# A Comparative Study of Phonological Categories among the Kunshan, Suzhou, and Shanghai Dialect Points of Wu Chinese

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## Abstract

Since the founding of the People's Republic of China, dialect surveys and research in Shanghai and Suzhou have been relatively comprehensive. However, Kunshan, as a city "sandwiched" between these two major metropolises, remains at a nascent stage in terms of dialectological investigation. Some scholars have simplistically characterized the Kunshan dialect as a "transitional form" between Shanghai and Suzhou Wu varieties. This paper first compares the phonemic disparities among the three Wu dialects individually, then examines these differences through the lens of initial-final combinatory relationships within the framework of Middle Chinese phonology, thereby elucidating the distinctive features and evolutionary trajectories of the Kunshan dialect. The phonemic inventory of Kunshan exhibits strict correspondence with that of Suzhou, being nearly identical; phonetically, it demonstrates comparatively innovative features under Shanghai's influence. Nevertheless, certain sound changes in Kunshan are more progressive than those in Shanghai, precluding its reduction to a merely conservative variant of the Shanghai dialect. For instance, characters from the Yu and Guo rime categories exhibit the rounded vowel ə following non-Bang-series initials, corresponding to Shanghai's u. Whether this reflects labialization of ə to u in Bang-series rounded contexts, or conversely diphthongization of u into ə , , etc., bears directly upon the question of which dialect represents the more "innovative" versus "conservative" phonological system between Kunshan and Shanghai.

## Full Text

## Preamble

A Comparative Study of Sound Categories in Kunshan, Suzhou, and Shanghai Wu Dialects (International Cooperation Department, China Association for

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## Abstract

Suzhou, Kunshan, and Shanghai are geographically adjacent and share highly similar dialects. While Suzhou and Shanghai dialects have been extensively studied, research on Kunshan dialect remains limited. Situated in southern Jiangsu, Kunshan's phonological features represent a synthesis of characteristics from both Suzhou and Shanghai. Using the Middle Chinese phonological system as a framework, this paper compares the sound categories across these three dialects to preliminarily investigate the nature of Kunshan dialect and its historical sound change patterns.

**Keywords:** Kunshan dialect; Suzhou dialect; Shanghai dialect; Wu dialect

Suzhou and Shanghai dialects have long been focal points in traditional Wu dialect research. Due to their proximity and near-perfect mutual intelligibility, these two dialects have frequently been compared to explore developmental patterns in Wu dialects, particularly Northern Wu. Kunshan, located between Suzhou and Shanghai, also speaks a typical Northern Wu dialect, yet its study remains in its infancy. Kunshan City in Jiangsu Province borders Suzhou to the west, Shanghai's Jiading District to the east, Taicang, Changshu, and Wuxi to the north, and Shanghai's Qingpu, Minhang, Songjiang districts and Zhejiang's Jiashan County to the south. Both phonological features and immigration history indicate that Kunshan dialect has been deeply influenced by Suzhou and Shanghai dialects. Many listeners perceive Kunshan dialect as either Shanghai dialect with a Suzhou accent or a transitional form between Suzhou and Shanghai dialects. Such perceptions are, of course, oversimplified. This paper presents a preliminary comparison of sound categories across the three dialects and attempts to draw some simple conclusions about the nature of Kunshan's phonological system and its historical evolution.

## 1. Description of Modern Phonological Systems in Suzhou, Kunshan, and Shanghai

The Suzhou dialect phonology follows Wang Ping (2011), Shanghai dialect follows Qian Nairong (1992) and Gu Qin (2007), and Kunshan dialect follows Wu Linjuan (2006) supplemented by the author's own speech. All are based on middle-aged speakers' pronunciation from urban areas, with old and new varieties listed when necessary. Literary and colloquial readings are included as much as possible, with explanations provided for very irregular or rare literary pronunciations. Since different scholars use different IPA symbols for the same sounds, this paper standardizes them as needed, with specific modifications noted in the text.

## 2. Comparison of Sound Categories Under the Middle Chinese Framework

Within the Middle Chinese phonological framework, this section compares sound categories (initials, finals, and tones) across the three dialects, focusing on Kunshan dialect. The Middle Chinese framework facilitates tracing historical sound changes, while comparing sound categories is appropriate because categories represent the basic unit of historical stratification. As Chen Zhongmin (2013) notes, the basic unit of phonological historical layers—including those formed by literary-colloquial distinctions—is neither the syllable nor the phoneme or phone, but the sound category.

