
序	preface	z	h	3	22	013	si
						2	si (a)
						5	tṡhi2
							(a)
豎	vertical	zp	h	3	32	0	su
						14	spu
墅	villa	zp	h	3	22	24	spu (2a)

3.2.6. The Rime Group XO (Guo).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
墮	to fall	d	h	1	22	1	tho
舵	rudder/helm	d	k	1	12	147a	tho
						5	tho (b)
						2	tho (1b)
坐	sit	dz	h	1	22	147b	tsho
						5	tsho (b)
禍	calamity	gr	h	1	22	0	fo2
						149b	fo
						25	fo (a)
						9a	xo
						9de	fo (b)
						8	ho (b)
						9c	fou (2a)

3.2.7. The Rime Group WO (Jia).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
夏	summer/name	gr	k	2	12	0146	ha
						2	ha (a)
						5	ha (b)
廈	house	gr	k	2	12	146	ha
						5	ha (b)
社	club	zp	k	3	12	49b	spa
						5	spa (a)
						2	spa (b)

3.2.8. The Rime Group NG (Tong).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
奉	offer,	v	h	3	32	0146	fuv
	receive					2	fuv (a)
						5	fuv (b)
						8	fuv (1a)
動	move	d	h	1	12	013469bc	thuv
						25	thuv (b)
						9de	thov (b)
重	heavy	dp	h	3	32	14	tsphuv
						25	tsphuv (a)

3.2.9. The Rime Group WG (Jiang).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
項	item	gr	k	2	12	0	ho2v
						146	hov
						5	hov (b)

棒	club(weapon)	b	k	2	12	0	puv
						7a	pov
						14	pov (2a)
						7b	poz
						2	phuv (b)

3.2.10. The Rime Group YG (Dang).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
盪	agitate	d	k	1	12	14	thov
						5	thov (b)
						3	thov (1a)
蕩	dissolute	d	k	1	21	134	thov
						5	thov (b)
						6	thov (2a)
丈	ten feet	dp	k	3	22	136	tshov
						1489ad	tsphov
						25	tsphov (b)
						7a	tsov
						7b	tshov (2a)
						1a6	tshov (1a)
仗	battle	dp	k	3	22	0	tso2v
						14	tspov
						25	tspov

							(a)
						7a	tsov
杖	cane	dp	k	3	22	14	tsphov
						5	tsphov
							(b)
						2	tsphov
							(2a)
像	resemble	z	k	3	22	14	tshiov
						0	tshio2v
						2	tshiov
							(a)
像	image	z	k	3	22	14	siov
						25	siov (a)
橡	oak	z	k	3	22	0	tshio2v
						14	siov
象	elephant	z	k	3	22	0	tshio2v
						1348	siov
						2	siov (a)
						5	siov (b)
上	above	zp	k	2	22	2	spov (b)
						4	spov

3.2.11. The Rime Group XG (Geng).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
並	and/also	b	k	4	42	014	pin
錠	ingot	d	k	4	42	146	thin
						3	then
						5	thin (b)

挺	straight/ stiff	d	k	4	42	0156	thin(2a)
						4	thin(1b)
艇	small boat	d	k	4	42	156	thiav (2a)
						0	thin (2a)
						4	thin (1b)
靖	pacify	dz	k	3	32	1	tshin
靜	quiet	dz	k	3	32	146	tshin
						2	tshin (a)
						5	tshin (b)
						8	tshev (b)
						7a	tsin
						7b	tsin (2a)
倖	lucky	gr	k	2	22	0	he2n
						14	hen
						5	hen (b)
幸	fortunate	gr	k	2	22	0	he2n
						146	hen
						2	hen (a)
						5	hen (b)
						8	spiev (b)
杏	apricot	gr	k	2	12	0	he2n
						146	hen
						7b	xien
						2	hen (a)

						5	hen (b)
						8	hev (b)

3.2.12. The Rime Group NN (Zhen).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
笨	stupid/thick	b	h	1	22	0136	pun
						7ab	pe3n
						7a	phe3n (1a)
						123	phun (1a)
						8	pev
忿	vehement	v	h	3	72	0134	fun
憤	indignant	v	h	3	72	014	fun
						2	fun (a)
沌	turbid	d	h	1	22	14	thun
盾	a shield	d	h	1	22	05	tun (2a)
						14	thun (2a)
盡	exhaust	dz	k	3	42	014	tshin
						2	tshin (a)
						3	tshiv
						5	tshin (b)
近	near/close	g	k	3	62	0149b	khiun
						25	khiun (b)

