

PHONOLOGICAL ASPECTS OF CHINESE DIALECTOLOGY

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In this article I survey the phonological characteristics of Chinese dialects, with emphasis on the interrelations among the initials, medials, vowels, endings, and tones. There are eight major types of Chinese dialects: Mandarin (Peking, Chinan, T'aiyüan, Hankow, Ch'engtu, Yangchow), Hsiang (Ch'angsha), Ch'u (Shuang-feng), Wu (Soochow, Wenchow), Kan (Linch'uan, Nanch'ang), Hakka (Meihsien), Yüeh (Canton), and Min (Foochow, Amoy, Ch'aochow). As representatives of these types I have selected those dialects which have been most adequately recorded and studied; in laying the foundation of historical-comparative studies, sketchy, fragmentary material should be avoided wherever possible. In conclusion, I offer a projected common phonological system for all Chinese dialects. (Detailed discussions on the stages through which various types of modern dialects have developed from this projected common system will be presented in following articles.) In citing examples, I have attempted to extract from narrow phonetic transcriptions the phonologically relevant elements, and have given these in the more commonly used phonetic symbols. Dialect data are from *Han-yü fang-yin tzu-hui* (Peking University, 1962), unless otherwise indicated.

1. Introduction

A Chinese syllable may consist of a maximum of five parts: initial, medial, vowel, ending, and tone. These five units which we use to describe Chinese dialects are intricately related to each other; it would be extremely difficult to discuss any one in isolation. The initial is the first of the sequence of phonological units making up the syllable. Except for the zero initial, this is a consonant. (The term 'zero initial' as sometimes applied to an initial glottal stop is a misnomer, since the glottal stop may contrast with a true zero, as in the case of *?jwɛn and *jwɛn in reconstructed Ancient Chinese.) The medial is either a front unrounded glide j, a back rounded glide w, or a front rounded glide y or jw. The medials are optional in a syllable: some syllables have medials, others do not. Vowels (including diphthongs) or voiced continuants (syllabic m, n, ŋ, l, and v) constitute the nuclei of syllables. A syllabic voiced continuant, in most cases, occurs by itself, without initials, medials, or endings. Like the medial, the ending—a stop or nasal following the vowel—is optional. Tones are the pitch contours extending over the voiced portion of a syllable. In normal, stressed position, each syllable must have a tone. Tones, along with nuclei, are the essential parts of a syllable in Chinese: even the syllabic continuants are marked by tones. There

are two other terms—final and rime—which I will use frequently in the following discussions. The final is the syllable minus the initial. A final may consist of tone plus (1) medial-vowel-ending, (2) vowel-ending, (3) vowel, or (4) syllabic voiced continuant. Syllables which have different initials and medials may belong to the same rime category, and be used as rime words in poetry.

2. Tones

The essential features of tone are two: height (pitch) and length. If a tone is long, its height may be maintained at a certain level, or it may change its course by rising or falling. We may conveniently divide each such tone into three sections; through different combinations, such as high-high-high, high-mid-low, high-mid-high, and so forth, different tones are formed. There are also short tones, which do not exemplify so many variations. These short tones usually accompany syllables with a stop ending, or a glottal stricture.

Chart 1 shows the corresponding tonal categories of fifteen Chinese dialects. A, B, C, D represent the four traditional categories which have been recognized by Chinese scholars since the fourth or fifth century A. D.; the distinctions were probably in the language long before that. The D tone category consists of those words which originally had stop endings. These endings, though lost in some dialects, are preserved in others.

Chart 1.
Tonal categories.

	A1	A2	B1	B2	C1	C2	D1	D2
1. Amoy	55	24	51	33	11	33	32	5
2. Ch'aochow	33	55	52	35	12	11	1	5
3. Foochow	44	53	31	242	213	242	23	4
4. Canton	55, 53	11	35, 13	13	33	22	55, 33	22
5. Meihsien	44	11	31, 44	42	42	42	2	4
6. Linch'uan	31	24	45	12	41	12	32	4
7. Nanch'ang	42	24, 55	213	31	55	31	5	5
8. Ch'angsha	33	13	41	21	55	21	24	24
9. Shuangfeng	55	23	21	33	35	33	23, 35	23, 35
10. Wenchow	44	31	54, 24	24	42	11	23	12
11. Soochow	44	24	41, 331	331	513	331	4	23
12. Yangchow	31	34	434	45	45	45	5	5
13. T'aiyüan	11	11	53	55	55	55	2	54
14. Ch'engtu	44	31	53	13	13	13	31	31
15. Peking	55	35	214	51	51	51	55, 35, 214, 51	35, 51

Subcategories 1 and 2 represent the split of one tone into two, depending on the presence or absence of voicing in the initials. Originally, the words in sub-

categories A1, B1, C1, and D1 all had voiceless initials; the words in subcategories A2, B2, C2, and D2 had voiced initials. We might expect subcategories A1, B1, C1, and D1 to have a phonetically higher register than the subcategories here labelled A2, B2, C2, and D2. But, in fact, this is not universally true. So, in the Min dialect of Ch'aochow, A1 (33) is lower than A2 (55).

The distinction between voiceless initials and voiced initials can still be observed in some dialects. For instance, in the Wu dialects of Soochow and Wenchow, and the Ch'u dialect of Shuangfeng, we find that the words with voiceless initials have tonal categories A1, B1, C1, D1, while those with voiced initials have tonal categories A2, B2, C2, D2 (cf. Chart 2).

Chart 2.

Voicing and the tonal split.

	低	抵	帝	滴
Soochow	˩ti (A1)	˩ti (B1)	ti˥ (C1)	tiə˥, (D1)
Wenchow	˩tei (A1)	˩tei (B1)	tei˥ (C1)	tei, (D1)
Shuangfeng	˩ti (A1)	˩ti (B1)	ti˥ (C1)	˩ti (D1=A2)
	堤	弟	地	敵
Soochow	˩di (A2)	di˥ (B2=C2)	di˥ (C2)	diə˥, (D2)
Wenchow	˩dei (A2)	˩dei (B2)	dei˥ (C2)	d(e)i˥ (D2)
Shuangfeng	˩di (A2)	di˥ (B2=C2)	di˥ (C2)	˩thi (D2=A2)

The contrasting voiceless and voiced initial stops and affricates exercise different influences on the tonal development. The continuants (nasals, lateral, voiced fricatives, semivowels) without voiceless counterparts behave sometimes like voiceless stops and affricates, sometimes like voiced stops and affricates. Among the words with A tones, these initials behave like the original voiced initial stops and affricates; they, therefore, develop into members of the A2 category. Exceptions to this general statement are very few. In the Kan dialect of Nanch'ang, however, these words are pronounced with tone 55 (C1):

牙 ɲa⁵⁵, 魚 ɲie⁵⁵, 麻 ma⁵⁵, 犁 li⁵⁵, 扶 fu⁵⁵, 帆 fuan⁵⁵,
 熊 ɕiuŋ⁵⁵, 王 woŋ⁵⁵, 羊 joŋ⁵⁵, 文 un⁵⁵, 雲 yn⁵⁵.

