

A Research on the Error Types in Four Editions of Bǎijiā xìng in hP’ags-pa Script*

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The hP’ags-pa script was created in the late 13th century which was intended to transliterate all the languages of the Mongol empire such as Tibetan, Uyghur and Chinese into a single writing system. Among all the Chinese hP’ags-pa materials, the primer Bǎijiā xìng (BJX) offered us extensive hP’ags-pa syllables and their corresponding Chinese characters. The BJX in hP’ags-pa script has four editions that are currently known to scholars. In my research, I found three types of errors in those hP’ags-pa syllables: (1) Misuse of similar-looking letters; (2) Pure clerical errors; (3) Errors in the transliteration of variant pronunciations. Among the three types, the third kind is rare. Most of the errors are graphic mistakes reflecting a lack of knowledge of the nature of the writing system. Hence, people’s cognition of writing systems influenced the effectiveness of script promulgation.

1. The hP’ags-pa Script

The hP’ags-pa script was created by hP’ags-pa Lama (1235–1280), a Tibetan scholar in the late 13th century who assisted Qubilai Khan (1215–1294) in the early Yuan dynasty. The script was completed and issued in 1269 (Coblin 2007, Shen 2008) and was originally called *Ménggǔ xīn zì* 蒙古新字, “new Mongol characters,” or simply *guó zì* 國字, “national script,” as opposed to the old Uyghur script. The Mongols called it *dörbeljin üsüg*, or “square script” (Leonard 1996). It was intended to transliterate all the languages of the Mongol empire¹ (Coblin 2007). However, its use during the Yuan dynasty was sporadic (Leonard 1996). Documents surviving in it include epigraphic material, official tablets, official or private seals, and some printed texts. The script was used throughout the Yuan period for about a hundred years and abandoned with the collapse of Yuan. It only remains in use in the Tibetan culture as an ornamental script and on seals of ranking dignitaries and religious hierarchs (Leonard 1996).

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¹ In Chinese: 譯寫一切文字.

As an alpha-syllabic writing system, the hP'ags-pa script combines the orthographic principals of both an alphabet and of syllabary writings (Shen 2008). In syllabary writing, the initial letter represents an entire syllable. Even if there is no initial consonant, a “dummy” letter for zero initial must be shown. Similarly, in hP'ags-pa script, an initial letter represents a CV (consonant + vowel) syllable with a default vowel [ɑ]. The single vowel syllable [ɑ] is spelled with a zero initial. But the other vowels [i] [u] [e] [o] must be presented by vowel letters. Those letters cannot stand for a whole syllable and must be used with a dummy initial letter. The syllabic features of the hP'ags-pa script were inherited from the Tibetan script (Shen 2008). The hP'ags-pa script is written vertically (top to bottom) in columns from right to left, similar to the Uighur script.

The Chinese hP'ags-pa script materials can be found in various resources, such as official or private seals, coins, bank notes, and edicts in the Yuan dynasty (Coblin 2007). Extensive hP'ags-pa scripts can be also found in the primer *Bǎijiā xìng* 百家姓, [Surnames of the Hundred Families] (BJX). The value of this material is still not fully explored. BJX in hP'ags-pa script not only offers us ample information about Chinese phonology, but also it can provide more insight into the history and movement of Chinese Romanization.

2. *Bǎijiā xìng* 百家姓

The BJX in hP'ags-pa script was issued in Yuan dynasty. The purpose of this document was to promulgate this new script. As seen in the preface of two BJX editions² in hP'ags-pa script, “if you can become proficient in this text at an early stage, you will find it to be a shortcut to a career as an official.”³

The primer BJX in hP'ags-pa script is preserved in a popular encyclopedia *Shilin Guangji* 事林廣記 [Comprehensive Record of Affairs] (SLGJ). The BJX in hP'ags-pa script has four editions that are currently known to scholars (Luo and Cai 1959, Junast 1981, Junast 2003, Coblin 2007, Chen 2014).

(A). A Yuan edition, published by the Chunzhuang Shuyuan 椿莊書院 during the Zhishun 至順 period (1330–1333).

(B). A Yuan edition, published by Ji Cheng Tang 積誠堂 in the sixth year of the reign of Zhiyuan 至元 (1340).

