“All the aids which a beginner needs”: James Summers’ (1828-1891) research on Chinese grammar

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Chapter 10. A brief note on Summers' ideas of Chinese phonology and orthography

In the *Handbook*, *Rudiments*, and *Gospel*, "orthography" was introduced at the very beginning of the main body of the book as an indispensable part. The term "orthography" here not only refers to Romanization rules but also to the phonology of the Chinese language (cf. 1863a, p. 1; 1864a, p. 9; 1853b, p. ii). In fact, phonology did not grow into an independent linguistic discipline until the first half of the twentieth century, and by that time, phonological analysis had a strong bond to the missionaries' endeavour to devise orthographic systems (Klöter 2006, pp. 82–83). Based on this broader context, this chapter presents Summers' description of the Chinese phonological system in the mid-nineteenth century as well as his transcription system. However, for clarity's sake, I discuss them separately.

Since the main concern of this thesis is the grammatical notions displayed in Summers' works, this chapter focuses on presenting Summers' own phonological and orthographic systems without going too deeply into the details of his sources and influences.

10.1 Summers and the Romanization of the Chinese language

Summers wished to Romanize the Chinese language. One of the reasons for this was his negative attitude towards Chinese characters, although he admired the effectiveness of creating new compound characters by combining several elementary ones (1863a, p. xix).[327] His main objections against the use of the Chinese script can be summed up as follows.

First, Chinese characters are not able to record the language sufficiently. He claimed that Chinese characters do not correspond to sounds, and therefore impede analysing "sounds into their elements and articulations" (1863d, p. 113). Besides, Chinese characters are rarely used to record the varieties of the Chinese language. Some "syllables" of the vernaculars, such as expletives, have no corresponding character (1853a, p. 30; 1863d, p. 115).

Second, Chinese characters are rather difficult to master not only for foreigners but also for native speakers. They require long tuition and are therefore not an efficient tool (1853a, p. 30; 1853b, Preface, p. iv). Summers especially complained about how difficult in teaching literacy Chinese characters are for "a man of letters in Europe" to read and write:

> We can easily conceive how slow and how tedious his operations would become, and how these roundabout expedients would tend to

[327] Summers' calligraphy, however, was very good. One of Summers' students, Parker, commended his Chinese calligraphy as the best among all the Europeans he had ever seen (1902, p. 207). Luckily, Summers left some calligraphy works behind. In his cover letter that he submitted to King's college London (22 November 1852), Summers enclosed a list of the titles of several Chinese books, written by hand.

> cramp his mental energies, and produce a lethargic condition of intellect. The rapid processes of the brain would evaporate while their expression was dragging its slow length along in hieroglyphics, or something quite as bad. (1863d, p. 112)

This critique is not only an expression of a private exasperation of his earlier experience of learning characters, but also an argument for the superiority of Romanized writing system over others concerning Chinese. He recommended to "[l]et the Chinese and Japanese retain their crooked characters as a literary curiosity, but for practical purposes and popular use the Roman alphabet surpasses both" (1863f, p. 204) and hoping that one day, even Chinese and Japanese would employ the Roman scripts (1868, p. 18). In fact, in the journal *The Chinese Repository*, one of Summers' sources of reference, some articles were published to criticize the flaws of the Chinese characters, which were very similar to Summers' comments. For example, it is claimed that the pronunciation of Chinese is concealed by the characters and that therefore students always need a teacher to guide them through (Bridgman 1834, p. 3). Also, learning Chinese characters is difficult and time-consuming, even for the Chinese people themselves (Dyer 1835, p. 168).

Transcribing the Chinese language with Roman letters, by contrast, was not only necessary but also feasible, according to Summers. Firstly, in colloquial Chinese, not too many homophonic words can be found since, Summers explained, colloquial Chinese, including Mandarin and all other vernaculars, is not monosyllabic (at the level of the word, cf. Chapter 4). Therefore, it can be rendered with Romanized transcription without causing ambiguity. Secondly, transcribing the Chinese language with Roman letters is a much more precise way than the method of *fǎnqiè* 反切, Summers argued. Roman letters render every sound so that students can command the details of pronunciation through aural and visual signs (1863d, p. 113; 1863a, p. 225).

The *fǎnqiè* method deserves more explanation here. Chinese phonology was established when the method *fǎnqiè* 反切 was invented (Gōng Qiānyán 1997, p. 3). *Fǎnqiè* is a way of transcribing Chinese characters. At the end of Han dynasty, the introduction of Sanskrit transcriptions inspired the invention of *fǎnqiè* (Hé Jiǔyíng 1995, p. 94). Summers introduced *fǎnqiè*–here spelled *fàn-tsĕ*–in his *Handbook*:

> The Chinese divide the syllable into two parts, the initial and the final; and they define the pronunciation of characters by a process called *fàn-tsĕ* 反切 'to cut off in opposite directions;' thus the initial of the syllable

> *ke* may be taken and the final of the syllable *mung*, and they together constitute the syllable *kung*. (1863a, p. 4)

It is obvious that Summers understood the concept, yet forgot to mention the tones.

Thirdly, there are certain regular correspondences between the articulation of different varieties of the Chinese language. The application of one universal Romanized transcription system would help to present and distinguish the differences and correspondences between the varieties of the Chinese language (1863a, pp. xxiii–xxiv).[328] Hence, Summers not only hoped to Romanize Mandarin Chinese, but also to devise or adopt a universal system in order to transcribe all varieties of the Chinese language, and even the other Asian languages (Summers 1863d, pp. 112–124), which was also an idea raised in *The Chinese Repository* (Williams 1836, p. 22) and among scholars in the mid-nineteenth century (Klöter 2006, p. 88).

In Summers' time, a Romanization system that was used universally did not exist (Summers 1853a, p. 20), although in 1868, there were two favoured Romanization systems in China: Wade's system of the Peking dialect used in the ports and Williams' transcription of Cantonese used in areas like Canton and Hong Kong (Summers 1868, p. 6). Establishing a system like this had become one of Summers' academic goals. He also recommended for a Romanized system of the Chinese language that could be employed by both European and Chinese learners (Summers 1853a, p. 211). In fact, his system reached these goals to some extent: he applied his own Romanization system to transcribe Mandarin in the *Handbook* and *Rudiments*. While listing the possible diphthongs in his *Handbook*, Summers often made remarks like "Shanghai D." or "Canton D." to indicate that such diphthongs do not exist in Mandarin but in the respective dialects instead (1863a, p. 3). He employed the same system to transcribe Shanghainese in his *Gospel* and Cantonese in his *Repository*. His Romanization system was used by him and his students. Moreover, his translation of the *Lord's Prayer* and the *Apostle's Creed* to Cantonese with his Romanization system was tailor-made for Chinese coolies in British Guyana (1863d, p. 115).

