

The Sound Change of “足” in Zhengzhou Dialect

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Abstract—Through the inspections of historical phonological statuses and dialectal pronunciations of “足”, and from the perspectives of sound change, language contact and lexical diffusion, this paper explains why the various pronunciations of “足” coexist in Zhengzhou dialect at present, and makes a prediction of the future evolutionary trend about these different pronunciations. Meanwhile, this paper points out that both internal rules of sound change(endogenous) and external influences of language contact(exogenous) should be paid attention when studying sound change diachronically or synchronically.

Keywords—phonological status, dialectal pronunciations, sound change, language contact

I. INTRODUCTION

The following five pronunciations [tey¹³], [tey⁵²], [tsy¹³], [tsu¹³], [tsu⁵²] of “足” appeared in the survey of Zhengzhou dialect made by the author. Why there are so many pronunciations of a common word in Zhengzhou dialect, and why there are differences in the three aspects of initial, final and tone? In order to discuss these problems, this paper considers that it is necessary to compare and analyze the historical phonological status of “足”, the pronunciations of other dialects, the phonetic evolution after deep contact with Putonghua, and Zhengzhou people’s different evaluations of the five pronunciations of “足”.

II. THE HISTORICAL PHONOLOGICAL STATUS AND DIALECTAL PRONUNCIATIONS OF “足”

A. The pronunciations of “足” in Old Chinese, in Middle Chinese and in late-Middle Chinese

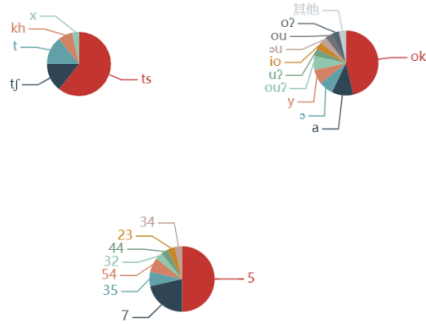
As a common Chinese word, “足” has been widely used in pre-Qin, Han, Wei and Jin dynasties, and has left traces in many literary works. First of all, for the ancient phonetic value of “足”, there are several constructs: *tsiok in Hou(侯) rhyme groups (Li Wang); *tsjugh and *tsjuk in Hou(侯) rhyme groups (Fanggui Li); *tsjoks and *tsjok in Wu(屋) rhyme groups (Yiping Bai); *sogs and *sog in Wu(屋) rhyme groups (Wuyun Pan), and so on. It can be seen that among the constructions of the four famous scholars listed above, three scholars construct the initial of “足” as the affricative [ts], and one scholar constructs it as the fricative [s], but the constructions of the final of the word are quite different. Both Bai and Pan propose the ending of the syllable “足” as the fricative [s], which should be

believed that the ancient ending [s] fell off in the development and evolved into the departing tone in Middle Chinese. Then, the phonological status of “足” in Middle Chinese can be queried in relevant rhyme books. In the existing early rhyme book *Guang Yun*, the word “足” appears in two places. One belongs to Zou(緇) small rhyme, Ziju qie(子句切), Jing(精) initial, Yu(虞) final, departing tone, the 3rd division with the medial [u], and means feet. The other belongs to Zu(足) small rhyme, Jiyu qie(即玉切), Jing(精) initial, Zhu(燭) final, entering tone, the 3rd division with the medial [u], and means feet or sufficient. For the two phonetic values of “足” in Middle Chinese, they are: *tsiū and *tsiwok (Li Wang), *tsio and *tsiok (Rong Li), *tsjū and *tsjok (Wuyun Pan), and so on. In the framework of rhyme books, the initial of “足” in Middle Chinese is constructed as the affricate [ts]; the medial is constructed as the front high unrounded vowel [i]; the nucleus is constructed as the back high rounded vowel [u], [wo], [o] or [ɔ]; the ending is constructed as the vowel ending(i.e. without endings) or the ending [k]. Specifically, Jing(精) initial is constructed as [ts]; the 3rd division is treated as the medial [i]; Yu(虞) final with departing tone is treated as [u], [o] or [ɔ] without ending; Zhu(燭) final with entering tone is constructed as [wo], [o] or [ɔ] with the ending [k]. Despite the nucleus is constructed slightly differently by the scholars, a closer look shows that the different vowels [u], [wo], [o], [ɔ] are relatively similar in tone quality, manner of articulation, and place of articulation.