In most dialects, words with continuant initials with the B tone joined the words with the original initial voiceless stops and affricates; in the subsequent tonal split, they therefore became members of the B1 category. In the Hakka dialect of Meihsien, a southern dialect with a northern origin, these words are pronounced either with A1 or with B1 tones (cf. Chart 3), a phenomenon for which I have no explanation.

In the Min dialect of Ch'aochow, which has had constant contact with the Hakka as well as the Yüeh dialects, words with the nasal initials appear in both

series of these four tones, although the words with the second series are more numerous than those with the first series.

In the majority of Chinese dialects, B2 and C2 are pronounced identically. This merging is reported to have taken place as early as the ninth century A. D. in some of the dialects spoken in the area of Shensi and Honan. In the dialects of Ch'aochow, Canton, and Wenchow, B2 and C2 are still distinguished. The correspondences, however, are not always regular (cf. Chart 4). These irregularities are probably due to dialect mixture.

Chart 3.

The development of the B tone in the Meihsien dialect.

Meihsien A1	Meihsien B1
Canton and Wenchow B2	Canton and Wenchow B2
買尾免	米畝網
唆	女腦惱
	偶眼
禮里理鯉魯櫓	李裏了卵攏隴
滿旅呂隴領嶺	
軌惹忍	擾
養痒	管引
有	友遠偉葦

Chart 4.

The tones B2 and C2 in the dialects of Canton, Wenchow, and Ch'aochow.

B2: B2: B2	C2: B2: B2	C2: C2: B2	C2: C2: C2	C2: B2: C2
	惰弟杜待道稻	大第怠兌導盜	地度渡鍍袋隊	
	淡斷	佃鈍遁鄧	掉調豆殿段緞	
			定洞	
舅近	枝妓互跪儉件	忌健倦競	櫃轎舊共	
婦倍抱	奉並罷部薄父	敝弊罷備暴	鼻避步腐稗	
	負被伴辨辯	(方)便鳳	敗辦飯份病	
似儘	象橡靜坐祀聚	自袖暫漸藏	座邪宇寺賤在	
	序罪息造盡	淨		
(上)下厚旱	項下(山)戶后	械系护互壞	夏話賀害號效	
		匯會惠慧校	候汗陷餽縣	
		限患宦恨混	巷	
乃		糯膩耐奈內念	怒鬧難	累(被)
呂旅老		厲勵麗隸利	例露類料漏	
		痢吏慮瀆賴淚	爛練另	
		濫亂論浪亮量		
		諒令弄		
		義議遇寓僞魏	餓藝碍外驗	
		傲岸雁願硬	硯	

Chart 4. (cont.)

B2: B2: B2	C2: B2: B2	C2: C2: B2	C2: C2: C2
		暮慕墓務邁冒	罵霧賣妹昧
		貌茂漫幔蔓孟	未味廟慢面
			萬問夢命
		易異譽預裕	柚樣用
		喻銳孕恙	
雨有		衛胃謂蝟又右	位韻運
		祐旺	
社腎市上 ^(山)	是豎善甚	紹順尙盛	射示視樹壽
			授剩
	重兆篆丈杖仗	住撞仲	治傳 ^(肥) 陣
	士柿	助狀	事
		忍閏潤	二認讓

Words which originally had the stop endings p, t, k, now form a special class marked by the occurrence of the D tone. The treatment of this class of words varies in the modern dialects: (1) The p, t, k endings are still preserved in the Yüeh dialect of Canton and in the Hakka dialect of Meihsien. (2) Simplified, these endings merge in a glottal stop in the Mandarin dialect of T'aiyüan, in the Wu dialect of Soochow, and in the Min dialect of Foochow. (3) As a result of dialect mixture, there are four stop endings (p, t, k, ?) in the Min dialect of Amoy. (4) In the Kan dialect of Nanch'ang, while final k remains, the endings p and t have merged into one (t). (5) All three stop endings have disappeared, leaving only a trace of glottal stricture in the Wu dialect of Wenchow. (6) Though there is no trace of stop endings nor any glottal stricture, the words of this class remain a distinct entity in the Mandarin dialect of Ch'engtu and in the Ch'u dialect of Shuangfeng. (It is merely a chance coincidence that, for example, in the Ch'engtu dialect, D is phonetically the same as A2, and that in the Shuangfeng dialect D is sometimes phonetically the same as A2, and sometimes the same as C1.) (7) There is no trace of stop endings or glottal stricture, and the words of this class are dispersed among the words of other tonal categories. The Mandarin dialects of Peking and many other places represent this type of dialect.

In the Canton dialect, the words with D tone can be accompanied by one of three tones: 55, 33, and 22. Generally speaking, the first two, which are varieties of the D1 category, are conditioned by the length of the vowels: tone 55 occurs with short vowels, tone 33 with long vowels. (The phonetic differences in vowel length present in the Canton dialect contrast and are phonologically significant only in the case of short a as opposed to long a.) There are, however, eight sets of examples which demonstrate a threeway contrast (cf. Chart 5).

The distribution in tonal categories of certain finals in the Min dialect of Foochow is a phenomenon unique among Chinese dialects. The seven tones of

Foochow can be divided into two categories: A1 (44), A2 (52), B1 (31), and D2 (4) form one category, which can be described phonetically as high; C1 (213), B2 and C2 (242), and D1 (23) form another group which can be described as low. The nature of the initials obviously plays no part in this division. There is tone sandhi in this dialect, and the same word may have two alternate pronunciations,

Chart 5.

The D tone in the Canton dialect.

[Information from Huang Hsi-ling (Wong Sik-ling), *Yüeh-yin yün-hui* (1941). Parentheses indicate noncontrastive length.]