						9e	khun (b)
						3	khun/ khiun
菌	mushroom	g	h	3	42	014	khiun (2a)
混	confused	gr	h	1	22	0146	fun
						1	kwun
						2	fun (a)
						5	fun (2a)
腎	kidney	zp	k	3	42	14	spin
						06	se3n
						3	siv
						5	spin (a)

3.2.13. The Rime Group WN (Shan).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
伴	companion	b	h	1	22	01469b	phan
						5	phan (a)
						9ae	phan (b)
						9c	phan (2a)
						9d	phav (b)
拌	mix	b	h	1	22	014	phan
						3	phan (2a)
辨	distinguish	b	k	3	52	014	phien
						5	phian (b)

絆	trip over	b	h	1	22	0147a	phan
						4	pan
辯	debate	b	k	3	12	0	phie2n
						14	phien
						2	phian
							(b)
斷	break	d	h	1	22	14	ton
						4	ton (2a)
						25	ton (a)
						8	thuv (3)
誕	birthday	d	k	1	12	14	tan
篆	seal	dp	h	3	52	0	tsho2n
	characters					14	tsphon
						3	tshen
						5	tsphon
							(b)
賤	lowly	dz	k	3	52	0	tshie2n
						1346	tshien
						25	tshian
							(b)
						7a	tsien
踐	tread	dz	k	3	52	0146	tshien
						25	tshian
							(b)
撰	write	dzr	h	2	32	13	tshon
						0	tshon
							(2a)

						5	tshon (a)
饌	food/ delicacies	dzr	h	2	32	1	tshon
						5	tshon (b)
件	item	g	k	3	52	13469b	khien/ khian
	(clothes)					25	khian (b)
						9e	khien (b)
						9a	tsphien (b)
						9d	tsphiez (b)
						9c	khien (2a)
键	key	g	k	3	62	1469b	khien/ khian
						9a	tsphien (b)
						9d	tsphiez (b)
						9c	khien (2a)
缓	go slow	gr	h	1	22	0	fan (2a)
						14	fan

						2	fon (a)
限	limit	gr	k	2	42	01349b	han
						259e	han (b)
						9a	xan (b)
						9d	hav (b)
						9c	ha:n
							(2a)
善	good	zp	k	3	52	25	span (a)
						1	spen/
							span

3.2.14. The Rime Group WM (Xian).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
範	model	v	h	3	72	14	fam
						2	fam (a)
						5	fam (b)
范	surname	v	h	3	72	0146	fam
						2	fam (a)
						5	fam (b)
						9d	fav (b)
犯	violate	v	h	3	72	1469b	fam
						59a	fam (b)
						2	fam (a)
						9d	fav (b)
簟	fine woven	d	k	4	82	1	thiam
	grass mat					5	thiam
							(b)
淡	insipid	d	k	1	32	0136	tham

						2	tham (b)
漸	gradually	dz	k	3	52	014	tshiam
						2	tshiam
							(b)
儉	frugal	g	k	3	52	01469b	khiam
						4	khiav
						9e	khiav
							(b)
						2	khiam
							(b)
						9a	tspiem
							(b)
檻	door sill	gr	k	2	42	1	kam

3.2.15. The Rime Group NM (Shen).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
甚	very	zp	k	3	12	0	se3m
						6	se3m
							(2a)
						14	spim
						5	spim (b)

3.3. Tone 2a as a Modern Reflex of IIvo.

3.3.1. The Rime category NI (Zhi).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
柿	persimmon	dzr	k	2	32	14	sai
妓	prostitute	g	k	3	12	1	khi/ki
技	skill	g	k	3	12	145	khi
						6	khi (1a)
跪	kneel	g	k	3	12	014	khui

3.3.2. The Rime category WI (Xie).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
蘑	water chestnut	dz	k	4	52	1	tsi/tshi
						3	tshi (1b)
鱟	crab	gr	k	2	42	01234510ab	hai

3.3.3. The Rime category WU (Xiao).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
灝	vast (of water	gr	k	1	12	1	hau
昊	vast, clear summer sky	gr	k	1	12	1	hau

