

**SPEECH-TONES AND MELODIC EXPRESSIONS:  
A COMPARATIVE STUDY OF “JASMINE FLOWER” FOLKSONG  
VARIANTS FROM JIANGSU AND BEIJING**

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**ABSTRACT**

The traditional Chinese folksong "Jasmine Flower" is a culturally rich artifact, that has many variants across mainland China. Its variations in melody, rhythm, and lyrics, reflect diverse regional cultures. This study focuses on two representative regional variants—the Jiangsu and Beijing versions—delving into a comprehensive exploration of poetic verses and melodies between the two different regional dialects. Special attention is paid to examining the intricate relationship between dialectal speech-tones and the folksong melodies, highlighting how cultural diversity shapes this musical connection. Data collection for this study involved recording recitations of the poetic verse of each of these two regional variants of the “Jasmine Flower” folksong, each accompanied by its corresponding melodic transcription. The linguistic software PRAAT was utilized for analyzing these dialect recitations, allowing for a comparison between speech-tones and folksong melody, representing a pioneering use of contemporary linguistic approaches in studying the “Jasmine Flower” folksong. The evaluation framework, centered around three comparative criteria between speech-tones and melodic structures: similar motion, oblique motion, and contrary motion, providing a comprehensive lens for analysis. The study's findings reaffirm the significant influence of language and musical traditions on the construction of regional melodies in the various versions of the folksong. Through a superimposed contrastive analysis of the two regional variants, this study elucidates how these versions maintain common characteristics across different levels of melody and poetic structures. This study, thus, not only enriches understanding of the musical heritage embodied in "Jasmine Flower" but also underscores the broader interplay between language and music within regional folk traditions.

**Keywords:** folksong, speech-tones, melody, comparison, “Jasmine Flower,” China

## INTRODUCTION

As widely acknowledged, folksongs originating from various countries and regions serve as reflections of diverse cultures and identities regardless of whether they come from tonal or non-tonal language regions. Tonal languages, characterized by word meanings dictated by pitch levels or tone variations can sometimes lead to misunderstandings with incorrect tones or pitches (Best, 2019; Bohlman, 1988, p. 70; Karlsson, 2018; McCawley, 1978; Remijnsen, 2016; Yang & Xie, 2022).

The creation and evolution of vocal and in some cases instrumental melodies in tonal language regions are closely linked to the speech-tone patterns prevalent in those languages (Pugh-Kitingan, 1984; Feld & Fox, 1994; Lau, 2010; Schellenberg, 2012). Singing, chanting or articulating words through instruments in tonal languages raises questions regarding intelligibility, as mispronunciation of melody or pitch can lead to misinterpretations of the words. “Intelligibility” refers to accurately conveying the meaning of lyrics (Brouwer *et al.*, 2022; Schellenberg, 2013; Zhang & Cross, 2024; Zhou, 2019).

The relationship between speech-tone and musical melody in tonal languages has been a subject of much scholarly interest (Franich & Lendja, 2021). This connection is described using various terms such as “correspondence between speech melody and song melody” (Schellenberg, 2012), “tone and melody matching” (Ladd & Kirby, 2020), “musical-lingual interplay” (Sollis, 2007), and “tune-tone” (Mark & Li, 1966). Scharinger (2022) specifically referred to this phenomenon as “speech melody and musical melody.” This alignment between speech-tone and song melody potentially contributes to the diversification of folksongs in certain regions (Creel, 2023). For instance, the renowned Chinese folksong “Jasmine Flower” has spawned at least ten distinct regional variants, each exhibiting in both poetic verse content and variations in melodic structure. However, within the existing research on the “Jasmine Flower” folksong and its diverse variants, there remains a gap in investigating the relationship between tonal language and melody correspondence.

This current study focuses on two regional variants of the “Jasmine Flower” folksong—the Jiangsu and Beijing versions representing their respective Jiangsu and Beijing (Mandarin) dialects, both belonging to the same tonal language type, as its primary research focus. The main objective is to examine the correlation between speech-tone patterns and the variations observed in the melodic structures of these two folksong versions. To facilitate this investigation, a comprehensive literature review of prior studies related to tonal languages and melody correspondence is provided. This is followed by a discussion of the research methodology used in this study. The Jiangsu version is then examined, followed by the Beijing version. Then, a comparative analysis between the two versions is provided, followed by the discussion and conclusions.