	55		33		22	
ik	即 織	tsik	脊 熨	tsik	籍 直	tsik
	昔	sik	錫	sik	食	sik
i(:)t	必	pit	鼈	pit	別	pit
i(:)p			劫	kip	狹	kip
uk	竹	tsuk	捉	tsuk	逐	tsuk
u(:)t			鉢	put	陟	put
y(:)t			乙	yt	月	yt
e(:)k			錫	sek	石	sek
œ(:)k			約	joek	若	joek
œt	率	sœt			術	sœt
o(:)k	剝	pok	博	pok	薄	pok
	剝	mok	模	mok	莫	mok
o(:)t			割	kot		
ak	得	tak			特	tak
at	失	sat			實	sat
ap	急	kap	鴿	kap	及	khap
ark	壓	mark	摩	mark	麥	mak
art			抹	mart	襪	mat
arp			答	ta:p	踏	ta:p

Chart 6.

Alternations of tone and finals in the Foochow dialect.

	High Tones			Low Tones		
	A1 (44); A2 (52); B1 (31); D2 (4)			C1 (213); B2=C2 (242); D1 (23)		
	e			a		
i	iŋ	iʔ		ei	eiŋ	eiʔ
	eiŋ	eiʔ			aiŋ	aiʔ
u	uŋ	uʔ		ou	øyŋ	ouʔ
	ouŋ	ouʔ			auŋ	auʔ
y	yŋ	yʔ		øy	øyŋ	øyʔ
	øyŋ	øyʔ			ayŋ	ayʔ

varying in both tone and segmental makeup, depending on the tonal categories with which it appears in context. For instance, 智 *tei* (C1) becomes *ti* (A2) in the compound 智慧 *ti* (A2) *ie* (C2). Chart 6 shows the finals in the Foochow dialect which participate in this alternation. (Tone sandhi does not affect the segmental makeup of the finals *ie*, *ieŋ*, *ieʔ*, *uei*, *eu*, *ieu*, *ai*, *uai*, *au*, *iau*, *aŋ*, *aʔ*, *ua*, *uaŋ*, *uaʔ*, *ia*, *iaŋ*, *iaʔ*, *o*, *uo*, *uoŋ*, *uoʔ*, *yo*, *yoŋ*, *yoʔ*, \emptyset .)

3. Initials

The role played by voicing divides Chinese dialects into two types. In the first type, voicing plays an important part: voiceless and voiced initials (stops, affricates, fricatives) contrast. In the second type, the element of voicing is predictable: stops, affricates, and fricatives are always voiceless; the nasals, semi-vowels, and *l* are always voiced. Phonetically, in the dialects of the second type, voiced fricatives (*ʒ* in the dialects of Peking, Chinan, Si-an, Ch'angsha, and *z* in the dialects of T'aiyüan, Ch'engt'u) and the voiced affricate (*dz* in the Amoy dialect) form a contrastive pair with their voiceless counterparts. Nevertheless, in the total phonological structure, the voiced members belong to the same group as the nasals, lateral, and semivowels.

Those dialects which do not distinguish between voiced and voiceless initial stops and affricates can be further divided into three varieties: the dialects which have more unaspirated initials, such as the Min dialects of Foochow and Amoy and the Hsiang dialect of Ch'angsha; those which have more aspirated initials, such as the Hakka dialect of Meihsien and the Kan dialect of Nanch'ang; and those which have approximately equal numbers of unaspirated and aspirated initials, such as the Mandarin dialects of Yangchow and Peking and the Yüeh dialect of Canton. The historical explanation for this phenomenon is that, while

Chart 7.

The development of **d* in modern dialects.

	帝	替	遞
Soochow	ti ²	thi ²	di ²
Wenchow	tei ²	thei ²	dei ²
Shuangfeng	ti ²	thi ²	di ²
Yangchow	ti ²	thi ²	ti ²
Ch'angsha	ti ²	thi ²	ti ²
Canton	tai ²	thai ²	tai ²
Foochow	ta ²	tha ²	ta ²
Amoy	te ²	the ² (L),* thue ² (C), thi ² (L)	te ²
Meihsien	ti ²	thi ²	thi ²
Nanch'ang	ti ²	ˊthi	ˊthi

* L=literary; C=colloquial

the original voiceless unaspirated and aspirated initials remain unchanged, in the Foochow, Amoy, and Ch'angsha dialects the original voiced stops and affricates became unaspirated stops and affricates; in the Meihsien and Nanch'ang dialects, they became aspirated stops and affricates; in the Yangchow, Peking, and Canton dialects they became partly aspirated and partly unaspirated stops and affricates (cf. Chart 7).

Classification by point of articulation yields three sets of initials for all dialects: dentals, velars, and labials. Retroflexives and palatals are present only in some dialects. Charts 8-11 and 13 give illustrative inventories of these initials.

Chart 8.
Dental initials.

Soochow	t	th	d	n	l	ts	tsh	(dz)	s	ʒ
Wenchow	t	th	d	n	l	ts	tsh	dz	s	z
Shuangfeng	t	th	d	n		ts	tsh	dz	s	(z)
Yangchow	t	th		n	l	ts	tsh		s	
Ch'angsha	t	th		n	(l)	ts	tsh		s	
Canton	t	th		n	l	ts	tsh		s	
Foochow	t	th		n	l	ts	tsh		s	
Amoy	t	th		d/n	l	ts	tsh		s	
Meihsien	t	th		n	l	ts	tsh		s	
Nanch'ang	t	th			l	ts	tsh		s	

The distinction between the initials n and l is strictly observed in the area comprising Hopei, Liaoning, Chilin, Heilungchiang, Inner Mongolia, Shantung, Honan, and Shansi. Elsewhere in China, n and l very often merge into one category. The phonetic realization may be n or l, or n and l, conditioned by different phonological environments.

Some dialects have, in addition to the dentals, a set of retroflexives. For instance:

Chart 9.
Retroflexive initials.

Peking	tʂ	tʂh	ʂ	
Chinan	tʂ	tʂh	ʂ	
Si-an	tʂ	tʂh	ʂ	
Ch'angsha	tʂ	tʂh	ʂ	
Shuangfeng	tʂ	tʂh	ʂ	dz

The Mandarin dialect of Si-an has another set of initials, pf, pfh, and h, which alternates with the retroflexives when there is a following u vowel or w glide.

Chart 10.

Retroflexive variants in the Si-an dialect.

	知	猪	池	除	世	樹
Si-an	ɛtʂu	ɛpfu	ɛtʂhu	ɛpfhu	ʂu²	fu²
Peking	ɛtʂu	ɛtʂu	ɛtʂhu	ɛtʂhu	ʂu²	ʂu²
Chinan	ɛtʂu	ɛtʂu	ɛtʂhu	ɛtʂhu	ʂu²	ʂu²
Ch'angsha	ɛtʂu	ɛtʂy	ɛtʂu	ɛtʂy	ʂu²	ʂy² (L), ʂy² (C)
Shuangfeng	ɛtʂu	ɛty	ɛdzu	ɛdy	ʂu²	hy²

As a result of this development, the initials ʂ and f merge into one category before the vowel u and the glide -w-. Thus, in the Si-an dialect, 樹, 富, and 婦 are all pronounced fu²; both 水 and 匪 are pronounced ʂei. The same phenomenon is reported for some other districts of Shenshi, in southern and southwestern Shantung, northwestern Kiangsu, eastern Honan, and some districts in Anhwei and Hunan.