Literary readings are highly similar across all three dialects and heavily influenced by Mandarin. For certain rhymes without clear literary-colloquial distinctions, such as the Yu rhyme, Chen Zhongmin (2013) considers them all literary readings. This paper argues that distinguishing literary from colloquial readings is not particularly meaningful for such rhymes; they can be considered either all colloquial or all literary. The comparison simply lists all finals.

### 2.1 Initial Comparison

Compared with Middle Chinese initials, the three dialects show the following main differences.

**2.1.1 Palatalization of the Jing Group** Within the Middle Chinese initial framework, differences among the three dialects are minimal, with the vast majority being identical. The most significant distinction lies in the palatalization of Division III and IV characters in the Jing group. When alveolar stops and affricates are followed by front, apical vowels, they tend to become alveolopalatal sounds—a universal phenomenon across languages. In Wu dialects, this is commonly called the "sharp vs. rounded" (jiantuan) distinction.

In Northern Wu, southern Jiangsu shows less "rounding," Shanghai shows more, and Zhejiang even more. Suzhou, Kunshan, and Shanghai are all undergoing this "rounding" process. Suzhou and Kunshan are very consistent, with few rounded pronunciations and many characters maintaining sharp pronunciations. Shanghai more readily changes to rounded pronunciations.

The following examples illustrate this pattern:

Regarding palatalization of initials in Jing group Division III and IV characters, the sound change trajectory is clear across all three dialects. Shanghai shows more rounded pronunciations, indicating its phonological evolution is more "innovative" than Suzhou and Kunshan. It should be noted that in Northern Wu, palatalization shows a clear positive correlation with the north-to-south direction, making it impossible to determine whether these changes represent internal evolution or borrowing from prestige dialects as literary readings. Shen Zhongwei (2007) argues that the k->t - change in Shanghai's Jian group Division II

characters represents borrowed literary readings. Since this discussion focuses on categorical differences among the three dialects, detailed analysis of internal versus external origins is omitted.

In Kunshan dialect, we can observe a transition from sharp to rounded pronunciations. For some characters, most Kunshan speakers produce sharp pronunciations while a minority produce rounded ones, with the former primarily middle-aged and elderly speakers and the latter mainly younger speakers. For other characters, the same individual typically produces sharp pronunciations but occasionally produces rounded ones. For example, the character "焦" is pronounced [tsio] by most middle-aged and elderly speakers, [t io] by many young speakers, and mixed by others.

**2.1.2 Other Palatalizations** The Jian group initials and the Xiao initial in all three dialects have undergone palatalization before front vowels, showing general consistency with slight differences. Overall, Shanghai shows very high degrees of palatalization, while Suzhou and Kunshan are still in the process. As mentioned, Shen Zhongwei (2007) considers this a shift from colloquial to literary readings. For example, the character "去" (Qie initial) has dual readings [k ]-/[t ]- in both Suzhou and Kunshan. As a verb in sentences like "我去," many urban Kunshan speakers sometimes say [ŋəu k e] and sometimes [ŋəu t ij], with no discernible pattern.

Additionally, Shanghai dialect has a rare initial [ ] in characters like "序," "席," and the second "谢" in "谢谢." This initial does not exist in Songjiang or anywhere in southern Jiangsu, where corresponding characters have initial [z]. You Rujie (2006) considers this a 增生 due to Ningbo dialect influence, appearing in Middle Chinese Xie initial characters. This represents evidence of Shanghai's greater external influence.

**2.1.3 Sound Changes in Xiao Initial with Back Vowels** The third difference in initials is subtle but observable. According to sound change patterns from Middle to Modern Chinese, Xiao initial characters with back vowels retain [h], while those with front vowels change to [ ]. Suzhou and Kunshan perfectly follow this pattern, but Shanghai shows [f] in Xiao initial Division I combined-opening characters, such as "虎" [fu] and "灰" [fe]. It should also be noted that some Xiao initial Division I combined-opening characters have dual readings of [h] and [f] among Shanghai speakers, indicating an unstable sound change in progress.