## LITERATURE REVIEW

### **Previous Studies on the "Jasmine Flower" Folksong**

During the 1980s, Chinese scholars studied the “Jasmine Flower” folksong, focusing primarily on investigating its origins and development. Considerable attention has been given to determining the regional roots of this folksong within China. Scholars such as Yang G. X. (1993), Feng (1998), Wang Z. Y. (1999, p. 99), Liu Y. B. (2007, 122), Xu Y. Y. (2007), Wang G. Q. (2005; 2008, p. 30), Lian (2010), Wang N. (2011, p. 2), Xia (2011, p. 19), Qin J. L. (2011, p. 32), Yang L. L. (2012), Li B. (2013a, p. 56; 2013b, p. 139), Jiang (2015), Liu S. (2016), among others, have presented arguments regarding its possible origins, debating whether it originated in northern or southern China. Wang Z. Y. (1999, 100), for instance, supported his assertions with compelling geographical and historical evidence. However, scholarly discourse on the regional origins of the “Jasmine Flower” folksong has not reached a unanimous consensus.

Discussions on regional variations of the “Jasmine Flower” folksong have been explored to a certain extent. Di (2009) analyzed three regional variants from Hebei, Jiangsu, and Henan provinces, highlighting their interconnectedness in terms of origin. Sun Y. M. (2010) initially discussed the relationship between the melody of Jasmine's music and the tone of the language, and she believed that dialects had a certain influence on the composition of the melody. Li B. (2013a, p. 57) conducted a comparative study of three versions from southern China, examining their evolution within regional stylistic frameworks considering influences from regional language and geography. Additionally, Li S. Q. (2008, p. 216) noted distinct singing styles, national and local characteristics, and differences in lyrical content.

Other researchers including Sun W. (2007, p. 190), Li Y. Q. (2009, p. 122), Chen (2011, p. 39), Liu S. (2016, p. 81), Li Y. (2018, p. 9), and Wang F. (2019, p. 12) focused on scrutinizing the musical structure and melodic style across different regional renditions. Existing research, however, primarily emphasizes the examination of regional stylistic disparities in music, with limited exploration into the underlying factors influencing these regional styles, thus providing a constrained investigation into the impact of these factors on the melody of the folksong.

### **Previous Studies on the Interrelation between Speech-Tone and Melody**

Many scholars have explored the relationship between tonal languages and musical melody, serving as valuable references for this study. Pioneering explorations were conducted by Ward (1932) and George Herzog (1934). Ward (1932) examined Fanti singing from the African Gold Coast, highlighting the potential hindrance in understanding lyrical meaning caused by inappropriate melodic tonality. Conversely, Herzog (1934) scrutinized Navaho music, outlining distinct grounds for the separation between language and music, especially in the impact of language tonality on musical melody, potentially affecting comprehension. Herzog emphasized that speech-tone is a fundamental influence on the melodic structure of songs (Sollis, 2010). The groundwork, laid by Ward and Herzog has opened avenues for studying the connection between tonal languages and musical melody. Subsequent investigations have predominantly focused on regions renowned for tonal languages, such as China, continental Southeast Asia, Africa, and highland Papua New Guinea.

Research focusing on the correlation between language and music in the Chinese context has primarily centered around traditional Chinese opera, folksongs, and popular music, offering notable insights. In the study of Kunqu opera, Levis (1936) found evidence suggesting that librettists and composers paid meticulous attention to aligning speech-tones with melodic contours in the creation of Kunqu opera pieces. Their efforts were aimed at achieving synchronisation between speech-tones and melody, although they didn't explicitly discuss intelligibility. Liu M. (1974, p. 80) proposed that traditional compositional techniques employed in Beijing opera also incorporate an awareness of the tonalities within libretti. Stock (1999), examining the inherent melodic patterns and libretti texts in Chinese Peking opera, identified instances where performers slightly adjusted melodies to better suit the verse texts, enhancing audience comprehension.