Chart 11.

Velar initials.

Soochow	k	kh	g	ŋ	h	h	0
Wenchow	k	kh	g	ŋ	h	h	0
Shuangfeng	k	kh	g	ŋ	h	h	0
Yangchow	k	kh			h		0
Ch'angsha	k	kh		ŋ	h		0
Canton	k	kh		ŋ	h		0
Foochow	k	kh		ŋ	h		0
Amoy	k	kh		g/ŋ	h		0
Meih sien	k	kh		ŋ	h		0
Nanch'ang	k	kh		ŋ	h		0

Many dialects do not have the initial velar nasal ŋ. In the Canton dialect, ŋ cannot be followed by i, u, or y. Finals with the vowels i and y are always preceded by the semivowel j; finals with the vowel u are always preceded by the semivowel w. Before other vowels, the velar nasal and zero initial are in complementary distribution: the zero initial occurs in syllables with A1, B1, C1, and D1; the velar nasal occurs in syllables with A2, B2, C2, and D2. There are very few exceptions to this rule: three exclamations or interjections, ei², e², ɛo, and ɛŋəu 'hook; to hook up' (in the colloquial pronunciation; ɛkəu is the standard pronunciation). In the Nanch'ang dialect, the initial velar nasal has some of the same restrictions as in the Canton dialect, in that it is incompatible with the vowels i, u, y, and their corresponding medial glides. In the Nanch'ang dialect, however, ŋ occurs initially in syllables with the tones of both odd and even series.

Palatalization affects both velars and dental affricates and fricatives. This takes place before the front vowels or their corresponding medial glides. In some

dialects, there is complete compatibility between the velars and dental affricates and fricatives and the front vowels or their corresponding medial glides. In the dialects of Amoy, Ch'aochow, Foochow, Canton, and Meih sien, for instance, both the velars and the dental affricates and fricative can be followed by the front vowel *i*. (In the Canton dialect, *i* and *ei* are variants of the same final, with *i* occurring after *ts*, *tsh*, *s*, *j*, and *ei* after other initials.) In the Wenchow dialect, the dental affricates and fricatives do not occur before the vowels *i* and *y* and their corresponding medial glides. Though velar initials are generally palatalized before the vowels *i* and *y*, a combination of velar initial and front vowel *i* is still found in the colloquial pronunciation of some words. The combination of velar initials and the vowel *y* appears only in the spoken language of the city of Wenchow. Among the city dwellers of Wenchow, the dental affricates and fricative, and the velars, may all be followed by the sequence *ie*. In the Shuangfeng dialect, there are only palatal initials (*tš*, *tšh*, *dž*, *š*, *ň*) before the simple vowels *i* and *y*; velars, however, occur before the sequences *ie*, *iə*, *io*. The initial *h* seems to have no distributional restrictions. In the Shuangfeng dialect, there is a combination of dental *ts* and final *iə*. In the Soochow dialect, the dental affricates and fricative contrast with the palatal affricates and fricative before the vowel *i* and the sequences *iə*, *ia*; no velar initials occur before the vowels *i* and *y* or the sequences *iə*, *ia*, *io*, *ɨ*. In the Ch'angsha dialect, according to the materials in the *Han-yü Fang-yin Tzu-huei* (Peking, 1962), there are two sets of affricates and fricatives (dental and palatal) before the finals *i*, *ie*, *ieu*, and *iau*. In the Linch'uan dialect, before the vowel *i*, there are both dental and palatal affricates and fricatives; before finals with the medials *i* and *y*, only the palatal affricates and fricative can be used. In the dialects of Nanch'ang, Yangchow, T'aiyüan, and Peking, the appearance of the palatal initial affricates and fricative is conditioned by the presence of a following front *i* or *y*, or their corresponding medial glides.

In 1955, in a large-scale investigation of the palatalization of the dental affricates and fricative before *i* and *y* and their corresponding medial glides, the Institute of Linguistics sent out questionnaires to local informants throughout the Mandarin-speaking area of China. The number of places reporting palatalized as opposed to unpalatalized varieties is shown in Chart 12.

Of seventy-two Hunan dialects (some of which belong to the Hsiang group, some to the Ch'u group), Yang Shih-feng (*Bulletin of the Institute of History and Philology, Academia Sinica* 29: 31-57 [1957]) found fifty-five where dental affricates and fricatives were palatalized, and seventeen where these initials remained unpalatalized. Of the thirty-three Wu dialects surveyed by Y. R. Chao (*Hsien-tai Wu-yü Yen-chiu* [Peking, 1928]), there were eleven where the dental affricates and fricatives were palatalized, eighteen where they remained unchanged, and four where they were sometimes palatalized and sometimes not.

Chart 12.

Palatalization in Chinese dialects.

[Information from *Fang-yen ho p'u-t'ung-hua ts'ung-k'an* 1.142 (1958)]

	number of places		number of places	
	palatalized ts, etc.	93	unpalatalized ts, etc.	50
Hopei				
Liaoning		44		1
Chilin		37		1
Heilungchiang		52		0
Inner Mongolia		31		0
Shantung		59		6%
Honan		51		58
Shansi		85		4
Shensi		50		33
Kansu		64		11
Ch'inghai		13		0
Szuch'uan		147		6
Yunnan		74		6
Kweichow		57		1
Hupei		67		4
Anhwei		51		0
Kiangsu		41		3
Kwangsi		4		21

Chart 13.

Labial initials.

Soochow	p	ph	b	m	f	v
Wenchow	p	ph	b	m	f	v
Shuangfeng	p	ph	b	m		
Yangchow	p	ph		m	f	
Ch'angsha	p	ph		m	f	
Canton	p	ph		m	f	
Foochow	p	ph		m		
Amoy	p	ph		b/m		
Meih sien	p	ph		m	f	
Nanch'ang	p	ph		m	f	

While the confusion of ɕ and f before u or a w -glide seems to be limited to the North, the confusion of f and h before u or a w -glide is a major phenomenon of the South (cf. Chart 14). These two processes are thus mutually exclusive. (The Hopei 'flipflop' of f and h before u and the w -glide is quite another matter. Thus, in the third subdistrict of Ch'inglung, some of the words which have initial h in Standard Mandarin are pronounced with an initial f , while other words, which in Standard Mandarin have initial f , are pronounced with initial h .)