This situation also exists in Huaqiao, eastern Kunshan, where local residents born in the 1920s-1930s show dual readings. If [h] and [f] coexist, which is the innovative form? Historical sound changes in many languages provide reference. For example, Japanese ha-gana underwent $p$>f>*h, proving [f] precedes [h]. The fact that elderly Shanghai speakers retain [f] more frequently also supports this.

It should be noted that beyond Xiao initial Division I combined-opening char-

acters, Shanghai dialect also shows merging of Yu/Xia initials with Fei group initials. The reason is that [ u], [ u] are very similar to [ ], [$\beta$], [v], so pronouncing "胡" and "王" with initial [v] is not incorrect. Suzhou and Kunshan are consistent with each other, and even new varieties show no merging, indicating they are phonologically more "conservative."

**2.1.4 "Conservative" vs. "Innovative" Initials** In terms of initials, Suzhou and Kunshan phonology is more "conservative" than Shanghai's. The biggest difference is the "sharp vs. rounded" distinction, with other evidence including Jian group palatalization, [h]/[f] mixing, [ ]/[v] mixing, and borrowed [ ]. Suzhou and Kunshan are highly consistent with each other and form one group, while Shanghai can be considered a more "innovative" variety. As previously mentioned, these initial differences may stem from internal sound changes or literary-colloquial distinctions formed by borrowing from prestige dialects, requiring case-by-case analysis.

Additionally, initial changes in all three dialects are increasingly influenced by Mandarin. For example, the character "骁," rarely used colloquially, has initial [t ] in old varieties, but most middle-aged and younger speakers cannot pronounce it, and those who do produce [ ], which follows no sound change pattern and represents pure borrowing from Mandarin.

### 2.2 Final Comparison

**2.2.1 Comparison of Rhymes by Middle Chinese She** The three dialects show high consistency in finals across the Tong she. Level-tone Division I rhymes all have final [on], entering-tone [o ]; Division III [ioŋ] and entering [io ]. Kunshan shows a trend of merging [yə ] and [io ]; for example, the characters "玉" and "局" from the Zhu rhyme are no longer distinguished among middle-aged speakers, tending toward [yə ]. This merger likely results from Northern Mandarin (Putonghua) influence, also present in Suzhou and Shanghai.

Kunshan Jiang she level-tone finals are [an] and [on], entering [o ]. Suzhou and Shanghai differ by using [ n] instead of [an]. Traditionally, Suzhou and Shanghai contrast [a] and [ ], but they are merging; Kunshan has already merged them, making its phonological evolution more "innovative" in this respect. From a Middle Chinese perspective, the Jiang she main vowel is reconstructed as , *with [a], [ ], and [o] all deriving from* —[a] and [ ] through lowering, [o] through raising, which could also be considered allophones. The Middle Chinese Division II medial is reconstructed as * , which in Chinese dialects either drops or changes to [i] in some Division II characters. The three-way split among the dialects reflects normal differentiation from Middle Chinese, again showing Kunshan as more "innovative."

Kunshan Zhi she open Division III finals are complex: [a], [ij], [e], [ ], [ ]. Combined Division III finals are [e], [ue], [ ], [ij]. Kunshan's [ ] appears in open-mouth

Zhi-Zhang group characters and combined-mouth Zhi-Zhang group and Ri initial characters, as an allophone of [ ].

Suzhou matches Kunshan exactly. Shanghai is similar but lacks [ij] (using [i] instead) and lacks [ ] (using only [ ]). Some scholars consider [ue], [e] in Suzhou to be [u ], [ ], but this is merely a transcription difference.

The Zhi she finals across the three dialects likely contain different layers, but correspondences are strict enough that layer division is unnecessary for comparison. The three dialects are highly consistent phonologically, with phonetic differences being allophonic. For example, all have [e]; Suzhou and Kunshan have [ij] where Shanghai has [i]; Suzhou and Kunshan have [ ] while Shanghai has only [ ] (via the change * >[ ]).

According to Qian Nairong (2014:67), Shanghai still distinguished [ij]/[i] and [ ]/[ ] in the 1920s-30s, but by the 1960s they had merged into [ ]/[i]. This indicates Shanghai's Zhi she finals are in a more advanced sound change process than Suzhou and Kunshan. Geographically, Kunshan's Zhi she finals appear transitional between Suzhou and Shanghai.