Studies on Chinese folksongs, as explored by Chao (1956), encompassed various genres including children's songs, street vendors' cries, traditional Chinese opera music, and contemporary art songs spanning from 1920 to 1950. Chao observed a correlation between linguistic tones and melodic structures, noting a strong relationship in traditional song categories compared to relatively weaker connections in contemporary art songs. This observation aligns with trends documented and summarized by Schellenberg (2012).

Mark and Li (1966) conducted research on Wuming songs performed in the Tai dialect of Guangxi Province, China. Their findings revealed that when poetic verses in these established melodic patterns underwent changes or rephrasing, about 62.8% of the words maintained the original melodic pitches. During live performances, singers often improvised, modifying the original melody to suit the of the lyrics. This adaptation of the melody aimed at aligning with the speech-tones of the words, contributing to improved intelligibility to a certain extent.

Yung (1983; 1989) explored Cantonese Opera and noted that while predetermined melodies exist, singers frequently made improvisational modifications during live performances to enhance expressive effects, either for artistic reasons or to improve comprehensibility. In Wong and Diehl's (2002) study on Cantonese songs, they observed that audiences comprehend lyrics through the pitches of the words and the contextual meaning of the text. Consequently, in the creation of Cantonese songs, the sequence of the lyricist and composer significantly influences the alignment between the speech-tones of the words and the melody.

Marius Schneider introduced a set of criteria in 1942 concerning the reciprocal influence of speech-tone patterns in song texts and melody on rhythm. Schneider (1950) applied these criteria to study Chinese art songs, yielding promising results (Mark & Li, 1966, p. 167). Wee (2007), after analyzing various Mandarin songs, proposed that Mandarin Chinese accentuates a robust rhythmic synchronization between speech and sung melodies. In instances where a strong beat within a measure aligns with an emphasized syllable in the words, the melody corresponds at these junctures. This observation echoes Schneider's (1950) concept of

the mutual correlation between Chinese tonal patterns and music concerning rhythm and cadence.

Studies on the correlation between language tones and melody in mainland Southeast Asia have predominantly concentrated on Thailand, Vietnam, and Laos, because those regions are where tone languages are traditionally spoken. George List (1961) conducted an extensive study involving various song genres in Central Thailand. His research expanded to develop a comprehensive classification system, enabling the representation of all speech and song genres on a two-dimensional plane. This framework served as a foundational model for assessing the relationship between language tones and song melodies. David Morton (1974), Stanley Mendenhall (1975), and Yoko Tanese-Ito (1988) conducted extensive research on Thai classical singing. Yoko Tanese-Ito aimed to formalize the correlation and identify musical phrases based on original primary melodies rather than resulting surface melodies. Dusadee Swangviboonpong (2003), in a comparative study of traditional music across various regions of Thailand, discovered a high level of correspondence between language tones and melody.

Marius Schneider (1961) conducted studies on West African Music, emphasizing the crucial role of comprehensibility in traditional West African music. He noted that language tones significantly influence the direction of musical melodies and aid in the comprehensibility of lyrics. V. Kofi Agawu (1988), in his research on Northern Ewe music, elucidated the relationship between speech-tones and song melodies. Bruce Connell (2012) studied Mambila songs, which are sung in a Bantoid language in the Nigeria–Cameroon borderland, and identified a consistent alignment between language tones and musical melodies in Mambila songs. Schellenberg (2009), in his research on three Shona language songs, observed that as the melodies of the music become more modernized and integrate more Western compositional techniques, the alignment with speech-tone patterns decreases. This observation is consistent with Chao's (1956) perspective on traditional Chinese songs versus modern art songs, providing explicit evidence for the relationship between the comprehensibility and artistic aspects of language tones and song melodies.