Chart 14.

The confusion of f and h initials.

	夫	呼	逢	紅	防	皇
Canton	ɛfu	ɛfu	ɛfuj	ɛhuj	ɛfoŋ	ɛwoŋ
Ch'engtū	ɛfu	ɛfu	ɛfoŋ	ɛhoŋ	ɛfaŋ	ɛhuaŋ
Ch'angsha	ɛfu	ɛfu	ɛhoŋ	ɛhoŋ	ɛfaŋ	ɛfaŋ
Wenchow	ɛfu	ɛfu	ɛhoŋ	ɛhoŋ	ɛhuo	ɛhuo
Shuangfeng	ɛhəu	ɛhəu	ɛhaŋ, ɛhən	ɛhaŋ, ɛhən	ɛhaŋ	ɛhaŋ
Foochow	ɛhu	ɛhu	ɛhuj	ɛhuj (L), ɛøyŋ (C)	ɛhuoŋ	ɛhuoŋ
Amoy	ɛhu	ɛhu (L), ɛho (L), ɛkho (C)	ɛhoŋ	ɛhoŋ (L), ɛaŋ (C)	ɛhoŋ	ɛhoŋ
Meih sien	ɛfu	ɛfu	ɛfuj	ɛfuj	ɛfoŋ	ɛfoŋ
Nanch'ang	ɛfu	ɛfu	fuj ^ʔ	fuj ^ʔ	fuoj ^ʔ	fuoj ^ʔ

In the Hakka dialect of Meih sien, there is strong initial friction (transcribed as v) if a syllable begins with u or a w-glide. A diphthong ui may assume either of two forms, vi or vui. A similar phenomenon is found in the Mandarin dialect of T'aiyüan. This seeming coincidence is, rather, an indication of the northern origin of the Hakka dialect. Historical accounts relate that the Hakka people migrated originally from the regions of Ping, Szu, and Yü (now Shansi and Honan). The Si-an dialect shows the following contrasts: vo : uo, vu : u, vei : uei, vā : uā, van : uan, von : uon. In the Mandarin dialect of Ch'engtū, the simple vowel u used alone always has a strong initial friction, and is transcribed vu. (Phonologically, there is no initial v in the Ch'engtū dialect.)

4. Medials

Medials are the semivowels which occur between the initials and the vowels. Some Chinese dialects do not have medials. In the Canton dialect, for instance, there are no medial -j- or -y- glides. It is most convenient to treat the only medial glide, -w-, as part of the initial: there are then two types of velar initials, plain and labialized. If, however, we widen our scope and compare the Canton dialect with other dialects, we are led to regard some of the simple vowels of the Canton dialect as representations of underlying sequences composed of vowel plus medial

Chart 15.

The development of medials in the Canton dialect.

iw : *jaw	in : *jan	it : *jat	uj : *woj	un : *won	ut : *wot
	im : *jam	ip : *jap			
			y : *ju	yn : *jun	yt : *jut
e : *ja	ej : *janj	ek : *jak	ø : *jo	øj : *joj	øk : *jok

(cf. Chart 15). The same restriction on medials is not, however, characteristic of all Yüeh dialects. In *Szeyap data for a first approximation of Proto-Cantonese* (Cornell Ph. D. diss., 1966), John McCoy has recorded a variety of medial developments (cf. Chart 16).

Chart 16.

The development of medials in the Yüeh dialects.

橋	見	結	劍	接
khiu	kin	kit	kim	tsip, tip
khiau	kien	kiet	kiem	tiep
kheu	ken	ket	kem	tep
khei	kek			
灰	官	活	書	雪
fui	kun	ut	sy	syt
foi	kon	uot	syu	syat
fei	ken	uet	si	sit, lhit
fuai			ši	sut, lhut lhiet

In the Canton dialect, the -j- glide is one of two forces to cause fronting of the following vowel; the other is the influence of the initials. In the Canton dialect, the initials can be divided into two groups. The first group, consisting of nonlabialized consonants—ts, tsh, s, t, th, n, l, k, kh, and h—functions in the same way as the semivowel medial -j-, in that its members may be followed by finals with the front vowels y and ø. The second group, consisting of labials and labialized velars (p, ph, m, f, kw, khw), functioning in the same way as the semivowel medial -w-, may be followed by finals with the back vowel u. This distribution is summarized in Chart 17.

In the Min dialect of Amoy, many words have two or more pronunciations, the literary or reading pronunciation and the colloquial or speaking pronunciation. The former represents the phonological system of a dialect of foreign origin (possibly a Mandarin dialect); the latter represents the phonological system of the local dialect. The literary or reading pronunciation is acquired through the educational process; the colloquial or speaking pronunciation is always associated with commonly used words. When two or more pronunciations are recorded side by side, their stylistic differences can be easily identified. Words with only one pronunciation should also be identified stylistically. A word which is used only in daily conversation may have the colloquial pronunciation, while a word which is used only in classical texts may have the literary pronunciation. In many cases, it is the presence or absence of medial glides which marks one or the other of the two pronunciations. Some words show variations between i (colloquial) and u (literary),

Chart 17.

The distribution of finals with ϕ , y, u in relation to initials in the Canton dialect.
 [Information from Huang Hsi-ling (Wong Sik-ling), *Yüeh-yin yün-hui* (1941)]

	y	u	ϕ y	ui	ϕ n	yn	un	ϕ t	yt	ut
	x		x		x	x			x	
ts	x		x		x	x		x	x	
tsh	x		x		x	x		x	x	
s	x		x		x	x		x	x	
t			x		x	x		x	x	
th			x		x	x			x	
n			x			x		x		
l			x		x	x		x	x	
k			x			x			x	
kh			x			x			x	
h			x			x			x	
p				x			x			x
ph				x			x			x
m				x			x			x
f		x		x			x			x
kw		x					x			
khw		x		x						x
w		x		x			x			x

e (colloquial) and o (literary), ak (colloquial) and ok (literary), as well as between the medials -w- (colloquial) and -j- (literary).

Many Mandarin dialects, including the Peking dialect, have three medials: in addition to finals not preceded by any medial, there are finals with -w-, -j-, and -y-. In some dialects, such as the Hakka dialect of Meih sien, where there is no contrast between rounded and unrounded front high vowels, there are only two medials, -w- and -j-.