The above examples also show that Summers' intention to render the Chinese language with the Roman alphabet reflected the Protestant educational principles, although Summers was no longer a missionary when he compiled these works. As stated by Heylen (2001, p. 150), missionaries from different denominations had different purposes when using the Roman transcription: Roman Catholic missionaries learned the Chinese characters and languages with the aid of the alphabetic scripts, while Protestant missionaries "began preparing a whole range

[328] Marshman is the first European scholar who tried to conduct such research (Branner 1997, p. 248).

of literature" with Roman scripts in order to preach their religion and to educate the Chinese people.

10.1.1 Summers' orthographic rules

Summers contended that it is not enough to only employ Roman letters to transcribe Chinese. Some "marks" are needed to designate the tones and other features of Chinese (1853a, p. 21). Hence, his system consists of two parts: Roman letters and diacritics, including the spiritus asper <‘> after the consonant for marking aspiration, for example in *t‘ā*. Summers also briefly mentioned placing an <h> after the consonants to indicate the aspiration, for example, *thien* (1863a, p. 4). However, the first option is the one Summers used in his works. This diacritic was adopted from Williams, who applied the spiritus asper to indicate aspiration (Branner 1997, pp. 250–251).

For marking tones, Summers claimed that he followed the Jesuit tradition and applied eight diacritics (1863a, p. 7; 1853a, p. 23). The five tones in Nanjing Mandarin in his *Handbook* are rendered as a macron <¯> for the "upper even tone" (*shàng-p‘îng-shīng* 上平聲), a circumflex accent <^> for the "lower even tone" (*Hiá-p‘îng-shīng* 下平聲), a grave accent <`> for the "upper rising tone" (*shàng-shàng-shīng* 上上聲), an acute accent <´> for the "upper descending tone" (*shàng-k‘ŭ-shīng* 上去聲) and a breve <˘> for the "upper entering tone" (*shàng-jĭ-shīng* 上入聲) respectively (1863a, p. 7). The signs were indeed adopted from the Jesuit Trigault's *Xīrú ěrmù zī* (西儒耳目資 *An Aid to the Ear and the Eye of Western Scholars*, 1626); however, of all the works that Summers referred to, Varo's grammar (1703) is the first publication that employed this set of signs to mark Chinese tones (Coblin and Levi 2000, Editor's foreword, pp. xiv–xvi). Summers called these diacritics "tone-accents" and said that they should be placed on top of each syllable to designate the tone of the entire syllable (1853b, Introduction, p. iv). This indicates that Summers considered tones as an attribute of syllables, not of vowels, i.e., they are suprasegmental, although in practice, he still placed them on top of the vowels. In fact, although Summers did not express the rule, he always placed tonal markers on top of the last vocalic sign in the syllable, such as *kiá and sź*.[329] Summers' transcription of the tones for Mandarin is the same as, and was most probably adopted from, Morrison (1815a), including the tonal markers and the position of the markers in the syllable.

[329] For the nature of <z>, see 2.2.

The basic principle of his orthography is, except for rare cases (for example, <i>, see Section 10.2), that each Roman letter should represent one "value" consistently and uniformly, as proposed by William Johns (1746–1794) and Karl Richard Lepsius (1810–1884, Summers 1863a, p. xii). Johns pointed out the necessity of a consistent and universal system of transliteration while transcribing Asian names of people and places with Roman letters in 1788 (Cannon 1998, p. 137). Lepsius shared his idea and argued that while transcribing non-European languages, each sound should be transcribed by a specific symbol and every modification needs to be marked by a certain diacritic (Solleveld 2020, p. 194).

Lepsius' idea and system were supported by the Church Missionary Society as early as 1845 (Solleveld 2020, p. 195). This is another reason why Summers followed Lepsius' suggestion, apart from approving of his ideas. Summers had a history with, and an emotional connection to, the Church Missionary Society. His old friends and benefactors who recommended him for the position at King's College London, Rev. Stanton and Smith, were all members of the society (cf. Chapter 1). In his *Lecture* (p. 20), Summers argued that he adopted the orthographic system, recommended by Rev. Henry Venn (1796–1873) of the Church Missionary Society. Therefore, Summers took the general suggestions of the Church Missionary Society as the doctrine of his own transcribing system. Regardless, some details differ, as shown later in this chapter.

Based on this principle, Summers argued that English orthography, especially for vowels, is not ideal for his transcription system because of the irregularity of the correspondence between the "letters" and their "values" (1863d, p. 122; 1863a, p. xii). This explains why Summers also gave German and French examples alongside the English ones when explaining the pronunciation of each symbol. The English consonant system, however, was suitable for transcribing Chinese, as stated by Summers. For example, in *Gospel* (1853b, Introduction, pp. ii–iii) and *Handbook* (1863a, p. 3), most of the examples of the "value" of the consonants are shown in English words. Summers stated that the Italian and German orthographies are the ideal ones (1853b, Introduction, p. ii), but he did not give any examples of Italian (there is no evidence showing that he spoke Italian). The notion that the Italian orthographic system, especially that of the vowels, was suitable for transcribing a non-European language like Chinese can be traced back to Venn (1848, p. 2) and can be found in *The Chinese Repository* (Williams 1836, p. 23; 1838, p. 480). Summers' transcription of the vowels and consonants is very similar to that in *The Chinese Repository* (compared to Williams 1842b, pp. 28–44).[330]

[330] Williams' system is based on Jones' orthography with some modifications (Klöter 2006, p. 89).

Summers himself was a Chinese teacher and, at the same time, a publisher. For didactic and practical reasons, the "applicability" principle of transcribing the Chinese language weighed a lot in his works.[331] To be useful and simple for European beginners was the goal of his transcription system. The proposed Romanized system should be a system that is familiar to Europeans, "without any modern inventions" and borrowing as little as possible from other alphabetic systems (1864f, p. 442) to cater for the needs of students who are used to the alphabetic systems. This also explains why Summers did not fully adopt the transcription system proposed by Williams in *The Chinese Repository* with nine complicated diacritics (cf. Klöter 2006, p. 90). Only two of the diacritics of Williams were employed by Summers in his works: the abovementioned aspiration marker spiritus asper and the marker of nasal vowels, i.e., superscript <n>. The latter can be seen in Summers *Gospel* (for example, 1853b, p. 1) for the rendering of Shanghainese.