In the highlands of Papua New Guinea, Jacqueline Pugh-Kitingan (1981; 1984; 2011, p. 112-116) extensively explored the interplay between melody and word-tones in the main genres of both vocal and instrumental music among the Huli of Hela Province (then known as the Southern Highlands Province) as well as in their extemporaneous stories or *bi té* that are usually told in a singing voice for entertainment. She observed that in all genres of Huli vocal and instrumental music that use language, the four speech-tone patterns, that include three main contrastive word-tone patterns of low-rising, high-falling and mid-level, as well as sentence terminating patterns of verbs, usually determine melodic contour for the given set of melodic pitches that is characteristic of a particular genre. Sometimes, the ends of word-tones may be distorted by characteristic melodic motifs of a particular genre for effect or contrast, but speech-tone is the primary determinant of melody in most instances. Extemporaneous stories or *bi te* also have linking expressions at the ends of sections in a tale, that tend to be articulated on a level pitch as in spoken sentence-terminating intonation, while performers of the solo orally-resonated instruments *gawa* (a woman's and a man's double-stringed musical bow) and *hiriyula* (bamboo jew's harp) often imitate the non-language melodic patterns of Huli group yodelling

as introductions, interludes and conclusions between the poetic verses articulated (Pugh-Kitingan, 1992).

In the more recently created *Ngodenaga iba gana* (Christian songs) that are influenced by South Pacific string band music and its pentatonic melodies, however, word-tones are sometimes subordinated to melody, but sentence-terminating intonation is still preserved. This is somewhat similar to the findings by Chao (1956) and Schellenberg (2009) mentioned above concerning contemporary Chinese and Shona genres, where melody in some instances can be independent of speech-tones. Michael Sollis (2010; 2011, p. 69-71), in his research on *pikono* stories performed among the so-called Duna (the Yunua or Yuna, northwestern neighbours of the Huli) in the former Southern Highlands province of Papua New Guinea, also noted a high level of correspondence between the word-tones of speech and musical melodies, but with a few instances of mismatch deliberately introduced to prevent excessive melodic descent. These intentional mismatches are at times employed for poetic effect, contributing to aspects beyond the mere comprehensibility of the stories, such as artistic and poetic expression.

Mark and Li (1966) underscore the caution required when applying the relationship between tone languages and song melodies from one tonal language to an entirely different one without comprehensive investigation and substantial research support. However, studies focusing on a particular dialect, specific musical genres, or fundamental melodic frameworks hold significant importance. The use of folksong materials in this paper thus offers a valuable opportunity to explore the relationship between variations in themes for the same folksong and the dialects found within a shared Chinese tonal language system.

## METHODOLOGY

### Data Collection

This research was part of a larger study based on ten regional variations of the “Jasmine Flower” folksong. Two variations of the folksong have been selected from that research for this present discussion. This present study involves the examination of both the speech recitation recordings of song verses and the corresponding musical melodies of the Jiangsu and Beijing versions of the “Jasmine Flower” folksong. The Jiangsu variant is primarily popular in the coastal regions of southern China, while the Beijing variant is prevalent in the northern regions with Beijing at its center, becoming representative of Chinese folksongs. Furthermore, the respective dialects used in singing these two variant versions are among the most widely spoken dialects in China, representing certain linguistic characteristics. Data collection mainly involved gathering audio recordings, videos, musical scores, and recitations of the lyrics in these dialects for both versions.

For recording speech-tones in the lyrics, participants residing in both the Beijing and Jiangsu regions, who are proficient in singing the respective regional dialect versions of the “Jasmine Flower” folksong, were invited to perform the recitations. They were each briefed about the study's purpose and significance and willingly participated, demonstrating enthusiasm. The recitations were carried out in a relaxed state, employing their native dialects. Recordings

were conducted using a portable TASCAM DR-100 solid-state recorder along with an AKG C420 headset microphone, capturing samples at up to 48000 Hz (24 bits).

Transcriptions were then created based on video and audio recordings of these performances. To facilitate pitch and melodic contour comparison and ensure clarity, all musical notations presented in this paper were transcribed into standard Western staff notation using MuseScore software. The performances of these folksong variants have previously been publicly sung and published, hence there were no copyright or moral issues associated with their performances and recording for this study.