Certain phonological conditions favor certain sequences. The palatal initials are, for instance, normally followed by high front vowels or their corresponding medial glides. The -w- glide regularly appears after velar initials. After labial initials there are only extrasystemic contrasts between finals with and without a -w- glide. The apparent exceptions are found in those dialects which are beset with the problems of literary and colloquial pronunciations, and can be explained in terms of dialect mixture. Contrasts between plain finals and finals with a -w- glide after the labial initials in the Min dialect of Amoy dissolve when we see that the plain finals belong to one style of pronunciation, and the finals with a -w- glide to another: the different styles of pronunciation constitute different phonological systems, both synchronically and diachronically,

5. Vowels

Except for those syllables which consist of a syllabic consonant, vowels form the nuclei of syllables. Diphthongs consisting of a vowel followed by a glide are included here; these glides can be front or back, rounded or unrounded. Four varieties are used in Chinese dialects: front unrounded (j or i), front rounded (y), back rounded (w or u), and back unrounded (u). These vowels can be either oral or nasal. The presence or absence of diphthongs and nasal vowels divides Chinese dialects into four groups (cf. Chart 18). Charts 19 and 20 show the vowel systems of the groups at either extreme.

Chart 18.

Vowel types in Chinese dialects.

	oral		nasal	
	simple vowels	diphthongs	simple vowels	diphthongs
(1) Amoy, Ch'aochow	XXX	XXX	XXX	XXX
(2) Chinan, Si-an, T'aiyüan, Yangchow, Ch'angsha, Shuangfeng	XXX	XXX	XXX	
(3) Peking, Hankow, Ch'engtü, Wenchow, Nanch'ang, Meihsien, Canton, Foochow	XXX	XXX		
(4) Soochow	XXX		XXX	

Chart 19.

Vowels in the Amoy and Ch'aochow dialects.

Amoy				Ch'aochow				
i			u	i			u	ur
e	ue		o	io	e	ue	ie	o
a	ua	ia	ɔ	a	ua	ia		
ī				ī				
ē				ē	ūē	iē		
ā	ūā	iā	ō	ā	ūā	iā		
iu			ui	iu			ui	
				oi				
				ou		iou		
ai	uai			ai	uai			
au		iau		au				
iū			ūi	iū			ūi	
							ōi	
				ōū				
āi	ūāi			āi	ūāi			
āū		iāū		āū				

Chart 20.

Soochow vowels.

[Information from Liao Hsü-tung, *Su-chou yü-yin* (1958)]

i			u/əu			y	
u						ɥ	
		iɪ				Y	iY
e	ue		o		io	ø	iø
a		ia	ɑ	ua	ia		
ã	ũã	iã	ã		iã		

6. Endings

Endings are syllable-final consonants: stops (ʔ, k, t, p) and nasals (ŋ, n, m). There is usually a parallelism, whether it be synchronic or diachronic, in the linguistic behavior of the two series of homorganic consonants, oral and nasal: k : ŋ, t : n, p : m. (The glottal stop is in some dialects the oral counterpart of the nasalization of vowels; in other dialects, it is the counterpart of the velar nasal.) These endings usually follow simple vowels. In the Min dialect of Foochow, however, the endings ʔ and ŋ follow both simple vowels and diphthongs: aʔ, aŋ, oʔ, oŋ, ieʔ, ieŋ, iaʔ, iaŋ, uaʔ, uaŋ, uoʔ, uoŋ, yoʔ, yoŋ, iʔ, iŋ, eiʔ, eiŋ, aiʔ, aiŋ, uʔ, uŋ, ouʔ, ouŋ, auʔ, auŋ, yʔ, yŋ, øyʔ, øyŋ, ayʔ, ayŋ.

Chinese dialects may be characterized in terms of the possible consonantal endings in their syllable structure. Some dialects have no syllable-final stops; many Mandarin dialects, including that of Peking, are representatives of this type of dialect. Some dialects have only the syllable-final glottal stop; the T'aiyüan dialect, the Soochow dialect, and the Foochow dialect belong to this type. The dialects of Wenchow and Shuangfeng have no syllable-final stops. The Nanch'ang dialect has only final t and p. The dialects of Linch'uan, Meihsien, and Canton have three stop endings: k, t, and p. The Ch'aochow dialect has ʔ, k, p. The dialect of Amoy has four stops: ʔ, k, t, and p.

Chinese dialects also vary according to the nasals which may occur at the end of syllables. The dialects of Chinan, Si-an, T'aiyüan, Wenchow, Shuangfeng, Foochow, and Ch'aochow have only final ŋ. In the dialects of Ch'angsha, Yangchow, and Soochow, the two nasal endings (ŋ and n) are used after different types of vowels. The dialects of Peking, Hankow, Ch'engtu, and Nanch'ang, on the other hand, have two nasal endings, ŋ and n, which may occur after the same vowel. The dialects of Linch'uan, Meihsien, Canton, and Amoy have three nasal endings (ŋ, n, m).

Consonantal endings can exercise the same influence on contiguous vowels as consonantal initials. The influence of consonantal initials on following vowels can be illustrated by the development of words which are classified as members of the same group in *Ch'ieh-yün*, the rime dictionary of 601. The difference in the

developments in the various modern dialects shown in Chart 21 is due to the difference in the two types of initials, velar and dental.

There is another case which shows the different influences of different types of initials on the following finals (cf. Chart 22). 藕 'lotus root', 母 'mother', and 歛

Chart 21.

The influence of velar and dental initials on vowels.

	割	渴	達	擦	辣
Amoy	kat, (L), kua?, (C)	khat,	tat,	tshat, (L), tshua?, (C)	lat, (L), luat, (C), lua?, (C)
Ch'aochow	kua?,	khua?,	tak,	tshak,	la?,
Foochow	ka?,	kha?,	ta?,	tsha?,	la?,
Canton	kot,	hot,	tart,	tshart,	la:t,
Meih sien	kot,	khōt,	that,	tshat,	lat,
Linch'uan	kot,	khōt,	that,		lat,
Nanch'ang	kot,	khōt,	that,	tshat,	lat,
Soochow	kə?,	khə?,	da?,	tsha?,	la?,
Yangchow	kə?,	khə?,	ta?,	tsha?,	la?,
Ch'angsha	ko,	kho,	ta,	tsha,	na,
Ch'engtu	ko	kho	ta	tsha	na
Hankow	ko	kho	ta	tsha	na
T'aiyüan	kə?, ka?,	khə?, kha?,	ta?,	tsha?,	la?,
Si-an	kə	khə	ta	tsha	la
Chinan	kə	khə	ta	tsha	la?
Peking	kə	khə	ta	tsha	la?

Chart 22.

The influence of velar and labial initials on finals.