From Old Chinese to Middle Chinese, the word “足” has always retained two different pronunciations (except for Li Wang’s construction, which has only one pronunciation in Old Chinese), and the endings of the two pronunciations are obviously different. However, in the *Zhongyuan Yinyun* of Yuan Dynasty, “足” had only one pronunciation: Jing(精) initial, Yu Mo(魚模) rhyme, entering tone as rising tone, Zu(足) small rhyme. In the corpus of *Zhongyuan Yinyun* in Xiaoxue Hall, the construction of “足” at that time is *tsiu. As for the nature of *Zhongyuan Yinyun*, this paper does not discuss, and generally thinks that it represents the northern phonology of Yuan Dynasty. Most significantly of all, the pronunciation of “足” had evolved from the two tones recorded in *Guang Yun* into one tone in *Zhongyuan Yinyun*. For this case, two possibilities are: (1) The original departing tone disappeared. And the original entering tone lost the [k] ending and evolved into the rising tone alone; (2) The original departing tone had merged into the entering tone, and then the entering tone lost the ending [k] and evolved into the rising tone. However, in *Zhongzhou Yinyun* of Ming Dynasty,

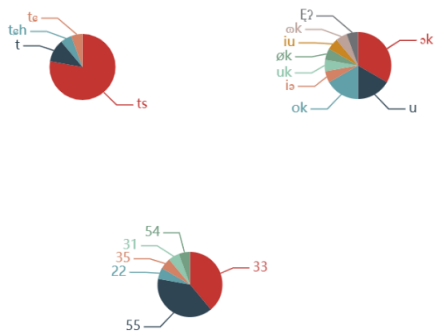
about 18% of the total pronunciations; and there are one pronunciation with the initial [t].The final of “足” is very uniform in Cantonese, all of which are [ok]. So all of the pronunciations in Cantonese are the entering tone.The tone value of “足” is relatively uncomplicated, with only two. Of the 11 dialect spots in Cantonese, the tone value is pronounced as 5 in 9 spots and as 4 in 2 spots.

Fig. 3. The initials, finals and tone values of “足” in Min dialect



The word “足” has a total of 28 pronunciations in 17 dialect spots of Min dialect. Of the 28 pronunciations, 17 are made with the initial [ts], accounting for about 61% of the total pronunciations; 4 are made with the initial [tʃ], accounting for about 14%; 4 are made with the initial [t], accounting for about 14%; and there are also 2 pronunciations with the initials [kʰ] and [x].The final differs distinctly in 28 pronunciations of Min dialect, but nearly half pronunciations have the final [ok], accounting for 46% of the total pronunciations. “足” of Min dialect has the 28 pronunciations with the k-ending, the ʔ-ending and the vowel-ending. The tone value differs distinctly among the 28 pronunciations, but half of them are 5.

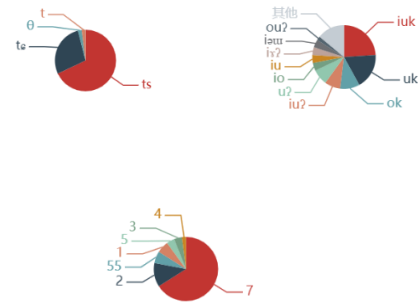
Fig. 4. The initials, finals and tone values of “足” in Pinghua



The word “足” has a total of 18 pronunciations in 18 dialect spots of Pinghua. Of the 18 pronunciations, 14 are made with the initial [ts], accounting for about 78% of the total pronunciations; 2 are made with the initial [t]; and there are also 2 pronunciations with the initials [tʰ] and [tʃ].The final of “足” differs distinctly in 18 dialect spots of Pinghua. 6 pronunciations have the final [ɔk], accounting for 33% of the

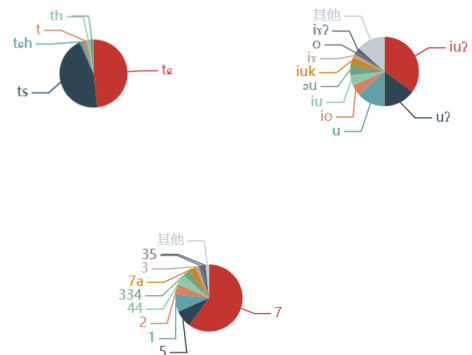
total pronunciations; 3 pronunciations have the final [ok], accounting for 17%; 3 pronunciations have the final [u], accounting for 17%; and the remaining 6 dialect spots have their own distinct finals. “足” of Pinghua has the 18 pronunciations with the k-ending, the ʔ-ending and the vowel-ending. The tone value differs distinctly among the 18 pronunciations. Relatively uniformly, there are 7 dialect spots whose tones are pronounced as 55 (39%) and other seven dialect spots whose tones are pronounced as 33 (39%).