Correspondences are extremely regular. Suzhou and Kunshan are identical: combined Division I Mo rhyme finals are [ ], [u], [ə ]; Division III are [y], [ə ], [ ], [u].

Shanghai is very similar but lacks diphthongization, having only [ ] and [u] without [ə ]. Northern Wu Yu she finals have different layers, with Yu and Yu rhymes having at least distinct and merged layers. The three dialects correspond neatly, allowing simple comparison without layer division. [ə ] results from diphthongization of [u], primarily from combined Division I and Zhuang group Division III characters. [y], [ ], and [ ] are likely phonological allophones (though native speakers perceive differences). Chen Zhongmin (2013) notes the Northern Wu sound change *iu*>y>* ( )>[ ].

Regarding [y], [ ], and [ ], Shanghai is more "innovative" than Suzhou and Kunshan, with faster sound change. Regarding [ ], [u], and [ə ], Suzhou and Kunshan show diphthongization, making them more "innovative" than Shanghai. Some consider diphthongization not an internal change but borrowing from external prestige dialects. In any case, Suzhou and Kunshan are more "innovative." The author's speculation is that diphthongization is likely internal. For example, Kunshan characters "乌" and "邬" are pronounced both [ ə ] and [ u]. Northern Wu borrowing from prestige dialects typically involves Mandarin (Putonghua) sounds; if borrowed, [u] should precede [ə ], not the reverse.

Additionally, the Yu she has syllabic nasals like "鱼" [ŋ], which are highly consistent across all three dialects and require no further discussion.

The Xie she finals are relatively complex compared to other she but highly consistent across the three dialects.

Kunshan Xie she level-tone open-mouth finals are Division I and II [e], [a]/[e],

[ia]; Divisions III and IV [ij], [ ] (with [e] as literary and [a] as colloquial in some characters like Tai rhyme characters).

Level-tone combined-mouth finals are Division I and II [e], [ue], (Jian group) [ua], [ ]/[ue], [ua]; Divisions III and IV [ij], [e], (Jian group) [y]/[ue].

Suzhou matches Kunshan exactly. Shanghai is also highly consistent, lacking only [ij], which has lost its friction to become [i]. Some characters like Tai rhyme "最" have dual readings [e] and [ø] across all three dialects, likely due to Mandarin influence. Some departing-tone characters like "迈" show checked-tone formation [a ], an irregular change consistent across all three dialects.

Regarding Xie she finals, despite internal complexity, the three dialects are phonologically identical, with Shanghai's *[ij]>[i] being only slightly more "innovative."

Kunshan Zhen she level-tone open-mouth finals are Divisions I and II [ən]; Divisions III and IV [in], though Zhuang and Zhi-Zhang groups retain [ən], and Ri initial has [in]/[ən].

Level-tone combined-mouth finals are Division I Jian group [uən], others [ən]; Divisions III and IV Jian group [yn], Ri initial [yn]/[ən].

Entering-tone open-mouth Divisions III and IV are [iə ], [ə ].

Combined-mouth Divisions I and II are [ə ], [uə ]; Divisions III and IV [iə ], [ə ], with Jian group showing [yə ].

The [iə ] is more like [ ], not a contrasting phoneme.

Suzhou and Shanghai match Kunshan exactly. Like the Xie she, the Zhen she appears complex but shows no phonological differences among the three dialects.

Kunshan Shan she level-tone open-mouth Division I finals are [ø], [ ]; Division II [ ]; Divisions III and IV [i].

Entering-tone open-mouth Division I [a ], [ə ]; Division II [a ]; Division III [ ], [ə ]; Division IV [ ].

Level-tone combined-mouth Division I Jian group [ø], others [uø]; Division II [u ]; Division III [i], [ ], [ø], [uø]; Division IV [uø].

Entering-tone combined-mouth Division I [ə ], [ua ], [o ]; Division II [ə ], [ua ]; Division III [ ], [ə ], [a ], [yə ]; Division IV [yə ].

Suzhou and Shanghai share the same phonemes as Kunshan, though Suzhou has [uə ] in entering-tone combined Division II, which can be considered an allophone of [ua ].