There are some interesting minor conventions in Summers' orthography. For example, in his *Handbook*, *u* is rendered as <w> and *i* as <y> when standing at the beginning of a syllable, such as <wai> and <ya> in the "Table of the syllables in the *Kwān-hwá*" (1863a, p. 5). Summers added more such conventions in his *Rudiments*; *ui* for example can be rendered as <wi> (p. 9). The unstated rule is that medial *u* is always rendered as <w>, just as the abovementioned example *Kwān-hwá*, [332] whereas the medial *i* is rendered consistently everywhere except as <y> in his *Gospel*. This is where examples like <kyo̤> are found.

10.1.2 Some changes in Summers' orthography in his Gospel and Handbook

What needs further clarification is that Summers' orthography in his *Gospel* and *Handbook* differ in three overt aspects.

Firstly, in *Gospel*, Summers also included <zh>, whose value is similar to *si* in *vision* as one of the consonants (1853b, p. iii), and in Summers' time, its value was [ʒ] (Prins 1972, p. 231). However, this sign never appeared in any actual examples of Chinese syllables in his works, which suggests that this consonant does not exist in Chinese, or at least, not in Mandarin, Shanghainese, Cantonese or any other variety of the Chinese language that Summers ever transcribed, or that this sign <zh> was abandoned by Summers in his later works. In fact, [ʒ] is transcribed as <j> in his *Handbook* (see Section 10.2), and this script appeared repeatedly in *Handbook* and *Rudiments*. In his *Gospel*, the same script <j> is pronounced as *j* in *jaw* (1853b,

[331] About "applicability", see Klöter (2006).
[332] More examples will be given in Section 10.2.

p. iii), whose value was [dʒ] in Summers' time (Prins 1972, p. 228), and no examples of syllables with <j> can be found in *Gospel*. Summers later claimed that <dj> stands for the English <j> (1863a, p. 3), which never appeared in any Chinese syllables that Summers transcribed either. Figure 11 shows the confusing relationship between the two values and two scripts in *Gospel* and *Handbook*:

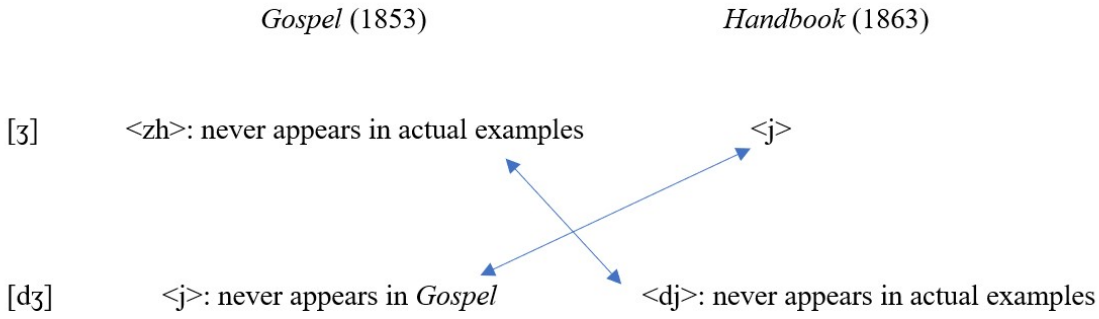

Figure 11: [ʒ] and [dʒ]

As shown in Figure 11, the corresponding relationship between the vertexes of each diagonal are easily noticeable. This should not be seen as a simple typo in his systems, but rather serve as an example of a shift in his orthography, i.e., in his *Handbook*, <j> is employed for [ʒ] whereas <zh> was abandoned. Besides, consonant [dʒ] does not exist in all the varieties of Chinese that Summers transcribed.

Secondly, in *Gospel*, when syllables start with <ü> or <ö>, these two vowels must be rendered as <Ue> and <Oe> (1853b, p. iv). This rule was abandoned in *Handbook*. <Ö>, as stated by Summers, does not exist in Mandarin, while <yü> stands for *ü* when there is no initial consonant in the syllable (1863a, p. 5).

Thirdly, his transcription of the apical vowel (i.e., the buzzing final) also changed (see 10.2.2).

10.1.3 Phonetic or phonemic?

In this section, I do not intend to claim that Summers aimed for a phonemic orthographic system, due to the fact that the phonemic principles of orthographies were not circulated until the 1940s, and the theoretical foundation of such a system was not laid before the late nineteenth century (Klöter 2005, pp. 127–129). However, Summers raised an intriguing point, which is cited here:

> 正 *ching* or *cheng*, 真 *chin* or *chen*, are equally good spellings in each case. It is therefore ridiculous to contend about shades of pronunciation that are almost imperceptible from their very nature, and are unnoticed by the natives themselves.
>
> These few remarks are merely intended as a friendly warning to the beginner not to be led astray by science, falsely so called, which affects a fastidious taste and does not lead to the truth in the end. By confining the system of orthography within bounds, a thoroughly correct pronunciation will be cultivated, while a simple system of spelling will be instituted. (1868, p. 5)

Discussing one of the examples *cheng* and *ching*, he noted that *ching* in southern Mandarin becomes *cheng* in Peking dialect, adding that "the difference however is hardly perceptible to a native" (1863a, Appendix V, p. 227). Practice always weighs more than theories in Summers' mind. He pointed out that an orthographic system should not pursue absolute correctness in order to pinpoint every single nuance and create new symbols for each of them, since they sometimes mean the same to native speakers, which reveals another pedagogical aspect of Summers' works.

10.2 Summers and Chinese phonology

Summers tried to explain the pronunciation of each vowel and consonant through the analogy of articulations in English, German, and French. In this section, I render his Chinese vowel and consonant system, mainly for Mandarin, in modern IPA, primarily according to his *Handbook*. The value of each symbol is based on Summers' English, German, or French examples, especially those in English and how they were pronounced in his time.[333] In the inventory, (G) represents German and (F) French. English examples are not marked, following the conventions Summers himself used (1863a, pp. 1–3; 1864a, p. 10). The example characters and their transcription are from his *Handbook*, unless otherwise indicated.