Fig. 5. The initials, finals and tone values of “足” in Hakka



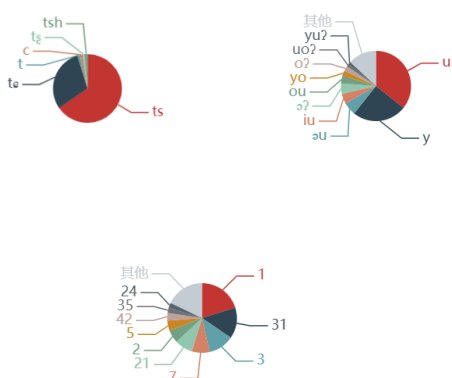
The word “足” has a total of 50 pronunciations in 50 dialect spots of Hakka. Of the 50 pronunciations, 34 are made with the initial [ts], accounting for about 68% of the total pronunciations; 14 are made with the initial [tʃ], accounting for about 28%; and there are also 1 pronunciation with the initial [t] and 1 pronunciation with the initial [θ].The final of “足” differs distinctly in 50 dialect spots of Hakka. The three finals that account for larger proportion are: 12 pronunciations have the final [iuk] (24%); 9 pronunciations have the final [uk] (18%); and 5 pronunciations have the final [ok] (10%). “足” of Hakka has the 50 pronunciations with the k-ending, the ʔ-ending, the u-ending and the vowel-ending. The tone value differs distinctly among the 50 dialect spots of Hakka. Relatively uniformly, there are 33 dialect spots whose tones are pronounced as 7 (66%).

Fig. 6. The initials, finals and tone values of “足” in Gan dialect



The word “足” has a total of 60 pronunciations in 59 dialect spots of Gan dialect. Of the 60 pronunciations, 29 are made with the initial [tɕ], accounting for about 48% of the total pronunciations; 27 are made with the initial [ts], accounting for about 45%; and there are also few pronunciations with the initials [tɕʰ], [t] and [tʰ]. The final of “足” differs distinctly in 59 dialect spots of Gan dialect. The three finals that account for larger proportion are: 21 pronunciations have the final [iuʔ] (35%); 9 pronunciations have the final [uʔ] (15%); and 8 pronunciations have the final [u] (13%). “足” of Gan dialect has the 60 pronunciations with the k-ending, the ʔ-ending, and the vowel-ending. The tone value differs distinctly among the 60 pronunciations. Relatively uniformly, there are 36 pronunciations whose tones are pronounced as 7 (60%).

Fig. 7. The initials, finals and tone values of “足” in Mandarin



The word “足” has a total of 84 pronunciations in 69 dialect spots of Mandarin. Of the 84 pronunciations, 55 are made with the initial [ts], accounting for about 65% of the total pronunciations; 25 are made with the initial [tɕ], accounting for about 30%; and there are also few pronunciations with the initials [tsʰ], [t], [c], [tɕ] and so on. The final of “足” differs distinctly in 84 pronunciations of Mandarin. The two finals that account for larger proportion are: 30 pronunciations have the final [u] (36%) and 21 pronunciations have the final [y] (25%). “足” of Mandarin has the 84 pronunciations with the ʔ-ending and the vowel-ending. The tone value differs distinctly among the 84 pronunciations. And the pronunciation with the tone value of 1 accounts for the largest proportion (20%).

Based on the above description, it can be seen that the word “足” has a total of 299 pronunciations in 271 dialect spots. Of the 299 pronunciations, 189 are made with the initial [ts], accounting for about 63% of the total pronunciations; 81 are made with the initial [tɕ], accounting for about 27%. Compared with the initial, the finals differ greatly in 299 pronunciations. According to Chinese phonology, the pronunciations of “足” include four types of finals, which are finals without any medials(Kai), finals with the medial [i] (Qi), finals with the medial [u] (He) and finals with the medial [y] (Cuo). Furthermore, they have two types of rhyme, which are the Rusheng rhyme with the k-ending, the ʔ-ending and the u-

ending, and the Yinsheng rhyme with the vowel-ending. And as for the nucleus, most of them are [u], [o], [ɔ], which are relatively close in tone quality, manner of articulation, and place of articulation. Finally, the entering tone is present in all dialects and the tone value is various.