² The two editions refer to the Yuan edition published by Chunzhuang Shuyuan 椿莊書院 during the Zhishun 至順 period (1330–1333) and the Yuan edition published by Ji Cheng Tang 積誠堂 in the sixth year of Zhiyuan 至元 (1340).

³ In Chinese: 初學能復熟此篇，亦可以爲入仕之捷徑云。

(C). A Japanese edition, published in the twelfth year of Genroku 元祿 (1699), which is a reprint of a Yuan Taiding 泰定 (1325)⁴ edition.

(D). An edition that was provided by the Hungarian scholar Louis Ligeti.

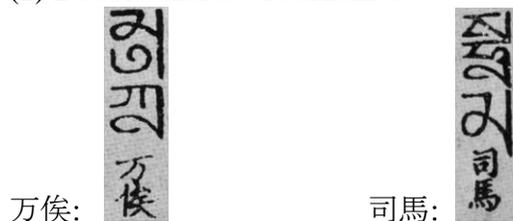
As a variety of scholars cannot be sure of the publishing house of the edition provided by Ligeti, these four editions are usually labeled A, B, C, and D. I will refer to them as the A, B, C, and D editions hereafter, according to the convention of the scholars in this field (Junast 1981, Junast 2003, Chen 2014).

Like the BJX Chinese version, the BJX in hP'ags-pa script also lists those common single-character and double-character Chinese family names, and the double-character surnames occur after single-character surnames. The difference is that the primer BJX in hP'ags-pa script provides both hP'ags-pa syllables and their Chinese equivalents. I show some examples below. In terms of single-character surnames, I use the first four surnames “趙、錢、孫、李” as examples. For the double-character surnames, I use “万俟、司馬” as examples.

(1) Single-character surnames



(2) Double-character surnames



As we can see from above, (1) lists the first four single-character surnames 趙 zhào、錢 qián、孫 sūn、李 lǐ⁵, and (2) lists two double-character surnames 万俟 mò qí and 司馬 sī mǎ⁶. For either single-character surname or double-character surname, the

⁴ Taiding (泰定) is the name of a Yuan emperor, his reign started from the year of 1324 and ended in the year of 1328. Yuan Taiding edition was produced in the third year 1325.

⁵ The pictures of 趙 zhào、錢 qián、孫 sūn、李 lǐ are from the Yuan edition published by Ji Cheng Tang 積誠堂 in the year of 1340.

⁶ The pictures of 万俟 mò qí and 司馬 sī mǎ are from the Yuan edition published by Ji Cheng Tang 積誠堂 in the year of 1340.

top part is the hP'ags-pa syllable, and the bottom part is the corresponding Chinese surname.

3. Brief Review of the BJX in hP'ags-pa Script Studies

Luo and Cai (1959) published their book 八思巴字與元代漢語（資料彙編） [The hP'ags-pa Script and Chinese in the Yuan Dynasty: Compilation of Materials]. In the second chapter of this book, they discuss various versions of SLGJ, in which different editions of the BJX in hP'ags-pa script text are recorded. Luo and Cai (1959) give a detailed comparison to the B edition preserved in the Peking University Library and the Japanese C edition. The comparison of those two editions focuses on their volume numbers, titles, prefaces, format, and errors. Based on their analysis of the errors in those two editions, Luo and Cai (1959) consider the B edition to be much more reliable than the Japanese C edition, which was compiled much later than when the hP'ags-pa script was created. Although its editors lacked knowledge of this writing system and made numerous errors, the Japanese C edition can still offer some useful information for scholars. Photographic reproductions of two editions are provided in the book 八思巴字與元代漢語（資料彙編）， and Luo and Cai's (1959) work offers a useful collection of materials. They meticulously compare and collocate two editions of the BJX in hP'ags-pa script, forming a foundation for later work.