10.2.1 Chinese vowels

Summers listed nine simple vowels, among which, seven are further divided into long and short versions (except for <o̤> and <ö>). The short vowels were marked with a breve <˘> on top. The breve, as stated above, was also used to mark the entering tone by Summers. For him, most

[333] The method is adopted from Coblin (2003).

of the short vowels were long vowels affected by the entering tone, which explains why the breve had a dual function (1863a, p. 2). Employing the breve for marking both the entering tone and a short vowel is a special feature of Morrison's Romanization system (Coblin 2003, p. 346), which was likewise adopted by Summers. The difference between the "short" and "long" vowels will not be presented in the following inventory, following Summers' own arrangement.

Summers argued that there are three fundamental vowels, namely <a>, <i> and <u>. Other single vowels or diphthongs are derived from them (1863a, pp. 1–2).[334] He stated that these vowels should be pronounced as in German and Italian, which is identical to how Lepsius illustrated the basic vowels in his work (1863 [1855], p. 46). Summers further claimed that there are no "accumulations of vowels" (1864a, p. 1), and that each vowel has to be separately pronounced "open" and "in full", even if they are transcribed with two letters (1853b, Introduction, p. iii). Although Summers mentioned the term "diphthong" in his works as "those sounds formed by the combination of two primary vowels" (1863a, p. xxiii), for him, the Chinese "diphthongs" have to be pronounced separately as if they were marked by diaeresis. This becomes one rule that I apply when rendering Summers' diphthongs with IPA. Below,

[334] This belongs to one of the trends in the nineteenth-century-sound laws. In the area of phonetics, some rules about the historical development of the European languages were formulated at that time, such as the famous Germanic and High German sound shifts or Grimm's Law (Koerner 1990, p. 7; Robins 1997, p. 191; Burridge 2013, p. 151). In Summers' journal *The Phoenix*, Joseph Edkins (1823–1905) published a paper, claiming that the development of the Chinese language obeys Grimm's Law as well. He also suggested taking East Asian languages into account in order to perfect Grimm's Law (Edkins 1872, pp. 68–69).

Grimm and other linguists like August Schleicher stated that *a*, *i* and *u* are three basic vowels in the beginning stage of every language (Jankowsky 2001, pp. 1332–1333). This notion anticipated Summers' elaboration of the Chinese vowels: "There are three primary vowel sounds, *a*, *i*, *u*, and from these the other vowels and the diphthongs spring (1863a, p. 1)" and "*Ai* and *au* are modified into *e* and *o*, pronounced *ay* and *o*" (1864a, p. 9). In fact, he recommended Grimm's *Geschite der deutschen Sprache* (1853 [1848]), Becker's *Organism der Sprache* and Humboldt's *Über die Kawi-Sprache auf der Insel Java* (1836, 1838, 1839) to the students on this topic. However, Grimm and Humboldt's works did not contribute to Summers' research on Chinese grammar. Summers even drew a triangular diagram to show the relationship between these three vowels and the other vowels (1863a, p. 1), which was a typical way to present the interrelation between vowels in the mid-nineteenth century (Kemp 2001, p. 1469). Summers placed *a*, *i*, *u* at the vertexes of the triangle, while the diphthongs and other vowels, which can be "produced" (p. 1) by uniting the two vowels at the vertexes, were placed on the edges:

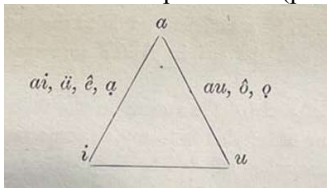

Figure 13: The vowel triangle by Summers (Leiden University Libraries 3 8691 G 16)

Appendix V. in Summers' *Handbook* (pp. 225–229) compares the system of vowels and consonants in Mandarin, Cantonese and other varieties of Chinese: "[t]he regular changes which we find in European languages occur in Chinese […]. These principal changes serve to show the uniformity that exists in Chinese dialects; the diversity being always in accordance with some well established [sic] law of euphonic change (pp. 226–228)". This suggests that, for Summers, rules discovered for European languages might also apply to the varieties of the Chinese language.

vowels in Summers' works (with a focus on his *Handbook*) are summarized and presented according to the first vowel of the diphthong (either the medial or the main vowel) by me.

(1) <i> ([i] or muted after <ch> or <sh>, see Section 10.2.2), <ie>, <ien>, <ia>, <iau>, <iai>, <io>, <iu>, <iun>, <iuen>, <iung>, <in>, <ing>, <iang>

Examples: *nì* 你, *siè* 寫, *tién* 店, *kiá* 架, *k'iaù* 巧, *kiaī* 皆, *h'iò* 曉, *yiū* 憂, *kiūn* 軍, *kiuén* 卷, *hiūng* 兄, *yīn* 音, *yíng* 應, *liàng* 兩

Summers stated that <i> is just like *ee* in English (1863a, p. 1), which was pronounced [i:] in Summers' time (Prins 1972, p. 122). Its value is interpreted here as [i]. For <io>, Summers stated that this vowel does not exist in Mandarin but only in Shanghainese. In his Gospel, *h'ió* could serve as an example of this diphthong, and the word it forms is *h'iò-tă* (1853b, p. 5, 48). In the vocabulary Summers provided at the end of this book, *h'iò-tă* is not included, but "*Hyo̤-tă* to understand" is listed (1853b, Vocabulary of the first two chapters, p. 2). According to the context and the Chinese translation, this word should be 曉得 'to know'. Summers, however, did not claim that the *i* stands as <y> (except when it is at the very beginning of a syllable) or *io̤* as <io> orthographically. The aspirations of the initials are also different based on his script. Moreover, a very similar *h'io̤-tă* can be found in the work (1853b, p. 5). However, in his *Handbook*, he also gave some examples of <io> in Mandarin: *kiŏ* 覺 (p. 159), *kiŏ* 却 (p. 174), *kiŏ* 脚 (p. 191), *kiŏ* 鞠 (p. 204), *kiŏ* 麴 (p. 204), *hiŏ* 學 (p. 168), *tsiŏ* 爵 (p. 177), *liŏ* 略 (p. 188), *niŏ* 虐 (Part II, p. 98, p. 10) and so on. These syllables are all marked with entering tone (or have short vowels). Hence it has to be intentional that the entering tone and <io> co-occur. It shows that, according to Summers, in Mandarin <io> exists but only with the entering tone.