III. ANALYSES OF PHONETIC VARIATION AND ALTERNATIONS OF LITERARY AND COLLOQUIAL READINGS OF “足” IN ZHENGZHOU DIALECT

A. The phonetic variation and evolution of “足” in Zhengzhou dialect

Zhengzhou dialect belongs to the Zhengkai Section of Zhongyuan Mandarin. Zhengzhou dialect usually refers to the accent dialect of Zhengzhou city, excluding the dialects of Zhengzhou suburban county. Due to a large influx of immigrants from Kaifeng and other places, Zhengzhou dialect emerged in the late 1950s. Compared with Luoyang dialect or Xinyang dialect, Zhengzhou dialect has less dialectal vocabulary and is close to Putonghua, which is easier to understand and communicate. Precisely because of Zhengzhou dialect close to Putonghua, there are few academic researches on Zhengzhou dialect. So few monographs and documents can be retrieved relating to the pronunciations of “足” in Zhengzhou dialect, among which are Lu’s *Zhengzhou Dialect* published by Language & Culture Press in 1992 and Su’s *The study of the ancient Ru-Sheng characters of Zhengzhou dialect* published by Shanghai International Studies University in 2018.

The pronunciations of “足” in *Zhengzhou Dialect* published in 1992 are as follows: the colloquial reading is [tsy²⁴]; the literary reading is [tɕy²⁴]. Therefore, it can be seen that the initials of MC Jing(精), Jian(见) and Xiao(晓) initial groups didn’t merge in Zhengzhou dialect at that time. The pronunciations of “足” in *The study of the ancient Ru-Sheng characters of Zhengzhou dialect* published in 2018 are as follows: [tsu²⁴] and [tsy²⁴] are pronounced by the elderly over 60 years old; [tsu⁴²], [tsu²⁴] and [tsy²⁴] are pronounced by those in their 40s; [tsu⁴²] are pronounced by young people in their 20s. In the survey of Zhengzhou dialect by the paper, there are five pronunciations of “足”: [tɕy¹³], [tɕy⁵²], [tsy¹³], [tsu¹³] and [tsu⁵²]. Considering all the pronunciations of “足” in Zhengzhou dialect, it shows: the initials are pronounced as [ts] or [tɕ]; the finals are pronounced as [u] or [y]; the two tones are :Yinping or Yangping(the low level tone or the high level tone).

Based on the historical pronunciations and dialectal pronunciations, the evolution of initials of “足” in Zhengzhou dialect should be as follows: [ts] in Middle Chinese remained unchanged to [ts] in late-Middle Chinese; afterwards the initial of [ts] differentiated into [ts] and [tɕ] to form the separation of Jian and Tuan; even later, due to the strong and guiding influence of Putonghua, the initials of [ts] and [tɕ] gradually merged, and [ts] began to become the dominant initial of “足” in Zhengzhou dialect. According to the knowledge of Chinese phonology, the front high vowel immediately following the affricative [ts] will cause the palatalization. In addition, the two pronunciations of “足” in Middle Chinese are the 3rd division, so all the three scholars(Li Wang, Rong Li and Wuyun Pan)

listed in this paper constructed the medial as the front high vowel [i]. Then, is the initial [tɕ] of “足” in Zhengzhou dialect derived from the palatalization of the original affricative [ts] due to the assimilation of the front high vowel [i]? The answer is no. Because, from the relevant descriptions and constructions of “足” in *Zhongyuan Yinyun* and *Hongwu Zhengyun*, the palatalized [tɕ] did not appear in late-Middle Chinese, while at the same time the [y] acting as medial or nucleus had appeared following the initial [ts]. Therefore, on the historical level, the palatalization of [ts] into [tɕ] should be caused by the subsequent high front vowel [y] instead of [i], which occurred later than the time when [iu] merged into [y]. Furthermore, with reference to the situation of [tɕy²⁴] (literary reading) and [tɕy²⁴] (colloquial reading) in *Zhengzhou Dialect* in the early 1990s, and the 5 pronunciations of this paper’s survey in 2022, it shows that the new initial [tɕ] produced by palatalization of [ts] has not completely replaced the original initial [ts], and the initials [ts] and [tɕ] of “足” will continue to coexist and compete with each other for quite some time in Zhengzhou dialect.