Junast (1981, 2003) is another important scholar who has made recent significant contributions to the study of the BJX in hP'ags-pa script. In his article 八思巴字百家姓校勘 [The Collation of the BJX Text in hP'ags-pa Script], Junast (1981) compares and comments on the quality of the four available editions of the BJX in hP'ags-pa script. He considers the A edition and B edition to be the two best editions because they have fewer errors and almost the same errors. The D edition has better quality than the Japanese C edition which has relatively poor quality and more than 110 errors. Junast (1981) points out all writing errors and makes critical corrections to the B and D editions. He provides an index of all the surnames by initials, which facilitates retrieval. Photocopies of those two editions are attached as appendices. This work is a milestone in the study of the BJX in hP'ags-pa script because it compares all four known editions and identifies and corrects graphic errors in two editions, consulting the hP'ags-pa writings in *Menggu ziyun* 蒙古字韻 [A Mongolian Script Rhyme Dictionary] (MGZY)⁷. Junast (1981) also gives the Latin transliterations of all the family names which appear in the four editions. Junast (2003) published an updated work 新編元代八思巴字百家姓 [A New Critical Edition of hP'ags-pa Script BJX], which could supplant his older critical version of 八思巴字百家姓校勘 [The Collation of BJX Text in hP'ags-pa script]. This newest book

⁷ MGZY is a rhyme book. The Yuan court attempted to develop an orthography for Chinese in the newly invented v hP'ags-pa script. This book can be used to learn the hP'ags-pa spellings of Chinese characters and possibly conversely to understand the Chinese characters represented in hP'ags-pa spellings.

includes the research results of his earlier work in 1981 and supplements it the standard hP'ags-pa scripts for each surname. In short, Junast's (1981, 2003) work is the most thorough research on the BJX in hP'ags-pa script. His work (1981, 2003) is an index for further studies.

In addition to those studies which treat the BJX in hP'ags-pa script as a whole, Chen (2014) focuses on a single character and a small question in his article. In the Japanese C edition, the surname Miu 繆 is spelled as muw, which is usually regarded as a variant pronunciation. However, after applying the voice corresponding rules and conducting a comparative literature study, he (2014) categorizes the spelling of the surname Miu 繆 in hP'ags-pa script in the Japanese C edition as a clerical error instead of a variant pronunciation.

As we can see, scholars have gradually recognized the value of the BJX in hP'ags-pa script. They have done excellent work, providing facsimiles for four editions, comparing the quality of these editions, correcting their graphic errors, and standardizing the writing of those hP'ags-pa syllables. These research results can facilitate further studies. However, except for Chen's (2014) analysis of the error type of a single surname, these scholars have not categorized the error types in this material.

4. The Error Types

There are three, main types of errors⁸ in the transliteration of Chinese in hP'ags-pa spellings. This includes the misuse of similar-looking letters; although some hP'ags-pa letters look very similar, they represent different phonological units in the BJX text, many graphic errors were made due to the ignorance of subtle differences. In addition, there are errors that can be classified as pure clerical errors; these errors involve the unintentional addition or omission of a hP'ags-pa letter. Finally, there are errors in the transliteration of variant pronunciations.

4.1 Misuse of similar-looking letters

Within the category “misuse of similar-looking letters,” there are eleven error subtypes involving initials (Wang 2017). Due to the limitation of space, we only list some typical examples here. For example, the confusion of the alveolar affricate ㄑ and the velar ㄑ, the confusion of the bilabial initial ㄅ and the retroflex initial ㄅ, and the confusion of the retroflex initial ㄅ and the velar nasal ㄅ.

The letter ㄑ represents a voiceless unaspirated alveolar affricate, while the letter ㄑ represents a voiceless unaspirated velar stop. Their places of articulation are totally different, although their graphic appearances have some similarities. Such errors can be observed in the writing of surnames 替 in the D edition.

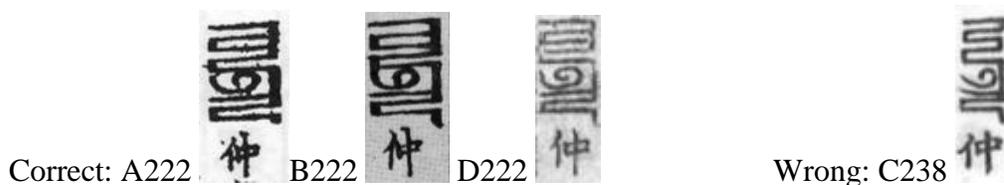
⁸ We only summarize common error types and give some typical examples in this article. As for the detailed errors, please refer to my thesis (Wang 2017).