(2) <e> ([e]), <ei>, <eu>, <en>

Examples: *k'ĕ* 客, *meī* 每, *sheù* 手, *yên* 眼

Summers' <e> here should be [e], since he wrote that it sounds like *a* in *lame* (1863a, p. 1). In his time, *a* should already be pronounced as [ei],[335] but in the eighteenth century, it was the monophthong [e:] (Prins 1972, p. 122). Summers claimed that this *e* is "the flattened *a* in *shame*" by "gradually closing and contracting the organs" from <a>. Therefore, based on his abovementioned principles, it is rendered as a monophthong [e] here, instead of the diphthong [ei]. According to the German example *ei* in *sein*, <ei> would have been [ai] in Summers' time

[335] Qián Nǎiróng (2014, p. 3) suggested that it should be the diphthong [ei] based on Summers' *Gospel*. As mentioned, Summers proposed a "universal" transcription system to render all varieties of the Chinese language and the value of <e> should be the same when he employed it to render Shanghainese and Mandarin. However, I do not adopt Qián's transcription here since it should be a monophthong.

(Wright 1907, p. 61). However, Summers also gave another [ai] as in *aisle*, arguing that "[b]y the union of *a* and *i* the *diphthong ai* is produced, as *ai* in *aisle*" (1863a, p. 1). Therefore, here <ei> is rendered as [ei] based on its simple-vowel component, which is a general rule of Summers' Romanization.

(3) <a> ([a]), <ai> ([ai]), <au> ([au]), <an>, <ang>

Examples: *mà* 馬, *t'aī* 台, *p'aú* 炮, *fán* 範, *tàng* 等

Summers wrote that <a> is like *a* in *darf* in German and *ah* in English, which was [a] or [a:] in Summers' time (Wright 1907, p. 49; Prins 1972, p. 145). Here [a] is adopted.

(4) <ạ> ([ə]), < ạr>, <ạn>, <ạng>

Examples: *kạ* 個,[336] *ậr* 兒, *sạ̄n* 孫, *kạ̄ng* 更

<ạ> is rendered according to the German example *e* in *haben* in *Handbook* (1863a, p. 3). Wright argued that when *e* is unstressed in New High German, it is pronounced as [ə] (1907, p. 66). Besides, in Summers' introduction, this sound is supposed to be similar to *ir* in *sir*, *er* in *her*, *a* in *organ* and *o* in *son* (1863a, p. 1, p. 3). These English examples were actually cited from linguist Monier Monier-Williams' (1819–1899) work *Original Papers Illustrating the History of the Application of the Roman Alphabet to the Languages of India* (1859, p. xii)[337] by Summers (1863d, p. 122). According to Prins (1972, p. 146, p. 150, pp. 154–155), for many instances in Modern English, *ir* and *er* is rendered as [ə]. However, in *o* in *son* or the other example given by Monier-Williams, i.e., *u* in *gun*, the vowels were [ɒ] and [ʌ][338] in Summers' time (Prins 1972, p. 123). Because the English examples that Summers provided do not have the same value, <ạ> is rendered as [ə] based on the assured German example. Summers also mentioned that <ạ> is the <ă> in Morrison's works (1863a, p. 3). Coblin argued, however, that the value of Morrison's <ă> is [æ] (2003, p. 346), which does not really match Summers' description.

(5) <o> ([o]), <oi>, <ọ> ([ɔ])

Example: *kō* 哥, *tsoí* 在, *tsó* 照

Based on Summers' German example *o* in *oder*, <o> is rendered as [o] (Wright 1907, p. 55), whereas <ọ> is [ɔ] since Summers' example is *aw* in *law* and in the time, it was [ɔ] (Prins 1972, p. 123). Summers stated that <ọ> does not exist in Mandarin but that it does in Cantonese and

[336] This syllable appeared in the *Gospel* (1853b, Vocabulary, p. 2) with the function "sign of the possessive case". The character is added by me.

[337] In this book, Williams also argued that English orthography should not be adopted for Romanizing the Indian languages, due to its "irregular and systemless" features (Monier-Williams 1859, pp. xi–xii).

[338] In fact, Qián Nǎiróng (2014, p. 3) interpreted it as [ʌ].

Shanghainese. The example *tsó̤* is from Shanghainese in *Gospel* and the character is added by me. Summers also mentioned that the value of <o> in his works is the same as <o> in Morrison's (1863a, p. 3). The latter is rendered as [ɔ] by Coblin (2003, p. 351), which indeed corresponds to the value of <o̤> in Summers' work.[339]

Summers stated that the vowel <oi> does not exist in Mandarin but in Cantonese, *tsoí* is identified from Summers' transcription of the *Lord's Prayer* and *Apostle's Creed* in Cantonese (1863d, Vol. I, p. 115) and the character is added by me because Summers did not provide any Chinese characters in these two texts.

(6) <u> ([u]), <wa>, <wai>, <wan>, <wang>, <wo>, <wei>, <ui>, <wui>, <uen>, <wüi>, <ung>

Example: *fū* 夫, *hwá* 話, *kw'ái* 快, *twán* 端, *ch'wāng* 窗, *kwó* 過, *kweí* 桂, *tusí* 罪, *shwuì* 水, *ch'uên* 船, *hwüí* 會, *sūng* 松

The value of <u>, as stated by Summers, is that of *oo* in English, which was [u:] in word-final positions in his time (Coblin 2003, p. 351). Hence, <u> is rendered as [u] here.

Summers stated that <ui> does not exist in Mandarin; in Cantonese, however, <wui> does. The example of <ui>, therefore, is chosen from his transcription of the *Lord's Prayer* in Cantonese (1863d, p. 115). I added the character 罪 for clarification.

(7) <ü> ([y]), <üi>

Example: *nǜ* 女, *tsüí* 醉

According to Summers, the value <ü> was as *ü* in *Mühe* (G). At the time, *ü* showed no difference from today's *ü* in German (Wright 1907, p. 55), which is rendered here as [y] in IPA. However, Wright also wrote that the value of <üi> is as *eu* in *Beute* (G), which is [oi] like Summers' transcription of <oi>; instead the alternative combination of [y] and [i] (Wright 1907, pp. 59–60). Summers also wrote that Morrison's transcription for his <ui> and <üi> is the same <uy> (1863a, p. 3), and Coblin interpreted <uy> in Morrison's works as [ʊi] (2003, p. 350). Apparently, Summers considered <ui> different from <üi>. In this case, I interpret his <üi> as [yi] by applying his general rule of the diphthongs in Chinese, i.e., each vowel in a diphthong has to be pronounced individually and separately.