The evolution of the final of “足” in Zhengzhou dialect is divided into the evolutions of medial, nucleus and ending. Specifically speaking, the medial [i] of “足” in Middle Chinese was retained to the era of *Zhongyuan Yinyun* (tsiu), and then when it came to the era of *Hongwu Zhengyun*, under the influence of the subsequent [u], the medial [i] disappeared, and [y] was developed and acted as the medial in front of [u](tɕyuk) or as the nucleus after merging with [u](tɕy). Now, “足” in Zhengzhou dialect does not have any medials. Then, the nucleus [u] or [wo] or [o] in Middle Chinese evolved into [u] or [y] in late-Middle Chinese. And the nucleus [u] of “足” was ever disappeared in Zhengzhou dialect around the 1990s (referring to *Zhengzhou Dialect* published in the early 1990s), but now the nuclei of “足” in Zhengzhou dialect are [u] or [y]. The reappearance of the nucleus [u] is probably due to language contact, especially the result of frequently contacting with Putonghua and being led to develop. In Middle Chinese, the entering tone with the ending [k] disappeared in the era of *Zhongyuan Yinyun*. Although the ending [k] appeared again in the later *Hongwu Zhengyun*, considering its conservative nature and the disappearance of the ending [k] in the later *Zhongzhou Yinyun*, it can be considered that in late-Middle Chinese, the entering tone with the ending [k] of “足” disappeared. Now “足” is a level-tone word with the vocalic ending in Putonghua. Therefore, the evolution of the tone of “足” in Zhengzhou dialect should be as follows: the two of departing tone and entering tone in Middle Chinese evolved into departing tone and entering tone as rising tone in late-Middle Chinese, and then evolved into two types of level tones (Yinping and Yangping) in modern Zhengzhou dialect.

From the analysis of initials, the initial [ts] (精母) of “足” has not changed from Middle Chinese to late-Middle Chinese. However, since the period of late-Middle Chinese, the medial [i] and its subsequent nucleus [u] began to merge, and led to the appearance of [y] following the initial [ts] as medial or nucleus. Later, due to the nature of the front high vowel of [y] itself, the assimilation of the preceding initial [ts] was promoted, resulting in the palatalization of [ts] and its evolution into the new initial [tɕ]. With reference to the initials of “足” in other Chinese

dialects, it can be seen that the initial [tɕ] of “足” occupies the second highest proportion, accounting for 27% of the total number of pronunciations in the dialects surveyed, but it is still far less than the largest proportion of [ts], accounting for 63%. Moreover, *Zhengzhou Dialect* published in 1992 pointed out that the initial [ts] was the colloquial reading and the initial [tɕ] was the literary reading of Zhengzhou dialect. Finally, in the survey of this paper, almost all the respondents show a disapproving attitude and strong negative evaluation on the initial [tɕ] of “足” in Zhengzhou dialect, which undoubtedly belongs to the low prestigious pronunciation. Therefore, it is speculated that: the evolution of the original initial [ts] into the new initial [tɕ] is only partial; in the process of evolution and diffusion of [ts] to [tɕ], it is interrupted by some external force and the older pronunciation of [ts] takes on a prestigious status instead; this external force that interrupted the process of evolution and diffusion makes the partial initial [ts] of “足” not undergo the palatalized change.

