

Part I

The Keys to Traditional Phonology

The following introductory chapter mainly provides two kinds of information. One is the explanation of some basic terminologies used in the traditional study of Chinese phonology. The other is various source materials that are used in the study of Chinese historical phonology. These two kinds of information are very much interrelated.

Due to the logographic nature of the Chinese writing system, the study of a historical sound system is a rather difficult task. Despite such a difficulty, Chinese scholars have been diligently analyzing the phonological system of Chinese for more than fifteen hundred years. It is not difficult to imagine all the problems that arise from using such a phonetically opaque writing system to analyze its phonology. Traditional phonology is considered one of the most difficult academic disciplines and is often called *juéxué* 絕學 ‘unique and esoteric knowledge’ by its students.

However, significant achievements have been made. As early as the third century, a special phonetic notation method called *fǎnqiè* 反切 was in use. This method uses two Chinese characters to provide the phonetic information of the initial and the final as well as the tone for the character in question. In the sixth century the initial consonants had been worked out. Each initial was represented by one Chinese character that shares the same initial consonant. The most well-known list of Middle Chinese initials is the thirty-six initial characters (refer to Section 1.4.1). For the purpose of poetry composition, rhyme dictionaries, such as the *Qìèyùn* 切韻 of 601, were compiled. The rhyme dictionaries actually provide a very thorough phonological classification for all Chinese monosyllabic words. The tones, rhyming parts, and initials of the Chinese syllables are well recognized and analyzed. Chinese phonology made another significant achievement in the form of rhyme tables, such as the *Yùnjìng* 韻鏡 of the twelfth century (or earlier). Rhyme tables were pure phonological analyses. By using tables, the initials and rhymes are systematically organized into rows and columns. The initials are classified according to their place of articulation and manner of articulation; the finals are classified according to their medials and main vowels. The accuracy of the analyses involved still amazes modern scholars.

In the long history of Chinese scholarship, the achievements of phonological studies are represented by a large number of terminologies. Since all these

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achievements were made in the absence of an alphabetical spelling system, what has been achieved by and large is the collection of categorical information, such as how many tones, how many initials, and the different categories of finals a given dialect or standard has. There are systematic phonetic transcriptions, such as the ḥP'ags-pa spelling system of the thirteenth century (refer to Chapter 6) and the Latin alphabet transcription by Nicolas Trigault (1577–1628), a Belgian/French missionary, in the early seventeenth century (refer to Section 9.5). But such phonetic information did not become an accepted part of traditional phonology until the twentieth century.

The terminologies are the keys to understanding traditional phonology. They are frequently used in the phonological studies for all periods – Old Chinese, Middle Chinese, Old Mandarin, and even Modern Mandarin. Without a good understanding of the foundational terminologies of traditional phonological studies, the study of Chinese phonology would be quite impossible. The recently published *Encyclopedia of Chinese Language and Linguistics* (Sybesma et al. 2016) is a good reference in addition to the introduction of this book for more information on these terminologies.

1 An Introduction to Chinese Historical Phonology

The study of the phonological history of Chinese is in essence a study of a history of phonological standards. Historically, the Chinese language is a set of not just variants in time but variants in space as well. But the purpose of this book is not to cover all the available historical variants in time and space, but to focus on the phonological standards of major historical periods. It is commonly accepted that there are two main traditions, one starting with the *Qièyùn* 切韻 of 601 and the other starting with the *Zhōngyuán Yīnyùn* 中原音韻 of 1324. According to the commonly accepted view (e.g. Wáng Lì [1957] 2004), the former marks the beginning of Middle Chinese and the latter marks the beginning of Old Mandarin. Both of these systems, as well as the reconstructed Old Chinese, represent ideal standards (“literary language”) and are more or less composite in nature. While it is accepted that these standards must be based on real phonological systems, it would be a mistake to consider them as representing any single phonological system; until modern times, phonological standards were never based strictly on a single dialect. For social, political, and cultural reasons the dialects of the capitals always become the base dialect of the standard pronunciation. Throughout history, Luoyang, Xi’an, Beijing, and Nanjing were the capitals for various dynasties. The phonological systems of standard Chinese thus have a close relationship with these capital dialects.