(8) <ö> ([ø])

Example: *kȫn* 'to see'看 (1853b, p. ix)

[339] Qián Nǎiróng (2014, p. 3) rendered <o̤> as [aw] and <o> as [ou], which are not adopted in this dissertation, since they do not correspond to the English or German examples that Summers provided.

Two corresponding examples were given by Summers: *ö* in *Löwe* (G) and *œu* in *sœur* (F). They had the same sound [ø] at that time (Wright 1907, p. 55; Pope 1952, p. 284; Coblin 2003, p. 349). Summers stated that this vowel exists in Shanghainese, but not in Mandarin. The example *kön* is from Shanghainese in *Gospel* (1853a, p. ix), to which I added the character because he did not provide any characters.

Summers' ideas about apical vowels are presented in Section 10.2.2.

10.2.2 Chinese consonants

Table 2 presents an inventory of twenty-nine consonants as found in Summers' *Handbook*, including twenty-six single consonants, two approximants and a special case of <r>.

Table 2: Consonants in Summers' works

Summers' transcription	IPA transcription	Analogy in European languages	Chinese examples	remarks
<b>	[b][340]	/	*bâng* 棚 (1853b, p. 46)[341]	Summers stated that <b> exists in Shanghainese and Southern Mĭn language, but not in Mandarin.
<ch> & <ch'>	[tʃ] (Prins 1972, p. 228) & [tʃʰ]	*ch* in *hatch*	*Cheū* 周 & *ch'ŭ* 出	
<d>	[d][342]	/	*-dậ* -頭 (1853b, p. xii)	Summers stated that this consonant exists in Shanghainese and the Ningpo

[340] Summers stated that it should be pronounced as the English <b> (1863a, p. 3), whose value was [b] at Summers' time (Prins 1972, p. 227).
[341] Character added by me.
[342] Summers stated that it should be pronounced as the English <d> (1863a, p. 3), whose value was [d] at his time (Prins 1972, p. 227).

				dialect, but not in Mandarin.
<f>	[f] (Prins 1972, p. 230)	*f* in *fit*	*fū* 夫	
<g>	[g] (Prins 1972, p. 227)	*g* in *good*	*gaú* 傲	
<h>	[h] (Prins 1972, p. 233)	*h* in *heart*	*haú* 好	Summers argued that "before *i* and *ü* it is a strong aspiration, nearly *sh*" (1863a, p. 3).
<j>	[ʒ] (Prins 1972, p. 233)	*z* in *azure*	*jû* 汝	
<k> & <k‘>	[k] (Prins 1972, p. 226) & [k^h]	*k* in *king*	*kw‘ái* 快 & *k‘ě* 客	Summers argued that when <k> is followed by <i>, it is pronounced similar to <chi> and <ci> (1864a, p. 11).
<l>	[l] (Prins 1972, p. 229)	*l* in *line*	*leū* 樓	
<m>	[m] (Prins 1972, p. 228)	*m* in *mine*	*maú* 帽	
<n>	[n] (Prins 1972, p. 228)	*n* in *nine*	*nù* 女 & *pàn* 板	
<p> & <p‘>	[p] (Prins 1972, p. 226) & [p^h]	*p* in *pine*	*pàn* 板 & *p’îng* 平	

<s>	[s] (Prins 1972, p. 230)	*s* in *see*	*siaù* 小	
<sh>	[ʃ] (Prins 1972, p. 231)	*sh* in *shine*	*shàng* 上	
<t> & <t‘>	[t] (Prins 1972, p. 226) & [t^h]	*t* in *tiny*	*tō* 多 & *t‘iēn* 天	
<v>	[v] (Prins 1972, p. 230)	*v* in *vine*	*và* 哇[343] (1853b, p. 7)	Summers stated that this consonant exists in Shanghainese and the Ningpo dialect, but not in Mandarin.
<ts> & <ts‘>	[ts] & [ts^h]	*ts* in *wits*	*tsiŏ* 爵 & *ts‘àu* 早	
<sz>	[sz]	/	*szé* 事	In the “Table of the syllables in the *Kwān-hwá*”, there are only <sz> and <tsz>, without <z>.
<tsz> & <ts‘z>	[tsz] & [ts^hz]	/	*tszé* 子 & *ts‘zé* 賜	
<ng>	[ŋg]	*ng* in *anger*	*ngò* 我 & *yâng* 陽	
<w>	[w] (Prins 1972, p. 233)	*w* in *way*, or *v* in *vine*	*waí* 外	In Summers’ transcription, <w> stands for <u> at the beginning of a syllable.

[343] Interrogative pronoun, character added by me.

<y>	[j] (Prins 1972, p. 233)	*y* in *you*	*yâng* 陽	
<r>	[r]	*r* in *run*	*ậr* 兒	

In Chinese, Summers argued, there are no consonant clusters. Even those transcribed with two letters are not considered to be clusters as such, for example, the initial consonants <ch>, <sh>, <ts> and the final nasal consonant <ng> (1864a, p. 1). They are single consonants as well. Therefore, the twelve "clusters" with <w>, mentioned in Summers' own table of consonants (1863a, p. 3) are considered to be combinations of consonants and a vowel <u> (or an approximate etc., but not a consonant). Table 3 is a list of these combinations.

Table 3: The combination of consonants and <w>

Summers' transcription	IPA transcription	Analogy in European languages	Chinese examples
<chw> & <ch'w>	[tʃw][344] & [tʃʰw]	*chw* in *hatchway*	*chwâng* 壯 & *ch'wāng* 窗
<kw> & <k'w>	[kw] & [kʰw]	*qu* in *queen*	*kwŏ* 國 & *k'weí* 塊
<lw>	[lw]	*lw* in *bulwark*	*lwán* 亂
<mw>	[mw]	*mw* in *homeward*	*mwán* 滿
<nw>	[nw]	*nw* in *inward*	*nwân* 暖
<sw>	[sw]	*sw* in *swain*	*swán* 算
<shw>	[ʃw]	*shw* in *a rash wish*	*shwŏ* 說
<ju>/<jw>	[ʒw]	*j* in *jouir* (F)	*jwàn* 軟
<tw> [345]	[tw]	*tw* in *twist*	*twàn* 短
<tsw>[346]	[tsw]	*tsw* in *Cotswold*	*tswàn* 纂