From the analysis of finals, the final of “足” in Middle Chinese is basically composed of the front, high and unrounded medial [i], the back, high and rounded nucleus [u], and the plosive ending [k] that expresses the entering tone. In late-Middle Chinese, the ending [k] fell off, and the combination of medial and nucleus [iu] began to merge and evolve into [y]. Referring to the pronunciations of “足” in other dialects, it can be seen that the finals of “足” differs greatly in each dialect, but the nuclei are basically [u] or other vowels in u’s adjacent positions. While in Mandarin area, the proportion of [y] is not small (25%), second only to [u] (36%); the ending [k] is still retained in some dialects, and the ending [ʔ] appears in many dialects. However, *Zhengzhou Dialect* in 1992 describes the nuclei of “足” in literary readings and colloquial readings as [y], and the difference between the two readings lies in the difference of the initials [ts] and [tɕ]. It can be inferred that the final of “足” in Zhengzhou dialect has completed the evolution of [k] falling off and [iu] merging into [y] in the early 1990s. Whereas, in the survey of the paper conducted in 2022, the unified status of the nucleus [y] in Zhengzhou dialect has been broken again, and the nucleus [u] appears again and coexists with [y]. Moreover, the nucleus [y] of “足” is far lower than the nucleus [u] in terms of daily usage frequency and positive language evaluation. Therefore, this paper speculates that the unnatural sound change from [y] to [u] is driven by external forces due to language contact, or is caused by borrowing.

From the analysis of tones, the tones of “足” in Middle Chinese are the departing tone and the entering tone. In late-Middle Chinese, due to the loss of the ending [k] and the phonological status of the voiceless initial [ts], the entering tone was classified into the rising tone regularly and coexisted with the departing tone. The tones of “足” in other Chinese dialects are unknown in the database of Oriental Linguistics, while the tone values vary greatly. The tones of “足” in Zhengzhou dialect are the level tones (Yinping and Yangping), and the tone values are respectively 24 and 42 (*Zhengzhou Dialect*), and 13 and 52 (the survey of this paper). There are no differences about the meaning and usage between the two tones of “足”. Therefore, this paper speculates that the irregular sound change from the departing tone and the rising tone to the level tones is

driven by external forces, which are from language contact or borrowing. According to the general law of phonology, the tone system may well have the following changes: (1) the level tone is divided into two level tones which are Yinping and Yangping; (2) the rising tone of the voiced initials changes into the departing tone; (3) the entering tone evolves into the level tone, the rising tone and the departing tone. In consequence, this paper holds that another possibility of the evolution of the tones of “足” in Zhengzhou dialect is: in the first place, the law that the entering tone evolved into the level tone, the rising tone and the departing tone was followed; and then, although [ts] is a voiceless initial, because this is not very regular in the entering tone, the entering tone as rising tone of “足” became Yangping of the level tone; finally, the original departing tone may well be the “failure” in the competition with the Yangping, so it disappeared. Furthermore, Yangping in Zhengzhou dialect should correspond to Yangping in Putonghua, and the tone value of Yangping in Putonghua is almost the same as that of Yinping in Zhengzhou dialect, so it is likely to cause confusion and misuse when Zhengzhou people switch the use of Zhengzhou dialect and Putonghua, and eventually lead to the forced addition of Yinping to “足” in Zhengzhou dialect. Consistent with the coexistence and mixed use of the level tones (Yinping and Yangping) of “足”, there are some other mixed uses of the level tones (Yinping and Yangping) in Zhengzhou dialect.

B. The alternations of literary and colloquial readings of “足” in Zhengzhou dialect

As for the situation of literary and colloquial readings, it is clearly pointed out in *Zhengzhou Dialect* published in 1992: “足”, the colloquial reading is [tsy²⁴], and the literary reading is [tɛy²⁴]. In this survey, informants generally believe that: the pronunciations of “足” with the initial [tɛ] or the final [y] are more old-fashioned and rural pronunciations, which are less heard in downtown Zhengzhou; the old people use them more, and the young people hardly say so. According to the survey, it can be roughly concluded that the literary and colloquial readings of “足” are: [tɛy^{13/52}] and [tsy¹³] (colloquial readings), and [tsu^{13/52}] (literary readings). So what is the reason for this change in the literary and colloquial readings of “足” in Zhengzhou dialect from the 1990s? Wuyun Pan (2006) put forward a concept about sound change relationship, and explained: “When two sounds are on the same sound change chain, they constitute a sound change relationship, otherwise it is called a non-sound change relationship. For example, [k-] before [i] and [tɛ-] have the sound change relationship because [ki-] > [tɛi-] is a common sound change. While [ŋ-] and [z-] have not the sound change relationship because in general [ŋ-] does not become [z-].” In addition, Pan (2006) also pointed out that “the historical layers can be actually divided into two categories. One is formed by language contact, which is essentially the nature of loanwords, and we can call it the exogenous historical layer. At the same time, there is also a case that when the pronunciation of a dialect changes, the speed of evolution is unbalanced for some reason, resulting in phonetic differentiation and forming another historical layer. This category of layer is the result of the lexical diffusion of sound