Historical phonology is discovery-driven. Research and reconstruction of Chinese at different periods of time depends on data given during and before the time period being researched. Data is compared to see when certain phonological features emerged in the written record in order to pinpoint where and when they emerged in history, with models of successive innovative features and sound changes based on the knowledge of older materials. Because of this nature of relativity to the past, “innovative” itself becomes a relative concept. Without comparison against older data, every phonological feature of a given time period or dialect would be a “new” feature. Because Old Chinese is the furthest back that researchers have been able to reconstruct so far, the phonology of Old Chinese is a collection of phonological features that are considered the “earliest” until older data becomes available. The

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identification of innovative features is much improved after the *Qièyùn*, which provides a phonological system with quite clear information concerning time and space.

Because of the long and unbroken written history of Chinese having lasted for more than thirty-five hundred years, many historical documents can be used as source materials for the study of phonological history. These source materials, systematic or not, are more reliable than any reconstructed results. For the Middle Chinese of the sixth century, the phonological categories of an entire system were recorded in the rhyme dictionary *Qièyùn*. Only the phonetic values need to be determined based on the modern dialects and ancient loans in non-Chinese languages. For this particular purpose the comparative method is applied. If there were no such rhyme dictionary, the comparative method could not have easily reconstructed the phonological categories as we see in the *Qièyùn*.

No complete edition of the *Qièyùn* has survived to the present day, and so much of the corpus of study on Chinese linguistics is connected to the more readily available *Guǎngyùn* 廣韻 compiled and edited by Chén Péngnián 陳彭年 and Qiū Yōng 邱雍 in 1008. The *Guǎngyùn* was the most common rhyme dictionary for Song poetry, and in regard to Chinese phonological reconstruction it is one of the most important texts, although it is ultimately based on and secondary to the *Qièyùn*.

For the later period of Old Mandarin of the thirteenth century, a systematic record of both phonological categories and their phonetic values can be found in a phonological work entitled *Méngǔ Zìyùn* 蒙古字韻, in which Chinese characters are listed according to phonological categories and each syllable has its phonetic transcription in the ᠮᠤᠩᠭᠤᠯᠠ script. In this case there is no need for the comparative method. In the study of Old Chinese, because of poetry rhyming, the phonetic information of Chinese characters, and the categorical information of the *Qièyùn*, the phonological categories can be worked out. The need for the comparative method is again limited to the reconstruction of phonetic values.

1.1 Defining Chinese

The territory of modern China is the result of more recent changes in history. All the people living in China today are “Chinese” by definition; among them the Han ethnic group make up an overwhelming majority, with non-Han people as many smaller minorities. These non-Han peoples have different cultures, histories, and civilizations, as well as languages, both from each other and from the Han. Historically many of them probably are indigenous to the areas they currently inhabit. So, in a more precise sense, Chinese people are not the same as the Han people, and the languages of China are not the

same as the Chinese (Han) language (in Chinese, *Hànyǔ* 漢語, literally ‘Han language’). Within the boundaries of modern China, there are many dozens – fifty-five according to the Chinese government – non-Han peoples. Thus, “in a world neatly divided into nations and states, these people are Chinese – and yet they are not Chinese” (Ramsey 1987: 148).

Modern China is called *Zhōngguó* 中國 ‘Middle Kingdom’ by Chinese people themselves. Historically, many dynasties with various names existed, such as Qin (221–206 BC), Han (206 BC–AD 220), Tang (AD 618–907), Song (AD 960–1279), Yuan (AD 1279–1368), Ming (AD 1368–1644), and Qing (AD 1644–1912). These dynasties may or may not have been ruled by the Han, but their territories have significant overlapping with that of modern China, and were also often composed of Han people as the majority of their population. In the time when different states coexisted, the Han were either the majority or a significant part of the populations. The Han language is called “Chinese” in English. As I have already said, it is confusing, because Chinese is not the language of China, rather the language of the Han. Referring to Chinese, there is even a problem of nomenclature (Norman 1988) in the Chinese language itself. There are many Chinese words referring to “Chinese.” In the academic publication it is *Hànyǔ* 漢語, while the Chinese script is *Hànzì* 漢字 ‘Han characters.’