The letter  represents the voiceless unaspirated bilabial initial, while the letter  represents the retroflex initial. Such errors can be observed in the writing of the surname 郚 in the C edition.

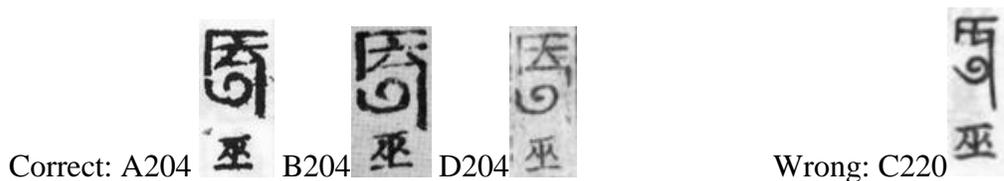


The letter  represents a voiced retroflex stop, while the letter  represents a velar nasal. Such errors can be observed in the writing of surname 仲 in the C edition.



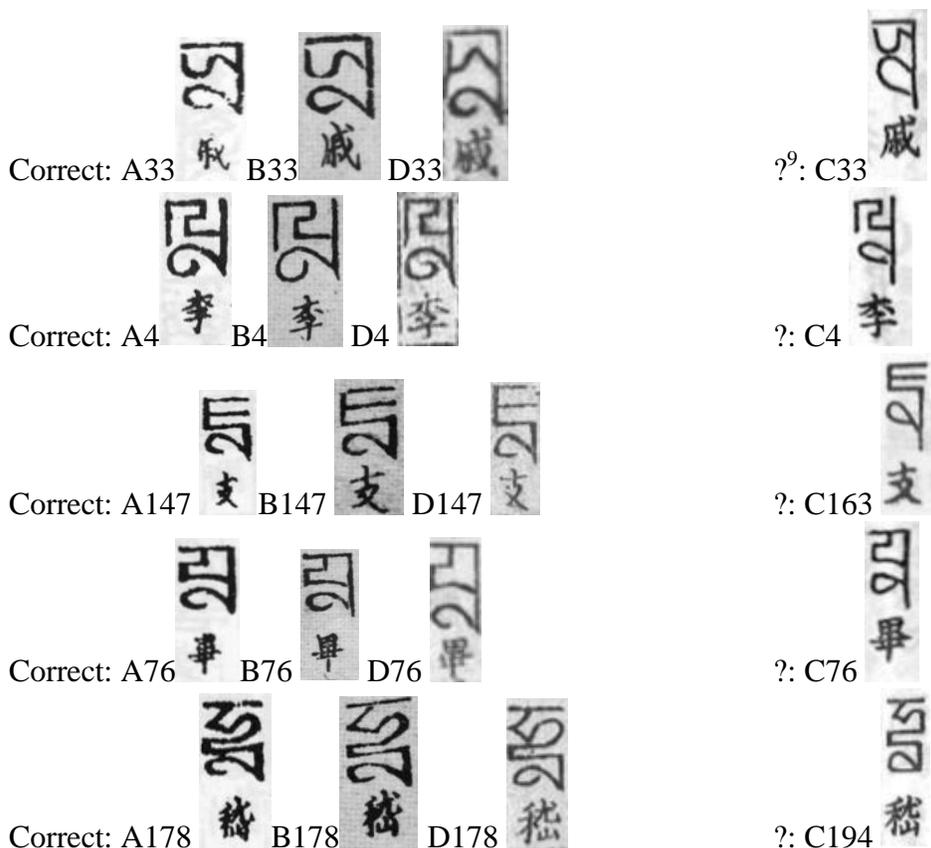
4.2 Pure clerical errors

In the category “clerical errors,” there are many mistakes in both initials and finals (Wang 2017). These errors involve the unintentional addition or omission of a hp’ags-pa letter. For example, the initial , , and the final .