changes within the dialect, so we call it the endogenous historical layer.” In *Zhengzhou Dialects* in the 1990s, there is a sound change relationship between the colloquial reading [tsy²⁴] and the literary reading [tɛy²⁴], and that is, [y] causes the palatalization of [ts] to become [tɛ]. Besides, the initial of “足” in Putonghua, as the authoritative dialect, has never been pronounced with [tɛ] or [y]. So, the literary and colloquial readings of “足” in Zhengzhou dialect in the 1990s should be endogenous historical layers. Now, there are some new literary and colloquial readings of “足” in Zhengzhou dialect, and there is no the sound change relationship between the initial change from [tɛ] to [ts] and the final change from [y] to [u]. Pan (2006) states: “If two historical layers in a language are non-sound change relationship, one of them must be an exogenous layer caused by borrowing.”, so the layer of the new literary readings [tsu^{13/52}] in the survey of this paper should be the exogenous layer.

In addition, Tongqiang Xu (2014) said, “the coexistence of literary and colloquial readings is one kind form of overlapping variations in phonetic system due to the mutual influence of different dialects, and in the form of overlapping variations, language evolution will be realized through ‘competition’.” So the newly emerged literary readings of “足” in Zhengzhou dialect should be due to language contact. And, whether the layers are endogenous or exogenous, this difference between literary readings and colloquial readings reflects the competition of language evolution. Tongqiang Xu (2014) also said, “After the emergence of literary-reading forms, the competition between literary-reading forms and colloquial-reading forms appeared in the language system. The general trend of competition is that the literary-reading forms win one after another, while the colloquial-reading forms lose one after another.” However, the sound change of “足” in Zhengzhou dialect is not the general trend, because the literary-reading forms that appeared in the 1990s did not win the competition over the colloquial-reading forms. In the survey of this paper, the previous literary-reading form and the previous colloquial-reading form were combined to turn into the current colloquial-reading forms corresponding to the newly emerged literary-reading forms. While in the survey of Mengya Su (2018), the previous literary-reading form even disappeared completely. Zhiyun Cao (2006) said, “Since the beginning of the 21st century, with the acceleration of the urbanization process in China, a large number of people with different dialect backgrounds have poured into cities, especially into big cities such as provincial capitals, which inevitably increases the complexity of language use in provincial capitals and forms an unprecedented language contact environment. Therefore, the development and change of Chinese dialects have become more rapid and profound, and the self-evolution of dialects in different regions has gradually stopped, while the evolution is mainly in the direction of Putonghua.” There is no denying that Zhengzhou dialect and Putonghua contact with each other deeply, so the newly emerged literary readings should be the exogenous sound change caused by the contact with Putonghua. Now the previous literary and colloquial readings (endogenous sound change) and the newly emerged literary readings

(exogenous sound change) are overlapping and competing with each other. And in view of Zhengzhou people's evaluation with low prestige of the the initial [tɕ] and the final [y] of “足” in Zhengzhou dialect, this paper speculates that in the near future, the initial and the final of “足” in Zhengzhou dialect will probably be unified into [tsu], which is consistent with Putonghua.

Finally, in the 1990s, the tone of “足” in Zhengzhou dialect was Yangping. In the surveys of Su (2018) and this paper, the tones of “足” are Yangping and Yinping respectively. Because there seems to be no competition in the overlapping and mixed use of the two tones, and no differences in Zhengzhou people's evaluation, this paper forecasts that this tonetic duality of “足” is likely to last for a long time in the Zhengzhou dialect.

IV. CONCLUSION

From the perspectives of diachronic, synchronic and social analysis, the paper clarifies and explains that the corresponding origins and reasons of the five pronunciations of “足” in Zhengzhou dialect. Meanwhile, the paper makes a few predictions of sound change about the initial, final and tone of “足” in the future. French linguist Gilliéron once put forward the famous assertion that “every word has its history”, and believed that the study of the history of each word would replace the study of dialect history, trying to explain the sound change with external influences. In this paper, the author thinks

that attention should be paid to the external influence, as well as the laws of sound change when studying the history of each word. And through the combination of internal and external visions, sound changes will be better explained and predicted.

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