As Jerry Norman says, “China is not an island; it is now and always has been surrounded by non-Chinese or, to be more precise, non-Han peoples. A non-Han people is by definition an ethnic group which uses a non-Han language” (Norman 1988: 16). Three thousand years ago, the southern part of modern China was inhabited by various non-Han groups, referred to as *bǎiyuè* 百越 ‘Hundred Yue.’ The word Yue is still used as the place-name referring to the southern area of China today (although with an alternative character, *yuè* 粵). Throughout history, “countless groups in South China gradually gave up their original ways of life and became Chinese. . . . more and more native groups took up Chinese dress, customs, social values, and of course the Chinese language” (Ramsay 1987: 34). When these people were in contact with the Han, many transferred their languages from non-Chinese to Chinese; it was inevitable that their native language would leave traces in the Chinese they acquired. Thus, many dialects of south China have the features of the non-Han languages spoken in adjacent regions. This phenomenon could be the main force behind language change and the formation of Chinese dialects. But these linguistic influences or contributions are not well realized and are considered just the features of Chinese or Chinese dialects, largely to do with internal development. In this book, the word “Chinese” is used to refer to the Han language, or *Hànyǔ*. The history of Chinese is therefore, in a sense, the history of the Han language, or the history of the language used by the ancestors of the modern Han people.

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1.2 The Nature of Phonological History

Language is realized in its carriers. A specific language is not inherited but acquired by a person through the contact of its users. Language change is thus a result of the language change within the language's carriers. The histories and the cultures of the language carriers must be the bases for understanding language changes. Throughout history, people who spoke different languages were in contact, and through this contact these people learned new languages and, in some cases, switched languages. This very basic mechanism, which introduces many linguistic changes, is not the interest of the Western tradition of historical linguistics, which is instead represented by the tree model and its related methodology, including the very influential comparative method.

The comparative method, if used correctly, can provide a way of tracing an ancestral language based on its descendants, usually modern languages. But this method only shows one origin of a language, modern or historical. Regardless of the number of languages, if they are related, they are traced back to one protolanguage. After all the languages are linked together, the diagram is in the form of a tree. The base or root of the tree is the protolanguage and the end nodes are the modern languages.

This tree gives an account of the historical development and the relationship of related languages. But such a diagram is far from reality. Because this tree only demonstrates how closely the languages are related to each other, it ultimately does not provide ample explanation of why languages change, diversify, and split apart. A mistake often made by the students of historical linguistics is to confuse reconstructed language family trees with real history. Many equate the tree diagram to the historical development of modern languages. In this way, the comparative method is only useful to a certain extent; it is completely unable to recover the real history of a language.

1.2.1 Chinese Phonology through Written Record

Although the history of Chinese is continuous, the available materials by and large represent just a few points in its history. The phonological history of Chinese is inevitably discontinuous. Language varies not only in time but in space as well. The Chinese language must have had its geographical variations, so-called dialects, throughout its history. Because emphasis was always placed on a national standard, the phonology of dialects or nonstandard variants was not well recorded before the sixteenth century,¹ when

¹ During the Han dynasty, Yáng Xióng 揚雄 (53 BC–18 AD) wrote *Yóuxuān Shìzhě Juédàiyǔ Shìbié Guó Fāngyán* 輶軒使者絕代語釋別國方言, often shortened as *Fāngyán* 方言, in which he recorded contemporary dialectal (and possibly foreign, due to the fact that no distinction between “foreign” and “dialectal” was made) words from various places throughout the Han Empire.

recording local dialects came to be within the interest of some of the literati. Limited by the available source materials, geographical variants in the early times of Chinese are therefore quite impossible to retrieve. But this limitation of materials should not be interpreted as evidence of a lack of dialectal variations throughout history.

The various standards of a language throughout history must also be understood as the written standard instead of the spoken standard. All standards were established for literary purposes, mainly for the sake of rhyming in the various poetry compositions of the time. Until modern times, while there was governmental effort to establish the standard for the written language, there was no effort made by the government to promote a spoken standard.