3.3.4. The Rime category NO (Yu).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
巨	gigantic	g	h	3	22	0124	ki
						1	khi (1a)
拒	reject	g	h	3	22	014	ki/khi
						2	khi (1a)
炬	torch	g	h	3	22	0	ki
						14	khi

距	distance	g	h	3	22	0	14
						14	khi
墅	villa	zp	h	3	22	14	spu

3.3.5. The Rime category WG (Jiang).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
棒	club(weapon)	b	k	2	12	14	phov

3.3.6. The Rime category YG (Dang).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
蕩	dissolute	d	k	1	21	14	thov
晃	sway	gr	h	1	12	0	fo2v
						12	fov
上	above	zp	k	2	22	14	hov

3.3.7. The Rime category XG (Geng).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
挺	straight/	d	k	4	42	0156	thin
	stiff					4	thin (1b)
艇	small boat	d	k	4	42	0	thin
						16	thiav
						4	thin (1b)

3.3.8. The Rime category NN (Zhen).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
盾	a shield	d	h	1	22	045	tun
						1	thun
菌	mushroom	g	h	3	42	014	khiun

3.3.9. The Rime category WM (Xian).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
諶	deep/clear	dp	k	2	32	1	tsham/tham

頷	chin	gr	k	1	12	12	ham/ngam

3.3.10. The Rime category NM (Shen).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
朕	I/we	dp	k	3	12	01	tsim
	(imperial use)					5	tspin(3a)

3.4. Tone 1a as a Modern Reflex of IIvs.

3.4.1. The Rime Group NI (Zhi).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
美	pretty	m	k	3	22	0123456	mui/mi
						9abc	
尾	tail	mv	h	2	42	012345	mui/mi
你	you	n	k	3	32	0	npi
						14567a	ni
						9abcde	
						12347a	ni (1b)
						3	hn (1b)
娌	husband's brother's wife	l	k	3	32	12	li
理	texture/ reason	l	k	3	32	012456	li
里	inside	l	k	3	32	012456	li
裏	inside	l	k	3	32	145	li
						5	li (1b) (col.)
鯉	carp	l	k	3	32	0123456	li
以	to use/ because	0	k	3	32	145	yi

3.4.2. The Rime Group WI (Xie).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
每	every	m	h	1	22	0123456	mi/mui
買	buy	m	k	2	24	0123456	mai
乃	be/so	n	k	1	12	012456	nai
						7ac	
奶	milk/breast	n	k	3	42	01246	nai
						3	len (2a)
						7b	ne2z (3a)
餒	hungry	n	h	2	22	1	nui
禮	etiquette	l	k	4	52	012345	li
						7a	ni

3.4.3. The Rime Group WU (Xiao).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
卯	5-7 a.m.	m	k	2	22	0123457a	mau
咬	bite	ng	k	2	22	0123458	ngau
鳥	bird					12457a	tiau

3.4.4. The Rime Group NU (Liu).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
某	a certain	m	k	1	12	0	me2u
						12456	meu
母	mother	m	k	1	12	124	mu
						7a	mu/muv
畝	1/6 acre	m	k	1	12	145	meu
						2	meu (3b)
藕	lotus root	ng	k	1	12	2	npiau
						9b	nge3u

						9c	ngo3y2
						7a	ngau/ngie3u
柳	willow	l	k	3	22	257a	liu
友	friend	j	k	3	22	14	ju
						2	zzu
有	have	j	k	3	22	013459bc	ju
						2	zzu
						8	ju2
						7a	je3u

3.4.5. The Rime Group NO (Yu).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
乳	milk/breast	np	h	3	32	69b	i
语	language	ng	h	3	22	01234569a	npi
						3	ngi
						9c	npy
						8	i
鲁	stew in soy	l	h	1	12	01235	lu
	sauce/gravy					7a	nu
李	surname	l	h	3	22	012345	li
						7a	ny
旅	travel	l	h	3	22	0345	li
						7a	ny
鲁	crass	l	h	1	12	01569c	lu
						9d	lu3
						7a	nu
掳	take captive	l	h	1	12	124	lu
橹	sculling oar	l	h	1	12	01256	lu

與	give/and	0	h	3	22	016	ji
						2	zzi2 (1b)

3.4.6. The Rime Group XO (Guo).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
我	I/me	ng	k	1	12	012459a	ngo
						9c	ngou
						7a	nga
						147a	ngai (1b)
							(col.)