All three dialects share identical phonemes with highly similar sound change trends. For example, [ø] and [uø] are merging; in Kunshan urban areas they are almost indistinguishable, all pronounced [ø]. Similarly, [ə ] and [o ] are

merging, more obviously in Kunshan. For example, the entering-tone open-mouth Division I He rhyme character "渴" is [ɒ ] in old varieties but merged as [ə ]/[ɒ ] in middle varieties.

Some sources transcribe Kunshan's [yə] as [y ], but this is merely a notational difference.

Xiao she finals are identical between Kunshan and Shanghai: Division I [o], Division IV [io], Divisions II and III both [io] and [o].

Changing [o] to [æ] gives Suzhou's Xiao she finals. Chen Lizhong (2004:76) notes that in Wu and Xiang dialects, the main vowel of Middle Chinese Xiao she characters follows the trajectory *a> >a/ > / >o/ , with the final* u dropping. Throughout the Wu region, [o] dominates Xiao she main vowels, showing a backing and raising trend from Middle Chinese. Suzhou's [æ] is very special; surrounding Wu dialects are between [ ]~[o], while Kunshan and Shanghai are at a very advanced stage of this change.

Kunshan Guo she level-tone open-mouth finals are Division I Duan group [a]/[ə ], Jian group [ə ]; Division III Jian group [a].

Level-tone combined-mouth Division I [ə ]; Division III Jian group [io].

All three dialects are consistent, with Shanghai lacking [ə ] and having only [u], mainly in Bang group characters.

Both Suzhou and Kunshan show diphthongization of [u] to [ə ]. According to *Suzhou Tongyin Changyong Zihui*, earlier Suzhou dialect, like Shanghai, had only [u], with diphthongization appearing later (Ding Bangxin, 2003). It is reasonable to assume Kunshan followed a similar path. In terms of Guo she vowel diphthongization, Suzhou and Kunshan are more "innovative" than Shanghai.

Kunshan Jia she finals exist only in Divisions II and III. Level-tone open-mouth Division II is [ ], with Jian group split into [a] and [ ]; Division III is complex: Jing group [ia], Zhuang and Zhi-Zhang groups [ia] and [ ], Ri initial [a], Jian group [ia].

Level-tone combined-mouth Division II has only Jian group [ ].

Shanghai matches Kunshan exactly. Suzhou is more complex, with more literary readings: open-mouth Division II Jian group has [io]; open-mouth Division III Jing and Jian groups have [i]; Zhuang and Zhi-Zhang groups have [i] and [ø ]; combined-mouth Division II Jian group has [ə ].

For Jia she finals, Kunshan and Shanghai form one identical group, with Suzhou's colloquial readings matching them. However, Suzhou has many additional literary readings that are hard to find in Kunshan and Shanghai, suggesting greater external prestige dialect influence.

Kunshan Dang she finals are highly regular: level-tone open-mouth Division I [an], Division III both [an] and [ian]; level-tone combined-mouth Divisions I and

III both [an] and [uan]; entering-tone open-mouth Division I [o ], Division III [ia ], combined-mouth all [o ].

Suzhou Dang she finals largely match Kunshan, differing in distinguishing [an] and [ n]: Zhuang group pairs with [ n], Zhi-Zhang group has both [an] and [ n], others are [an], though these nasal finals are merging.

Shanghai similarly distinguishes [an] and [ n].

Kunshan Geng she level-tone open-mouth Division II finals are [an], [ən], [in]; Divisions III and IV [ən], [in].

Entering-tone open-mouth Division II [ə ], [a ]; Divisions III and IV [ ], [ə ], [ ].

Level-tone combined-mouth Division II [uan], [on]; Divisions III and IV [ion], [iən].

Entering-tone combined-mouth Division II [a ]; Division III [io ].

Suzhou matches Kunshan exactly. Shanghai is largely consistent, differing only in having [ ] where Suzhou and Kunshan have [a ].

Additionally, Kunshan's entering-tone open-mouth Division II [a ] (e.g., "白") and Division III [ ] (e.g., "石") were still distinguished in Wu Linjuan (2006), but had already merged in mainstream urban speech at that time. [on] and [ion] are often transcribed as [oŋ] and [ioŋ]; as previously noted, front vs. back nasals are not contrastive in Northern Wu, though some perceive back nasals as heavier.