In comparison with the written language, systematic information about the spoken language is very rare. Because of its logographic nature, written Chinese can only provide categorical information and no direct information about pronunciation. Because of the phonetic nature of their writing systems, only foreign transcriptions can reveal the phonetic values of Chinese logographs. There is no question that the phonetic information about the spoken language can help us better understand various aspects of the written language, such as whether some phonological categories were artificially preserved in the rhyming dictionaries and what the variations of individuals' pronunciation were, besides the phonetic values of the known phonological categories. As will be seen in Chapter 8, the transcriptions of Chinese in the Old Persian script can be used to show the real pronunciation of the standard Chinese of the time, which can be realized in significantly different ways. The spoken language of individuals was never required to be strictly standard until recently, when the advent of long-range communication and recording made standardization practical, and the 1950s' new language policy within the People's Republic of China was enforced (P. Chen 1999: 24). The main function of language is for communication, and so when this function can be achieved, the amount of detail of the standard pronunciation that is adopted by a speaker will ultimately vary depending on the linguistic circumstance of said individual.

1.2.2 *Phonological Categories in Logographic Systems*

From its initial creation, the *Qièyùn* 切韻, as well as most of its successors, existed as a record of phonological categories only. This system was never intended to provide information concerning phonetic values. Because of the logographic nature of the Chinese writing system and the numerous dialectal variations present even at the time of the *Qièyùn*, no phonetic information can really be attached to such a system. Because it is categorical, it can exist beyond the limitations of time and space. The status of the written standard Chinese phonological system as categorical is one that has existed and been

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maintained by Chinese culture for centuries; for more than fifteen hundred years the *Qìèyùn* system has undergone several revisions, but its categorical nature has never changed. Such a supratemporal and supradialectal categorical system in fact worked out quite ideally with the writing system and the geographical variations of the Chinese language. The result of having specific phonological categories in a poetic standard was such that a poet from Beijing could write in correspondence with a poet from Guangzhou, and they would be able to notice the intricate rhyme schemes of each other's writing without ever hearing their mutually unintelligible dialects. Ultimately, the phonetic values were never necessary information for the Chinese people to compose and enjoy poetry in its traditional formats. On the flip side, there is no phonetic information about historical changes and geographical variations that can be learned from this tradition.

Such a categorical system was a literary norm in Chinese culture at the time, but it is unsatisfactory as information regarding the phonological system for modern linguists, especially those scholars who are used to more phonetically transparent alphabetical spellings. It is quite natural that the reconstruction of the phonetic values started by Western scholars when they encountered such a categorical system – for example, the studies done by the French linguist Henri Maspéro (1883–1945) and by the Swedish linguist Bernhard Karlgren (1889–1978) – represent the effort of identifying the phonetic values of traditional categories.

1.2.3 Terminology of Traditional Chinese Phonology

In the study of Middle Chinese phonology, many traditional terminologies are used to refer to the classification of the tones, initials, and finals. These phonological terms can be found in two very commonly used Middle Chinese phonological references: the *Gǔjīn Zìyīn Duìzhào Shǒucè* 古今字音對照手冊 'Handbook of the Ancient and Modern Pronunciations of Characters' by Dīng Shēngshù 丁聲樹 and the *Fāngyán Diàochá Zìbiǎo* 方言調查字表 'List of Characters for the Investigation of Dialects' by the Zhōngguó Shèhuì Kēxuéyuàn Yǔyán Yánjiūsuǒ 中國社會科學院語言研究所 'Institute of Language, Chinese Academy of Social Sciences.' In these two references, the information of Middle Chinese is given in terms of traditional terminologies. The *Fāngyán Diàochá Zìbiǎo* lists commonly used characters, about 3,700 of them, according to phonological categories of Middle Chinese in a format of tables. The *Gǔjīn Zìyīn Duìzhào Shǒucè* lists the characters according to modern pronunciation with the information of Middle Chinese, such as the *fānqiè* of the *Guǎngyùn* and the categorical labels of each character according to Middle Chinese phonology (refer to Section 1.4 for more details). For example, for the pinyin spelling *bāng*, *bāng* 幫 is the first character of this pronunciation, *bó páng qiē* 博旁切 is the *fānqiè* of the *Guǎngyùn*, and *dàng*

kāi yī píng táng bāng 宕開一平唐幫 denotes the categorical labels of this character according to Middle Chinese phonology.