Summers noted a difference between aspirated and unaspirated consonants. He employed the spiritus asper <'> to designate aspirated consonants, but he did not include the aspirated consonants in his table of the syllables: "[i]n the Mandarin or Court dialect…there are four hundred and ten syllables, besides those with aspirates, as *thien* or *t'ien*" (1863a, p. 4), although aspiration is actually used to distinguish the meaning (1863a, p. 8). This shows that he considered the two corresponding consonants as a pair and that aspiration is only an additional

[344] Clusters are all rendered by combining their components here.
[345] No syllable with <t'w> is found in Summers' works.
[346] No syllable with <ts'w> is found in Summers' works.

feature that does not need an extra letter in the transcription. In Table 2, the aspirated consonants are listed next to their unaspirated correspondences. The term "aspiration" not only referred to a distinct feature of a pair of consonants by Summers, but also to the natural characteristic of some consonants. For example, Summers wrote: "[w]hen the letter *h* is used it will be understood to be a very strong aspiration; thus, *haì* 海 'the sea' is pronounced as if written with the German guttural *ch*, *chaì*" (1863a, p. 8). Meanwhile, he gave very confusing examples of *h'wá* 畫 'to sketch' (1863a, p. 43), *h'ì* 喜 (1863a, p. 70), *h'ŏ* 渴 (1863a, p. 198) and *h'aī* 開 (1864a, p. 99) with <h> and the spiritus asper. However, he rendered the same characters differently elsewhere, such as *hwā* 畫 (1863a, p. 113), *hwá* 畫 (1864a, p. 131), *hì* 喜 (1863a, p. 81), *k'ŏ* 渴 (1864a, p. 150) and *k'aī* 開 (1863a, p. 8). Hence, <h'> is a discrepancy in Summers' work, so it should not be included in his transcription of Mandarin.

In his *Gospel*, Summers argued that <'> and <h'> are used to mark "different degrees of aspiration" (p. iii), and there are examples with <h'> in the text. In *Gospel*, no other consonants are placed together with <h> or <h'> to denote aspiration, but only with the spiritus asper <'>. Therefore, the spiritus asper marks the distinctive feature of aspiration for the consonants, a function that <h> or <h'> do not have based on Summers' orthography. There are examples with both initials <h> and <h'>, which suggests that these are two different consonants in Shanghainese. Jiāng Ēnzhī (2011, p. 46) mentioned that in later Shanghainese, there are three glottal consonants, i.e., [ʔ], [ɦ] and [h]. Unfortunately, Summers did not explain the differences any further. It seems that <h'> stands for the strong aspirated consonant, either a voiced fricative [ɦ] or voiceless fricative [h], and <h> for the less strongly aspirated glottal stop [ʔ]. In this case, his transcription of [h] in *Gospel* and *Handbook* are different, i.e., <h'> and <h> respectively.

The abovementioned special case of <r> is also worth noting. According to Prins, in Summers' time, <r> could be either [ɹ] or [ə (r)] in English (1972, p. 229). In Summers' *Handbook*, this consonant never occurs initially, but always follows <ậ>, forming the syllable *ậr* 兒. Since the value of <ậ> is [ə], the value of <r> is interpreted as [r] in Table 2.

According to Summers, the structure of syllables in Mandarin is V, CV or CVC. The final consonants of the last type can only be the nasal <n> or <ng> in Mandarin (1853a, p. 19; 1863a, p. 4; 1864a, p. 1), which can also occur word initially.[347] In Cantonese and Hakka, <k>, <p>

[347] In his *Handbook*, Summers could not decide how to render 愛: sometimes he interpreted it as *gaí* (1863a, p. 118, p. 143, p. 164, p. 192, p. 198, etc.), whereas in other cases it was rendered as *ngaí* (1863a, p. 52, p. 57, p. 67, p. 109 and Part II, p. 28, etc.). No specific patterns are found to explain these differences.

or <t> can serve as final consonants (1863a, p. 226). However, in Summers' table of the Mandarin syllables which are numbered, two of them are without any vowels, namely, 320 <sz> and 372 <tsz>. Furthermore, in his works, <ts'z> also appeared without a vowel. Summers explained that <sz> equivalents to the "hissing sound of" <s> followed by the "buzzing sound of" <z>. The same applies to <tsz> (1863a, p. 3). This idea can at least be traced back to Lepsius: "[i]n the Chinese language, for instance, *z* is used as a vovel [sic] in the roots *sz*, *tsz*" (1863 [1855], footnote, p. 48). However, in his *Gospel*, Summers argued that there is a vowel following <tsz> and it is rendered as a double-*o*- superscript <∞> at the right corner of a consonant, for example, *tsz*$^{\infty}$ (1853b, p. ii). He described it as follows:

> [T]here is a peculiar vowel sound written tsz$^{\infty}$, dz$^{\infty}$, &c. This is pronounced only in part. Rule: Place the lips in the position required for producing the vowel *u* or *oo*, then pronounce the *tsz* or *dz* without moving the lips, but do not enunciate the vowel sound. (1853b, p. ii)

As stated above, the value of <u> and <oo> in Summers' time was [u:], which is a close back rounded vowel. According to his explanation, the lips should be rounded while pronouncing <tsz$^{\infty}$> and the position of the tongue is not affected by <∞> at all. Hence the script with <∞> is not really the transcription of a vowel, but rather a way of pronouncing the preceding consonants. By comparison, Lepsius proposed that there is an "indistinct vowel-sound" which is "inherent in all soft *fricative* consonants", which is why *z* can form syllables without any other vowels in Chinese and is rendered as <z̥> (1863 [1855], p. 48). Furthermore, after consulting Gützlaff, Lepsius concluded that this vowel is derived from the Chinese vowel *u* (1863 [1855], p. 234), which was anticipated by Summers' abovementioned argument in *Gospel*. Summers did not write any scripts for vowels here, not because he believed that vowels are not necessary for a syllable,[348] but because such consonants inherently possess certain features of vowels.[349] This deduction can further explain Summers' argument that in his system, <shi> and <chi> end with a vowel <i>, though this <i> "is not sounded at all" in Beijing Mandarin and Nanjing Mandarin (1863a, p. 39).[350] He did not write any script after the buzzing *z* but an <i> after <ch> [351]and <sh> in his *Handbook*.