Overall, Suzhou and Kunshan Geng she finals are identical, while Shanghai matches them phonologically with slight phonetic differences, substituting [ ] for [a ].

Kunshan Zeng she level-tone open-mouth Division I finals are [an], [ən]; Division III [in], [ən].

Entering-tone open-mouth Division I [ə ]; Division III [ə ], [ ].

Level-tone combined-mouth Division I [on].

Entering-tone combined-mouth Division I [uə ]; Division III [o ].

Kunshan Zeng she entering-tone combined-mouth [uə ] is changing to [o ] in urban areas (e.g., "国," "或"); [o ] also has the allophone [yə ] (e.g., "域").

Suzhou and Shanghai Zeng she finals largely match Kunshan with minor differences. Suzhou's entering-tone combined-mouth Division I has [ə ]; Divisions III and IV Jian group have [yə ], similar to Kunshan's "域" changing from [o ] to [yə ]. [ə ] may have the allophone [iə ], not a contrasting phoneme. Other phonemes are identical.

In some respects, Suzhou and Kunshan are more "innovative" than Shanghai. For example, Shanghai can maintain [uə ], but Suzhou and Kunshan show a

trend toward [o ]; Shanghai can maintain [o ] in characters like "域," while Suzhou and Kunshan shift to [yə ] under Mandarin influence.

Kunshan Liu she open-mouth Division I finals are all [e]; Division III [iø], [e], [y].

Suzhou and Shanghai match Kunshan very regularly: Suzhou Division I [e]; Division III [ø ], [e], [ ]. Shanghai Division I [ ]; Division III [i ], [ ].

From the main vowel perspective, Suzhou and Kunshan's differences between [e] and [ø ]/[y] represent splits. Kunshan's [y] is an allophone of [iø], likely resulting from Mandarin influence. For example, "秋" and "酒" are pronounced with the former by some speakers, the latter by others, and mixed by still others. Additionally, Kunshan urban areas are undergoing [iø], [ø] merger, as [iø] is difficult to maintain.

Suzhou's [ø ] and [ ] have a similar relationship, with urban areas undergoing [ø ], [ ] merger. [e] and [ø] differ only in rounding, reflecting the Middle Chinese Liu she final *-u; [ ], [y] and [e] differ in height, indicating division differences. These show [e] and [ø ]/[y] share one origin, with Suzhou urban areas undergoing [ø ]>[e] changes.

Shanghai's Division III [i ], [ ] should correspond to Kunshan's [iø], [e], [y] and Suzhou's [ø ], [e], [ ].

Following Suzhou and Kunshan's sound change trajectory, Shanghai's [ ] should split into two vowels, which has not yet occurred.

This shows that Liu she finals are highly consistent across the three dialects and can be considered phonological allophones. In terms of sound change progression, Suzhou and Kunshan are more "innovative" than Shanghai. Considering the number of characters with [e] finals, Kunshan is even more "innovative" than Suzhou.

Shen she finals are identical across all three dialects: open-mouth Division III level-tone [in], [ən]; entering-tone [ə ], [ ]; no combined-mouth or other divisions. Some sources transcribe [ ] as [iə ], but this is merely a notational difference.

Kunshan Xian she level-tone open-mouth Division I finals are [ ], [ø]; Division II [ ]; Division III [i], [ø]; Division IV [i].

Entering-tone open-mouth Division I [ə ], [a ]; Division II [a ]; Division III [ ], [ə ]; Division IV [ ], [a ].

Level-tone combined-mouth Division III [ ]; entering-tone combined-mouth Division III [a ].

Suzhou and Shanghai Xian she finals match Kunshan exactly. Some consider Suzhou's [ø] slightly different from Kunshan and Shanghai's and should be transcribed as [ ], but this paper treats it as a notational difference. In open-mouth Division II Qia rhyme, extremely rare characters like "恰" and "洽" are pronounced with final [ia ] under Mandarin influence, but these characters are not

used colloquially in any of the three dialects. In open-mouth Division II Xia rhyme, the common character "甲" also has a literary reading with final [ia ], but this is the only such case. Generally, Xian she entering-tone open-mouth Division II finals are not considered to include [ia ].

Although Xian she finals are internally complex in each dialect, they are completely identical across the three.