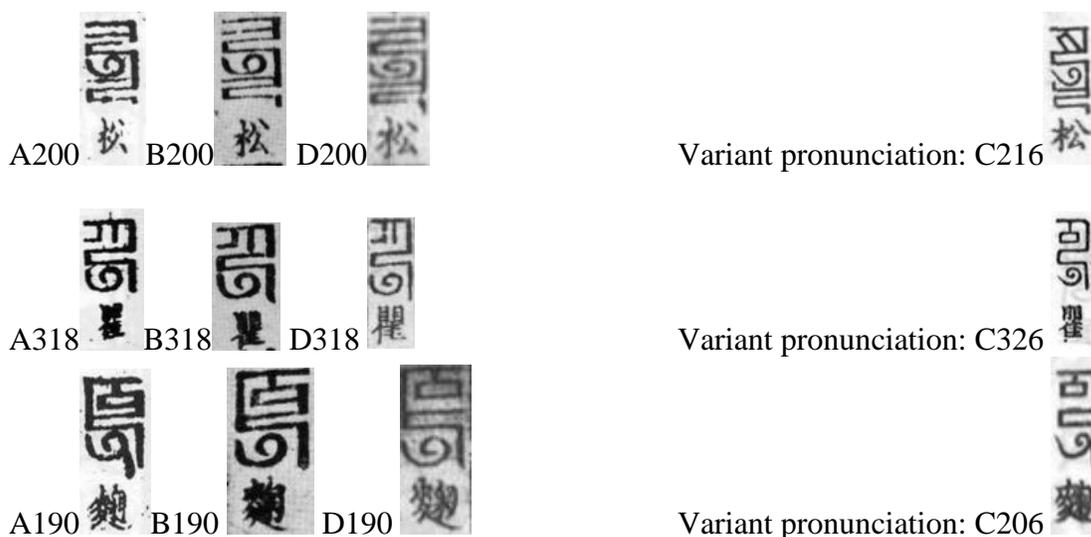
It is worth noting that the criteria for judging mistakes are not absolute. In many finals, whether or not an error exists may be debatable. For example, the surnames 戚, 李, 支, 畢 and 嵇 in the C edition. The writings of 戚 are not unified in the C edition.



⁹ The mark “?” means whether the writings are correct or incorrect is debatable.

4.3 Errors in the transliteration of variant pronunciations

The third type of error, errors in the transliteration of variant pronunciations, needs further examination. A total of 46 surnames with variant pronunciations appear in all four editions, but the distribution of these surnames across editions is not balanced. Forty-one surnames with variant pronunciations appear in the C edition, and only five surnames (于, 霍, 向, 蔚, 於) with different transliteration appears in the A, B and D edition. The different transliterations could offer us some useful phonetic information¹⁰. For example, 松: A, B, D edition transliterate the initial as the voiced ㄅ ; C edition transliterates as the voiceless ㄆ . 瞿: A, B, D edition transliterate the initial as the voiced ㄑ ; C edition transliterates as the voiceless ㄑ . 麴: A, B, D edition transliterate the initial as the aspirated ㄅ ; C edition transliterates as the unaspirated ㄆ .



Some variant transliterations do not only involve an initial or a final; the entire syllable varies in the C edition from the other editions. This kind of transliteration variation occurs in the surnames 繆, 母, 伏, 宓, 郇, 鄧, 宰, 蔡, 郗, 藉, 藍, 常, 水, 束, 岑, 葉, 蓋, and 谷. These surnames are transliterated differently in the C edition than in the A, B and D editions.

5. Conclusion

The limitation of space prevents us from listing all the errors here. We only summarize common error types and give some typical examples in this article. As for the detailed error types, including the transliteration of Chinese initial consonants and Chinese finals, please refer to my thesis (Wang 2017).

¹⁰ Detailed examination and analysis are included in my thesis (Wang 2017).

Among the three main types of errors, errors in the transliteration of variant pronunciations are the rarest. The majority of errors involve either the misuse of similar-looking letters or pure clerical errors, which together can be categorized as “graphic errors.” Although many hp'ags-pa letters look very similar, they can represent totally different phonological units. Han Chinese people tend to only regard hp'ags-pa scripts in BJX text as a special or representative example of calligraphy, such as is the case with Chinese characters. However, the nature of hp'ags-pa script and Chinese are totally different. As a result, many graphic errors have been made to the BJX text. This misunderstanding was a fatal error that prevented the spread of the script.

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