[348] It is quite different from the descriptions by Williams in the *Chinese Repository*, who argued that "*sz* […] is combined with a peculiar vowel sound" (1836, p. 26) but later on changed it "to be enunciated by a hissing, not followed by any distinct vowel sound" (1838, p. 485).
[349] Summers did not include such a rounded vowel in Chinese phonology, nor did he consider it as two different vowels, which is different from what has been stated by Jiāng Ēnzhī (2011, p. 47).
[350] Summers' application was mentioned by Schott (1857, p. 8).
[351] And also <ch'> as in *ch'ĭ* 吃 (1863a, p. 76).

While explaining the articulation of the vowels and consonants, Summers used the method of analogy, as mentioned above. His description of them is rather vague, for example, he stated: "*r* in *run*; rather more rolling than the English *r*" (1863a, p. 3).

10.2.3 Chinese tones

"Tones", Summers stated, is the European term for the "modulation(s) of the voice", which is referred to by the Chinese as *shēngyīn* 聲音 'tone-sounds' (1853a, p. 21; 1863a, p. 6). They have the function of differentiating the meaning that the syllables convey (1863a, p. 6). They are not "accents" of emphasising or the "elevated utterance of syllables in words" (1863a, p. 6). Tones are "certain fixed intonations", a property of syllables and they do not change according to the emotions of the speakers or the environment (1864a, pp. 12–13). However, they do vary for the purpose of "euphony" (1863a, p. 6). Although he did not explain this any further, Summers seemed to account for the existence of sandhi.

Summers claimed that there are eight tones in total in Chinese. In its varieties, the number of tones varies. Thus, the eight tones are further divided into a higher and a lower register, each of which have four types, i.e., even, rising, departing and entering tones. [352] In Mandarin, there are five tones, i.e., the upper even tone, the upper rising tone, the upper departing tone, the upper entering tone and the lower even tone, as mentioned above (1853a, p. 23; 1853b, Introduction, pp. iv–v; 1863a, p. 7; 1864a, p. 12).

Summers' analysis of the tones is sometimes attached to that of vowels. Two examples are the following. Firstly, from what has been mentioned above, the tones for Summers are merely a change to the pitch of the syllable. He considered the "entering tone" as a "short abrupt utterance" (1863a, p. 7). The difference in duration is caused by the vowels instead of the tones. That is why he distinguished between short and long vowels as mentioned above. Second, what we call a "neutral tone" is not included in his tonal system. However, he did indicate the feature of the vowel reduction in neutral tonal syllables. This argument was based on the analogy of English, clearly for didactic purposes. He wrote:

> [T]he simple vowels… may be accented or unaccented; in the latter case they are hardly distinguishable from one another […]. [I]n such syllables as *de* in *derive*, *on* in *mason*, *al* in *vocal*, these words might

[352] According to modern research on Chinese phonology, the voiced and unvoiced initial consonants impacted the tones of the syllables and finally split the four tonal categories into a high-pitched register and a low-pitched register which ended up with eight tonal categories in total in Middle Chinese (see Norman 2010 [1988], pp. 52–53).

> be written dŭraiv, mesŭn, vokŭl, and the syllables dŭ, ŭn, ŭl, uttered with the same vowel sound. Hence in unaccented syllables the short vowels are interchangeable. So also in Chinese. (1868, pp. 4–5)

Summers stated that accents are not tones, as mentioned above. For him, it is the vowel that changed or was reduced in the "unaccented" syllable, which has nothing to do with tones at all. In these two examples, Summers touched on the alien "tone"-topic from a familiar "the value of the vowels"-topic. It is both a strategy for himself originating from when he learnt Chinese tones, but it is also a tailored approach for his students with a European linguistic background.

When it comes to pedagogy, Summers argued that learning the tones is important yet difficult for students (1853a, p. 22; 1863a, p. xiii). Summers himself paid a lot of attention to tones when he learnt Chinese (Summers, 22 November 1852) and put a lot of effort into describing how to pronounce tones for his students. Analogies were his most frequently used method. For example, in order to explain the even tone, he cited Shakespeare's work:[353] "The sound or tone of voice in which Richard the Third may be supposed to have shouted, "A horse! a horse!" […] corresponds with the first tone (*p'îng-shīng*) of the Chinese" (1864a, p. 13). He even applied the tonal diacritics and concepts in English sentences so that students could understand the intonation (1863a, pp. 7–8). Sometimes, one can sense some irritation on his part. When trying to explain the second tone (lower rising tone) in Shanghainese, for example, he wrote: "this tone accords precisely with the accent of natives of Scotland, which is impossible to describe" (1853b, p. v).

His basic pedagogy of teaching tones was from the familiar to the unfamiliar, i.e., to start with similar features in English in order to help the students understand the tones gradually. He then asked the students to pronounce tones "with the full force and modulation" and as exaggeratedly as possible. With more practice, especially with native speakers, students would eventually speak in a natural way (1863a, p. xiii).

10.3 Concluding remarks

In early nineteenth century, the general consensus among scholars was that Chinese was difficult, was purely monosyllabic and had to be written with Chinese characters (DeFrancis 1950, p. 18). According to Summers' works, the colloquial Chinese was not monosyllabic, therefore, it was possible to render it with Roman letters, without the ambiguity caused by homophones. This shows the consistency of Summers' logic.

[353] Summers was very familiar with Shakespeare's works. He contributed a lot to the introduction of Shakespeare's works into Japan (cf. Chapter 1).

For Summers, Chinese characters could even be substituted with the Roman alphabet, at least for foreign students, which he indicated in his *Gospel* and his *Rudiments*. The former is a Shanghainese translation of the *Gospel* without a single Chinese character, whereas the latter is a manual for fast learning. However, in his *Handbook*, Chinese characters are valued as an important aspect of learning the Chinese language. The *Handbook* is a textbook about both colloquial and literary Chinese. It aims to provide students with a solid basis of the language. Hence, in Summers' mind, the Roman-alphabet replacement of Chinese scripts is a long-term ideal, not an enforceable reality in the short term. For the purpose of pedagogy, he had the responsibility to teach the students how to learn, recognize, and write Chinese characters correctly. He even gave examples of both handwritten and printed characters to help students in his appendix.

Summers' orthographic system was an adapted version of those developed by Williams and Morrison, and followed general principles found in Lepsuis'. It did not inspire other scholars, including Parker (cf. Branner's summary, 1999, p. 15), Wade (1867), Davis (1870) and Gabelentz (1881, p. 26). Among them, Doolittle (1872, p. I) and Douglas (1904, pp. 6–7) stated clearly that both their works follow Wade's transcription system of Beijing Mandarin.