3.4.7. The Rime Group WO (Jia).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
瑪	agate	m	k	2	12	14	ma
碼	yard	m	k	2	12	1467a	ma
						2	va
馬	horse	m	k	2	12	0123456	ma
						7ab9abcde	
惹	court/cause	np	k	3	12	013459ac7a	npia
						2	npia (3a)
雅	refined	ng	k	2	12	1245	nga
						0	nga (2a)
也	also	0	k	3	12	1457a	ja
						2	zza
野	the open	0	k	3	12	134567a	ja
						2	zza

3.4.8. The Rime Group NG (Tong).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
籠	cage/basket	l	h	2	22	124	luv

3.4.9. The Rime Group YG (Dang).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
仰	look up	ng	k	2	22	13	jov
						0	npio2v
						6	npiov
						9abd	ngio2v
兩	tael	l	k	3	22	01249abce	lio2v
						8	tio2v
						7a	nio2v
往	towards	j	h	3	22	0	vo2v
						124	vov
						5	wov
癢	itch	0	k	3	22	0	jo2v
						14	jov
						2	zzov
養	raise/ cultivate	0	k	3	22	0	jo2v
						145	jov
						2	zzov

3.4.10. The Rime Group XG (Geng).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
獰	violent	m	k	2	12	13469abce	mav
孟	vessel	m	k	3	12	14	men
冷	cold	l	k	2	12	0124567b	lav
						9abc	
						3	le2n
						8	lev
						7a	nav

鎖	collar/lead	l	k	3	32	0123456	liav
						9bce	
						7a	nav
嶺	mountain range	l	k	3	32	0123456	liav
						8	tiav
永	always	j	h	3	12	14	jun
						2	zzun

3.4.11. The Rime Group NN (Zhen).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
敏	sensitive	m	k	3	42	0	me2n
						1	men
忍	endure	np	k	3	42	01245	npjun
						9a	npin
						9b	npin
						3	ngun
						7a9b	npyn
允	permit	0	h	3	52	014	jun
引	lead/pull	0	k	3	42	14	jin
						2	zzin

3.4.12. The Rime Group WN (Shan).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
免	exempt	m	k	3	52	0	mie2n
						12345	mian/
							mien
勉	encourage	m	k	3	52	0	mie2n
						123457a	mian/

							mien
滿	full	m	h	1	22	012345	man
						7a	man/me3n
						8	mav
挽	pull	mv	h	3	62	14	van
晚	late	m	h	3	62	01259be	van
						9c	man
						9d	vuz
暖	warm	n	h	1	22	124569abc	non
						3	lo2n
						9d	nuz
軟	soft	np	h	3	52	124	npon
						3	npen
懶	lazy	l	k	1	12	027a	nan
						13459abce	lan
						3	lav

3.5. Tone 2a as a Modern Reflex of IIvs.

3.5.1. The Rime Group NI (Zhi).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
你	you	n	k	1	12	14	ni
耳	ear	np	k	3	32	013456	npi
						3	hn
蕊	stamen/ pistil	np	h	3	12	0126	lui
蟻	ant	ng	k	3	12	37b	ngei
						8	ne (3a)
壘	rampart	l	h	3	22	3	lei

李	plum/name	l	k	1	12	0123456	li
累	pile up/ implicate	l	h	3	12	01	lui
里	inside	l	k	3	32	13	li
裏	inside	l	k	3	32	013	li
偉	great	j	h	3	42	056	vi
						15	vui
葦	weed	j	h	3	42	05	vi
						25	vui
已	already	0	k	3	32	01	ji

3.5.2. The Rime Group WI (Xie).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
米	rice	m	k	4	52	0123457ab	mi
餓	hungry	n	h	2	22	14	nui
禮	etiquette	l	k	4	52	1368	li

3.5.3. The Rime Group WU (Xiao).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
渺	vague/remote	m	k	3	32	16	miau
	subtle/	m	k	3	32	1	miau
眇	minute					2	miau
秒	second	m	k	3	32	016	miau
惱	get mad	n	k	1	12	0146	nau
						25	no
腦	brain	n	k	1	12	01467a9ab	nau
						25	no
						9c	nou
						8	no2