	藕	歛	母
Amy	ŋãü?	ɸbo	ɸbu (L), ɸbo (C)
Ch'aochow	ɸjou	ɸbou	ɸbo
Foochow	ɸgau	ɸmu	ɸmu
Canton	ɸgau	ɸmau	ɸm(o)u
Meih sien	ɸgeu	ɸmeu	ɸmu
Linch'uan	ɸgeu	ɸmeu	ɸmu
Soochow	ɸY?	mY? (L), m? (C)	ɸmo
Shuangfeng	ɸjie	ɸmie (L), ɸmu (C)	ɸmu
Yangchow	ɸəu	ɸmo	ɸmo
Ch'angsha	ɸəu	ɸməu	ɸmo
T'aiyüan	ɸjou	ɸmu	ɸmu
Si-an	ɸjou	ɸmu	ɸmu
Chinan	ɸjou	ɸmu	ɸmu
Peking	ɸou	ɸmu	ɸmu

'acre' all belong to the same category in *Ch'ieh-yün*. In the modern dialects, however, the word for 'lotus root' and the word for 'mother' do not have the same finals; moreover, the word for 'acre' behaves in some dialects like the word for 'lotus root', and in other dialects like the word for 'mother'. The word for 'lotus root' has a velar initial; the words for 'mother' and 'acre' have labial initials.

The influence of different endings on preceding vowels can be best illustrated by the behavior of the endings p, t, k, m, n, and ŋ. p and t, and m and n, coalesce in some dialects. In the Kan dialect of Nanch'ang, for instance, there are only two sets of endings, t and n, and k and ŋ. There is, moreover, a striking difference in the behavior of these four endings. The front vowels i, y, and e can only be followed by t and n; the back vowels u and o, and the vowel a, can be followed by both sets of endings. (ə, which occurs before only two endings, t and n, is derived from an earlier i. The original distinction between initial palatal tš- and dental ts- is now reflected in different initials as well as vowels in, for example, the sequences tsət and tšit.) Generally speaking, in most Chinese dialects, the endings p, t, m, and n form one group, the endings k and ŋ form another group, and the two groups exercise different influences on the preceding low vowel a. The exception to this rule is Cantonese; where the Canton dialect has a, other dialects may have other vowels, depending on the original consonantal endings (cf. Chart 23).

Chart 23.

The influence of endings on vowels.

	生	山	衫
Canton	ɛsaŋ	ɛsarn	ɛsarm
Amoy	ɛsiŋ (L), ɛsī (C), ɛtsī (C)	ɛsan (L), ɛsuā (C)	ɛsam (L), ɛsā (C)
Wenchow	ɛsie	ɛsa	ɛsa
Shuangfeng	ɛsiē (L), sō (C)	ɛsā	ɛsan [ɛsā]
Soochow	ɛsən (L), saŋ (C)	ɛse	ɛse
Yangchow	ɛsən	ɛsē	ɛsē
Ch'angsha	ɛsən	ɛsan	ɛsan
	册	察	插
Canton	tshark _c	tshart _c	tsharp _c
Amoy	tshik _s	tshat _s (L), tshak _s (C)	tsha _s ?
Wenchow	tsha _s	tsha _s	tsha _s
Shuangfeng	ɛtshie	ɛtsha	ɛtsha
Soochow	tshə _s ?, (L), tsha _s ?, (C)	tsha _s ?	tsha _s ?
Yangchow	tshə _s ?	tsha _s ?	tsha _s ?
Ch'angsha	tshə _s	tsha _s	tsha _s

7. Historical projection

Chinese dialects can be described individually, and also compared collectively in terms of tones, initials, medials, vowels, and endings. From a comparative study

of modern dialects we may project that in an earlier stage there must have been tonal categories which gave rise to the four tones A, B, C, D; an initial system consisting of dentals (t, th, d, ts, tsh, dz, s, z, n, l), retroflexives (tʂ, tʂh, dzʂ, ʂ, ʂ), palatals (tʃ, tʃh, dzʃ, ʃ, ʃ), velars (k, kh, g, ŋ, ʔ, h, h), and labials (p, ph, b, m); three medials (j, w, and jw); five vowels (i, u, ə, a, a); and six endings (p, t, k, m, n, ŋ).

The original palatal, retroflexive and dental affricate and fricative initials do not descend in a straight line to the same three categories in the modern dialects: the present palatal set results from the palatalization of velar and dental affricates and fricatives; both the original retroflexive and the original palatal sets may correspond to present-day retroflexives or dentals; in some dialects the original distinctions are reflected in the vowels (cf. Chart 24).

Chart 24.

The original dental, retroflexive, and palatal initials in the modern dialects.

	私	獅	屍	鬚	梳	書
Canton	ɛsi	ɛsi	ɛsi	ɛsɸy	ɛso	ɛsy
Amoy	ɛsu	ɛsu (L) ɛsai (C)	ɛsi	ɛsu (L) ɛsiu (C)	ɛso	ɛso
Ch'aochow	ɛsuw	ɛsai	ɛsi	ɛsu	ɛso	ɛtsuw
Foochow	ɛsy	ɛsy (L) ɛsai (C)	ɛsi	ɛsy	ɛsu (L) ɛsɸ(C)	ɛtsy
Linch'uan	ɛsuw	ɛsuw	ɛsi	ɛsi	ɛsu	ɛsu
Soochow	ɛsuw	ɛsuw	ɛsq	ɛsi	ɛs(ə)u (L) ɛsuw (C)	ɛsq
Wuhsi	ɛsuw	ɛsuw	ɛsq	ɛsi	ɛsəuw	ɛsq
Ch'angshu	ɛsur	ɛsur	ɛsur	ɛsy	ɛsəur (L) ɛsuw(C)	ɛsq

The phonological system that I have projected above is much simpler than that suggested by *Ch'ieh-yün*. For many of the distinctions and categories preserved in this ancient rime dictionary there is no evidence among the modern Chinese dialects. So far, the study of the phonological history of the Chinese language has been heavily influenced by *Ch'ieh-yün*, and unnecessarily complicated by blind adherence to its categories, which obviously do not represent a coherent, synchronic system. For a more realistic and logical attack on the problems of Chinese phonological history, we must now turn to the comparison of modern dialects and the projection on this basis of an earlier common system. There are, of course, many irregularities which could lead one to speculate on a more complicated system for the projected stage from which the modern dialects derive. These irregularities could, however, very well be the results of interaction among these dialects after their split into individual dialects. It is obvious that there

must have been numerous contacts among the different dialects after they separated. A dialect should, therefore, be studied not only historically, by tracing it back to its earliest stage, but also geographically, by discovering all the contacts it may have had during its existence. This is a tremendous assignment, since the written documents do not give us a complete picture of the activities of the Chinese people. The most adequate information that we have in this regard is on the origin and migration of the speakers of the Hakka dialect: the northern origin of the Hakka dialect is strongly supported by both documentary and linguistic evidence.