These terminologies are the keys to understanding Middle Chinese phonology, the phonological systems both before and after it, as well as modern Chinese dialects. Although these terminologies are often used and thought of as the categories of Middle Chinese phonology, many of them are not from the *Qìyùn*, the standard reference of Middle Chinese, itself, but are actually from various rhyme tables produced many centuries after the *Qìyùn*. The most frequently used ones include:

- For initials: The thirty-six initials (*sānshíliù zìmǔ* 三十六字母) (Section 1.4.1); the *qīngzhuó* 清濁 system (Section 1.4.2)
- For finals: The *shè* 攝 ‘rhyme group’ (Section 1.4.9); *děng* 等 ‘division’ (Section 1.4.4); *kāihé* 開合 (Section 1.4.5); *yīnshēng yùn* 陰聲韻, *yángshēng yùn* 陽聲韻, and *rùshēng yùn* 入聲韻 (Section 1.4.10); *chóngniǔ* 重紐 and *chóngyùn* 重韻 (Section 1.4.6); *wàizhuǎn* 外轉 and *nèizhuǎn* 內轉 (Section 1.4.8)
- For tones: The *sìshēng* 四聲 (Section 1.3.4); *yīndiào* 陰調, and *yángdiào* 陽調 (Section 1.4.3)

To understand these terms, the syllable structure of Chinese itself must first be made clear. This structure has changed over time, but just as much of Chinese historical phonology revolves around the *Qìyùn*, so do modern conceptions of Chinese syllable structure rely on the division and categorization of the *Qìyùn* and its successors.

1.2.4 Syllable Structure

From the very beginning of recorded history in China, ancient written documents and literature works overwhelmingly indicate that the Chinese writing system was always monosyllabic, although it is probable that the syllable structure of earlier stages was more complicated (Baxter & Sagart 2014; see Section 2.3.1 and Section 2.3.5.1). Middle Chinese words themselves tended to be monosyllabic more often than not, although there are of course exceptions to this, one such famous one being *húdié* 蝴蝶 ‘butterfly.’

Traditionally a Chinese syllable is analyzed into three basic structural components: initials, finals, and tones. In recent years, some scholars who work on Old Chinese phonology have proposed that Chinese syllables can be structurally more complicated, a minor syllable with fewer structural elements can appear in front of the main syllable. (Refer to Section 2.3.1 and Section 2.3.5.1 for more information).

Because of the monosyllabic nature of written Chinese, historical phonology in general consists of a phonotactic analysis of syllables, a survey of the number and types of initials, finals, and their basic elements, tones, as well

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Table 1.1 *Additional syllable terms with their component segments*

		Component segments
Onset	=	IM
Coda ^a	=	E
Rime	=	VE
Final	=	MVE

^a “Coda” and “ending” are synonymous when discussing Middle Chinese onward.

as the rules governing the combination of these. At the syllabic level, the analyses will be on the segmental elements, initials, medials, main vowels, and codas, and the suprasegmental tones. From Middle Chinese on, the basic structural slots of a syllable are the initial, medial, main vowel, and ending; this is sequentially abbreviated as IMVE, with T representing tone; it is suprasegmental and thus placed above the syllable, unless otherwise noted:

T
IMVE

In the discussion of phonology, the aspects of a syllable often include certain combinations of the aforementioned segments, each with their own name (see Table 1.1).

Rime, as a combination of main vowel and coda, should not be confused with rhyme. Rhyme is a term whose definition changes depending on the source material, but tends to correspond to the rime and tone, with the medial often included as well. For example, the *yáng* 陽 rhyme of the *Qìyùn* is -jəŋ with a *píng* tone. By using the terms in Table 1.1, it is structurally MVE and T, or a final and a tone. The reconstructions of Old Chinese involve more complex syllable structures, and more than one syllable is sometimes used to reconstruct the phonetic value of single characters (e.g. Baxter & Sagart 2014). In some Old Chinese reconstructions, the suprasegmental tone is eliminated and reconstructed as segmental elements. This is explained alongside the discussion of minor syllables in greater depth in Section 2.3.1 and Section 2.3.5.1.

1.2.5 *Nonsyllabic Phonological Characteristics*

Any phonological characteristics that transcend individual morphemes or syllable structure are not in the main interests of most scholars of historical linguistics. An example of a nonsyllabic phonological characteristic is tone sandhi, a well-known phonological phenomenon that exists in many modern