						3	lau
鳥	bird					3	ngieu
						4	niau
擾	disturb	np	k	3	32	01	jiau
						3	lau
						4	jiau (1a)
繞	to wind	np	k	3	32	024	npiau
						1	jiau
了	particle (of completion)	l	k	4	42	01245	liau
						3	lieu
老	old	l	k	1	12	014	lau
						25	lo
						3	lou
						8	lo2
						7a	nau
						7b	lau (3)
釣	to scoop	0	k	3	32	01456	jiau
						2	zzau
						3	ieu

3.5.4. The Rime Group NU (Liu).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
某	a certain	m	k	1	12	9a	mey
						9b	mieu
						9d	ma4w
母	mother	m	k	1	12	019ab8	mu
						3	mou
畝	1/6 acre	m	k	1	12	0	me2u

						13	meu
扭	wring	n	k	3	22	01459ace	npiu
						2	neu
						3	ngiu (3b)
						9d	na4w
						7a	nie3u
						7b	lie3u
纽	button	n	k	3	22	0159ace	npiu
						2	neu
						9d	na4w
						7a	nie3u
钮	button	n	k	3	22	124	neu
						3	leu
						6	ngeu
偶	pair/image	ng	k	1	12	0	nge2u
						35	ngeu
						14	npieu
藕	lotus root	ng	k	1	12	0	nge2u
						14	npieu
						3	ngeu
						9a	ngo3y
						9d	nga4w
柳	willow	l	k	3	22	0134	liu
友	friend	j	k	3	22	01	jiu
						7ab	iu (3)
						3	iu (3)
有	have	j	k	3	22	9a	iu (3)

誘	lure	0	k	3	22	14	jiu
						5	jiu (3a)

3.5.5. The Rime Group NO (Yu).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
侮	insult	mv	h	3	22	14	vu
舞	dance	mv	h	3	12	01234569abe	vu
						9cd	mu
武	martial	mv	h	3	12	124569a	vu
						9c	mu
努	dilligent	n	h	1	12	14	nu
						02	nu (1b)
						5	nu (3a)
女	woman	n	h	3	22	0139abd	npi
						013567a	v
						3	hn
乳	milk/breast	np	h	3	32	49a	i
						9c	y
						3	zu (3)
						7a	nien (3)
						14	nen (3)
						25	nen (3a)
						3	zu (3)
五	five	ng	h	1	12	012456	v
						3	n
伍	five	ng	h	1	12	0124569abcd	v
						7a	
						3	n

						8	qv
語	language	ng	h	3	22	1	npi
						3	hn
						4	v
魯	crass	l	h	1	12	9ad	lu
午	noon	ng	h	1	12	012457a9abcd	v
						3	n
宇	universe	j	h	3	32	1	ji
						2	zzi2 (1b)
						5	ji (1a)
雨	rain	j	h	3	32	01458	ji
						2	zzi2
						3	zu/
							vu
羽	feather	j	h	3	32	1	ji
						2	zzi2
						15	ji (1a)

3.5.6. The Rime Group XO (Guo).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
我	I/me	ng	k	1	12	18	ngo
						3	ngou

3.5.7. The Rime Group WO (Jia).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
瓦	tile	ng	h	2	12	01347a9abe	nga
						1258	ngua
也	also	0	k	3	12	01	jia
						3	ia

野	the open	0	k	3	12	014	jia

3.5.8. The Rime Group NG (Tong).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
攏	reach/add up	1	h	1	12	013	luv
						2	luv (3b)
隴	short name for Gansu	1	h	3	32	01	luv
籠	cage/basket	1	h	2	22	124	luv
勇	brave	0	h	3	32	014	juv
						2	zzuv
						36	iuv
湧	gush/surge	0	h	3	32	14	juv
						3	zzuv
						6	iuv
甬	5 pecks	0	h	3	32	14	juv
						6	iuv

3.5.9. The Rime Group YG (Dang).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
莽	rude	m	k	1	12	1245	mav
蟒	python	m	k	1	12	124	mav
						5	mav (1a)
網	net	mv	h	3	22	07a	mio2v
						1245	miov
						3	miuv
						9abc	mov
噢	yell	np	k	3	22	0	jo2v
						14	jov