While we are using the historical-comparative method in our investigation of the phonological history of the Chinese language, we should also bear in mind the truth of the wave theory that different vocabulary items spread from different centers and cover different areas, and that different phonological changes originate at different times and exercise influence over different geographical areas. The wave theory tacitly holds that there has never been a unified, homogeneous language, and that there have been internal variations within every speech community.

The history of a language has two aspects. That there is a degree of historical continuity can be demonstrated by the historical-comparative method. On the other hand, we also see the results of contacts with other speech communities. These are generally described under the category of dialect mixture or competing changes.

Thus, before we can compare and project, we must first study the internal system of each individual dialect, bearing in mind the possibility of historical continuities, as well as external influences from neighboring dialects, from the standard language, and from the written language. We will not be able to find a historical explanation for every phenomenon; we must use our judgment in arriving at an understanding of the basic phonological system of a dialect. We may even have to establish two phonological systems if there is a serious problem of variant pronunciations in literary and colloquial styles. Of course, in some cases, information derived from *Ch'ieh-yün* can also channel our investigations to a profitable solution.

Chart 25 illustrates how vital it is that we fully understand the nature of the examples that we are dealing with in a historical-comparative study of Chinese dialects. This chart shows the various reflexes in the modern Min dialects of a projected *ak, which has only one reflex in the Canton dialect: a:k. If we fail to distinguish the literary and colloquial styles in the pronunciation of these three Min dialects, we will be unable to establish regular correspondences among these dialects and the Canton dialect. As soon as we recognize these distinctions, we are able to correlate them with the different reflexes in the Min dialects for the projected *ak.

.. After studying the individual dialects, we should next reconstruct the common

Chart 25.

*ak in the Min dialects.

Canton	Amoy	Ch'aochow	Foochow
ark literary	ik	ek	ai ² /ei ²
colloquial	e ² ,o ²	e ² ,o ²	a ²
from earlier sequences with the initials tj, thj, dj:			
literary	ia ²	ia ²	ei ²
colloquial	ia ²	ia ²	ia ²

Examples

	Canton	Amoy	Ch'aochow	Foochow
窄	tsark _c	tsik _c	t _s a ² _c	t _s a ² _c
責	tsark _c	tsik _c	t _s e ² _c	t _s ai ² _c
策	tshark _c	tshik _c	t _s he ² _c	tshai ² _c
册	tshark _c	tshik _c (L), t _s he ² _c (C)	t _s he ² _c	tsha ² _c
摘	tsark ₂	tik ₂ (L), tia ² ₂ (C)	tia ² ₂	t _s ai ² ₂ , tei ² ₂ , tia ² ₂
拆	tshark _c	tshik _c	thia ² _c	tshai ² _c , thia ² _c
擇	tshark ₂	tik ₂ (L), tia ² ₂ , to ² ₂ (C)	to ² ₂	tei ² ₂
澤	tsark ₂	tik ₂	tsek ₂	tei ² ₂
宅	tshark ₂	thik ₂ (L), the ² ₂ (C)	the ² ₂	tei ² ₂
格	kark _c	kik _c (L), ke ² _c (C)	ke ² _c	kai ² _c (L), ka ² _c (C)
隔	kark _c	kik _c (L), ke ² _c (C)	ke ² _c	kai ² _c (L), ka ² _c (C)
革	ka:k _c	kik _c	kek _c	kai ² _c (L), ka ² _c (C)
客	hak _c	khik _c (L), khe ² _c (C)	khe ² _c	khai ² _c (L), kha ² _c (C)
割	wak ₂	ik ₂ (L), ui ² ₂ (C)	ue ² ₂	hei ² ₂ (L), ua ² ₂ (C)
伯	park _c	pik _c	pe ² _c	pai ² _c (L), pa ² _c (C)
柏	pha:k _c	pik _c (L), pe ² _c (C)	pe ² _c , pek _c	pai ² _c (L), pa ² _c (C)
迫	park _c , pik _c	pik _c	pek _c	phai ² _c , phay ² _c
拍	pha:k _c	phik _c (L), pha ² _c (C)	pha ² _c	phai ² _c (L), pha ² _c (C)
白	park ₂	pik ₂ (L), pe ² ₂ (C)	pe ² ₂	pei ² ₂ (L), pa ² ₂ (C)
麥	mak ₂	bik ₂ (L), be ² ₂ (C)	be ² ₂	mei ² ₂ (L), ma ² ₂ (C)
脉	mak ₂	bik ₂ (L), mē ² ₂ (C)	me ² ₂	mei ² ₂ (L), ma ² ₂ (C)

phonological systems for the major types of Chinese dialects. The phonetic variations within each group of dialects are not significant to the phonological structure of the common system; the exceptional and irregular forms in each dialect can be explained as the result of external influences. Thus, instead of comparing several hundred living dialects, we deal with just a few reconstructed protosystems. The major problem here is the establishment of criteria by which we can define the various types of Chinese dialects. There are many dialects whose affiliations are not clear. We know very well that it is impossible to exhaustively classify all Chinese dialects under a definite number of types.

At every level, we must apply our subjective judgment in selecting material

for the historical reconstruction. We must have a goal in mind when we are working with masses of linguistic data. The mechanical tabulation of these data without the guidance of a projected system can produce only the most unsatisfactory of results. Projection is not a substitute for the comparative method, but represents a leap beyond it. It is a guiding force which can lead us through the jungles of exceptions and irregularities to a reasonable solution.

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漢 語 方 音

張 琨

這篇文章講的是現代漢語方言（官話、湘、楚、吳、贛、客家、粵、閩）的聲母、介音、元音（包括複合元音），韻尾、聲調跟聲韻調之間的關係。清濁聲母以及有時吐氣聲母對聲調的演變有很大的影響。鼻音邊音聲母的字在聲調的分化上是一種很有趣的現象。現代漢語方言有的有清濁之分，有的沒有清濁之分。從音韻結構上看來，國語中的 ς 與 s, h, f 相當，國語中的 ζ 與 l, n, ɲ, m 相當：清濁之別可以由發音方法之不同來推斷，塞音、塞擦音、擦音都是清的，鼻音、邊音都是濁的。在歷史演變中聲母及韻尾有時對元音發生影響：舌頭輔音與前元音有關，舌根輔音與後元音有關。最後討論到構擬古音時有文白異讀的糾纏及假設對應關係的困難。