**2.2.2 "Conservative" vs. "Innovative" Finals** In terms of finals, Suzhou and Kunshan form one group, Shanghai another. Some Shanghai finals appear more "innovative" than Suzhou and Kunshan's, such as merging "衣" [ij] and "烟" [i], and merging [ ] and [ ]. However, Suzhou and Kunshan are more "innovative" in some respects, such as diphthongizing [u] to [ə ] and merging [an] and [ n].

### 2.3 Tone Comparison

Individual variation and different recording times lead to significant differences in documented tone values across the three dialects, not due to measurement errors. This paper adopts tone values recorded in Wang Ping (2011), Wu Linjuan (2006), and Xue Cai (2010). Tone sandhi is complex in all three dialects. Considering only citation tones, Suzhou has 7 tones, with yangshang merging into yangqu; Kunshan has 7 tones, with yangshang merging into yangqu; Shanghai has 5 tones, with yangping and yangshang merging into yangqu, and yinshang merging into yinqu.

In citation tones, Northern Wu dialects with 7-tone systems generally merge yangshang and yangqu, as seen in very similar Suzhou and Kunshan. The difference is that Suzhou maintains distinct yinshang and yinqu, though some yinqu characters are merging into yinshang (Qian Nairong, 1992:38). Shanghai's tone evolution follows a different trajectory, which some scholars attribute to Ningbo dialect influence; You Rujie (2016) considers it a hybrid of old Shanghai, Suzhou, and Ningbo dialects. In terms of mergers, Shanghai's tone system is more advanced than Suzhou and Kunshan's.

## Conclusions

Based on the above analysis, the following conclusions can be drawn:

1. **The three dialects are extremely similar in sound categories.** Based on statistics of common characters and vocabulary, Lu Zhiji (1992:48) calculated correlation values of 0.8996 between Kunshan and Suzhou, 0.7682 between Kunshan and Shanghai, and 0.6985 between Suzhou and Shanghai. That is, Kunshan is closest to Suzhou, slightly more distant from Shanghai, but Suzhou-Kunshan similarity exceeds Suzhou-Shanghai similarity. The preceding comparison confirms their extreme similarity. Suzhou and Kunshan are closer in initials and tones,

while Kunshan finals show features of both Suzhou and Shanghai. Generally, Kunshan dialect can be said to resemble Suzhou more, matching the statistical results.

2. **Why Kunshan sounds more like Shanghai to listeners.** Empirically, most non-local listeners perceive Kunshan as more similar to Shanghai, a view shared by many Kunshan residents. Only Shanghai residents generally consider Kunshan accent to be Suzhou-leaning. This likely stems from Kunshan and Shanghai's greater similarity in specific phonetic values, while Suzhou has particularly distinctive front, low vowels. For example, [æ] in Xiao she and [ø ] in Liu she are highly distinctive in the region, but phonologically identical to Kunshan.

3. **The "conservative" vs. "innovative" nature of Kunshan dialect.** For a long time, as regional centers, Suzhou and Shanghai should have changed faster and been more influenced by external prestige languages; common sense would suggest Kunshan should be more "conservative" than both. This holds for initials, where Shanghai is most "innovative" and Suzhou and Kunshan are identical. However, Kunshan finals show "innovative" features, such as diphthongization of [u] to [ə ] and merger of [a] and [ ], both ahead of Shanghai. Shanghai's "innovative" features mainly appear in new and newer varieties under Mandarin influence, while its colloquial and old literary readings are more conservative than imagined. Kunshan's "innovativeness" may relate to simultaneous influence from two nearby powerful dialects plus Mandarin.

Since Shanghai's official opening in 1843, its rapid development gradually replaced Suzhou as the regional economic and cultural center, making Shanghai dialect the most powerful local variety. However, expanding the timeframe to the past thousand or even several thousand years, Suzhou dialect undoubtedly had the strongest regional influence. Administratively, ancient Kunshan and Shanghai long belonged to Suzhou, with Kunshan closer to Suzhou's core area. The likely inference is that historically, Kunshan dialect was more "closely related" to Suzhou dialect.

Of course, this comparison remains preliminary, focusing on sound categories. Further research on phonemes, vocabulary, syntax, and semantics will better reveal Kunshan dialect's historical evolution.

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*Note: Figure translations are in progress. See original paper for figures.*