仰	look up	ng	k	2	22	1	jov
						34	ngiov
						4	niov
兩	two	l	k	3	22	123459abce	liov
						8	tiov
						7a	niov
癢	itch	0	k	3	22	1	jov
						3	iov

3.5.10. The Rime Group XG (Geng).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
永	always	j	h	3	12	014	jun

3.5.11. The Rime Group NN (Zhen).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
敏	sensitive	m	k	3	42	134	men
						5	mian
忍	endure	np	k	3	42	1	npiun
						3	ngun
						8	nev
引	lead/pull	0	k	3	42	01	jin
允	permit	0	h	3	52	145	jun
						2	zzun
尹	surname	0	h	3	52	01	jun
						2	zzin (3b)
						5	jun (1a)

3.5.12. The Rime Group WN (Shan).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
娩	give birth	m	k	3	52	1	men

挽	to pull/pluck	mv	h	3	62	4 01246	van (3) van
晚	late	m	h	3	62	19a 3	van man
輓	send funeral ode	mv	h	3	62	14	van
撰	drive out	n	k	4	72	14	lien
暖	warm	n	h	1	22	0 1	no2n non
軟	soft	np	h	3	52	0 1	npio2n npon
眼	eye	ng	k	2	42	06 1257a89abde 2 1	npian ngan ngian npen
卵	egg/ testicles	l	h	1	22	0123456 9abcde	lo2n
輦	emperor's carriage	l	k	3	52	0 14	npian lien
遠	far	j	h	3	62	0145 7a 2 7b	jan jen zzan jez
演	perform	0	k	3	52	0145 2	jan zzan (1b)

3.5.13. The Rime Group WM (Xian).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF

染	to dye	np	k	3	52	13	npiam
						9d	niez
						9b	ngiam
						25	npiam
							(3b)
						014	npiam (3)
攬	seize/ monopolize	l	k	1	22	12	lam
欖	olive	l	k	1	22	1	lam
覽	look over	l	k	1	22	14	lam
						3	lav

3.5.14. The Rime Group NM (Shen).

CH	GLOSS	IN	KH	GD	RM	DIAL	REF
荏	ripe grain	np	k	3	12	01	nem
						1	npyim
						0	ym
凜	cold/chilly	l	k	3	12	12356	lim

3.6. The Development of IIvo in Lufeng and Hailu.

3.6.1. The Rime Group NI (Zhi).

CH	GLOSS	Lufeng	Hailu
被	passive marker	-	phi 3b
仕	an official	si2 3b	-
士	scholar/ warrior	si2 3b	si2 3a
柿	persimmon	si2 3b	khi 3b
伎	cleverness		
跪	kneel	khui 3b	khui 3b
祀	offer sacrifice to	si2 3a	-
似	similar	si2 3b	si2 3a
屿	islet	si2 3b	-
市	market	si2 3a	si2 3a
是	to be, this	spi 3b	spi 3a

3.6.2. The Rime Group WI (Xie).

CH	GLOSS	Lufeng	Hailu
倍	times/-fold	phui 3a	phui 3a
罷	to finish	pha 3a	pha 3a
弟	younger brother	thi 3b	thi 3b
待	wait for	thoi 3b	thai 3b
怠	negligent	thai 3b	thai 2a
悌	love and respect to	thi 3b	-

	one's brother		
迨	almost	thai 3b	-
在	exist, be at	tshai 3a	tshai 3b
罪	crime	tshui 3b	tshui 3b
亥	9-11 p.m.	hoi 3b	hoi 3a
蟹	crab	hai 2a	hai 2a

3.6.3. The Rime Group WU (Xiao).

CH	GLOSS	Lufeng	Hailu
抱	hold in the arms	phau 3a	pau 1a
鮑	abalone	phau 3a	-
稻	rice (plant)	tho 3b	tho 1b
道	principle/ road	tho 3a	tho 3b
兆	omen/ trillion	spau 3a	-
肇	originate	spau 3b	-
趙	surname	tsphau 3b	tsphau 3b
皂	black	-	tsho 3a
造	make/build	tsho 3b	thso 3b
紹	connect/ introduce	spau 3a	spau 3a

3.6.4. The Rime Group NU (Liu).

CH	GLOSS	Lufeng	Hailu
婦	woman	fu 3a	fu 3a
負	to bear/lose	fu 3a	fu 3a
紑	name of an	tsphu 3a	-

	emperor		
咎	blame	kiu 3a	-
厚	thick	-	heu 3a
後	behind/ after	heu 3b	heu 3a
受	receive	spiu 3b	spiu 3b

3.6.5. The Rime Group NO (Yu).

CH	GLOSS	Lufeng	Hailu
部	section	phu 1a	phu 3a
父	father	fu 3a	fu 3a
腐	decayed	fu 3b	fu 3b
柱	fabricate	thu 3b	thu 3a
聚	gather	tshi 3b	tshi 3a
巨	gigantic	ki 3a	khi 2a
戶	door	fu 3a	fu 3a
敘	narrate	si2 3a	si 3a
緒	clues	si2 3a	si 3a
序	preface	tshi2 3a	si 3a
豎	vertical		

3.6.6. The Rime Group XO (Guo).

CH	GLOSS	Lufeng	Hailu
舵	rudder/helm	tho 3b	tho 1b
坐	sit	tsho 3b tsho 1a	tsho 1a
禍	calamity	fo 3a	fo 3a

3.6.7. The Rime Group WO (Jia).

CH	GLOSS	Lufeng	Hailu

夏	summer/name	ha 3b	ha 3a
廈	house	ha 3b	-
社	club	spa 3a	spa 3b

3.6.8. The Rime Group NG (Tong).

CH	GLOSS	Lufeng	Hailu
奉	offer, receive	fuv 3b	fuv 3a
動	move	thuv 3b	thuv 3b
重	heavy	tsphuv 3a	tsphuv 3a

3.6.9. The Rime Group WG (Jiang).

CH	GLOSS	Lufeng	Hailu
項	item	hov 3b	-
棒	club(weapon)	-	phuv 3b

3.6.10. The Rime Group YG (Dang).

CH	GLOSS	Lufeng	Hailu
盪	agitate	thov 3b	-
蕩	dissolute	thov 3b	-
丈	ten feet	tsphov 3b	tsphov 3b
仗	battle	tspov 3a	tspov 3a
杖	cane	tsphov 3b	tsphov 2a
像	resemble	-	tshiov 3a
	image	siov 3a	siov 3a
象	elephant	siov 3b	siov 3a
上	above	-	spov 3b

3.6.11. The Rime Group XG (Geng).

CH	GLOSS	Lufeng	Hailu
錠	ingot	thin 3b	-

靜	quiet	tshin 3b	tshin 3a
倖	lucky	hen 3b	-
幸	fortunate	hen 3b	hen 3a
杏	apricot	hen 3b	hen 3a

3.6.12. The Rime Group NN (Zhen).

CH	GLOSS	Lufeng	Hailu
憤	indignant	-	fun 3a
盡	exhaust	tshin 3b	tshin 3a
近	near/close	khiun 3b	khiun 3b
混	confused	fun 2a	fun 3a
腎	kidney	spin 3a	-

3.6.13. The Rime Group WN (Shan).

CH	GLOSS	Lufeng	Hailu
伴	companion	phan 3a	phan 1a
辨	distinguish	phian 3b	-
辯	debate	-	phian 3b
斷	break	ton 3a	ton 3a
篆	seal characters	tsphon 3b	-
賤	lowly	tshian 3b	tshian 3b
踐	tread	tshian 3b	tshian 3b
撰	write	tshon 3a	-
饌	food/ delicacies	tshon 3b	-
件	item (clothes)	khian 3b	khian 3b
善	good	span 3a	span 3a

緩	go slow	-	fan 3a
限	limit	han 3b	han 3b

3.6.14. The Rime Group WM (Xian).

CH	GLOSS	Lufeng	Hailu
範	model	fam 3b	fam 3a
范	surname	fam 3b	fam 3a
犯	violate	fam 3b	fam 3a
簟	fine woven grass mat	thiam 3b	-
淡	insipid	-	tham 3b
漸	gradually	-	tshiam 3b
儉	frugal	-	khiam 3b

3.6.15. The Rime Group NM (Shen).

CH	GLOSS	Lufeng	Hailu
甚	very	spim 3b	-

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JAOL Journal of American Oriental Society

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