## DATA ANALYSIS AND INTERPRETATION





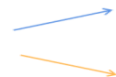

Melodic analysis serves as an indispensable tool for dissecting the intricate layers within a musical piece (Spring & Hutcheson, 2013). The analysis of the “Jasmine Flower” folksong’s melody entailed a systematic examination of various musical elements, encompassing pitch, rhythm, and phrases. This comprehensive investigation aimed to understand the distinctive styles, patterns, and emotional expressions present in these two regional variations. It facilitated a deeper exploration of the relationship between dialectal speech-tone patterns and their corresponding musical elements.

To measure speech-tones, Praat speech analysis software was utilized to export the speech-tone contours of the recited lyrics, providing visual references. This method allowed for a direct and intuitive comparison of specific speech-tones with the melody in detail. The primary focus involved precise measurement of the average pitch data from the recited lyrics using Praat’s pitch measurement function. Subsequently, this pitch data, in cycles-per-second or Hertz, was utilized to create frequency polygons in Microsoft Excel, facilitating a comparison with frequency polygons generated from the pitches of the folksong melody. Notably, as Chinese single words are monosyllabic (Wu *et al.*, 2016), there is no need for syllable segmentation, unlike tonal languages with multi-syllabic words such as, for example, among Papua languages.

Schellenberg (2009) proposed the notions of "opposing," "non-opposing," and "parallel" to express the relationship between speech-tone and melody. Ladd and Kirby (2020), in their study on Vietnamese songs, utilized comprehensive classification criteria to assess the relationship between language tones and song melodies. They categorized different corresponding states between speech-tone and song melody using Western polyphonic music concepts like "contrary motion," "similar motion," and "oblique motion," providing detailed definitions. These concepts provide precise descriptions of diverse correspondences between speech-tones and melodies. Employing this classification system will facilitate clear categorization and enumeration while statistically analyzing the relationships between language tones and the shapes of melodic contours (Table 1).

**Table 1:** Classification of relative motion trends of speech-tone and folk melodies, folk

melody (blue) and speech-tone (orange) (Ladd & Kirby 2020; Schellenberg 2009, 2020)

Description	Trend of the melody of folk song and speech-tone movement	Explanation
Similar motion		Both rise
		Both fall
Oblique motion		The folk song pitch remains constant, while the speech-tone rises or falls
		The folk song pitch rises or falls while the speech-tone remains constant
Contrary motion		The folk song pitch rises while the speech-tone falls
		The folk song pitch falls while the speech-tone rises

## THE JIANGSU VERSION OF “JASMINE FLOWER” FOLKSONG

### Music of the Jiangsu Version of “Jasmine Flower”

The Jiangsu version of the “Jasmine Flower” folksong is widely performed in southern China, particularly within the Jiangsu Province bordering Shanghai. This section analyses and discusses the folk melody, the realisation of speech-tones within the lyrics, and the interplay between them within the Jiangsu version of the “Jasmine Flower” folksong. This version has been frequently performed in public, often with instrumental accompaniment, across Jiangsu and Zhejiang Provinces and the Shanghai area. The musical transcription discussed here is based on the performance by Wu Liangying, a female folk singer from Nanjing city, Jiangsu Province. It was sung in the Jiangsu dialect, and was recorded on 22 September, 2021 (Figure 3). Wu Liangying's rendition closely aligns with the version published in cipher notation in 1982 (National Editorial Committee of Chinese Folk Song Collection, 1982). The musical cipher score of the Jiangsu variant of the "Jasmine Flower" folksong has been transcribed into Western staff notation for this analysis and discussion (Transcription 1).





**Figure 1:** Performance of the Jiangsu Version of "Jasmine Flower" sung and accompanied by Wu Liangying playing *pipa* (right) with a *sanxian* performer (left)  
(Source: Liang Tao, 22 September 2021)

**Transcription 1:** The Jiangsu version of "Jasmine Flower"

(Source: Transcribed from *Collection of Chinese Folk Songs*, Jiangsu volume, 1982, p. 726, National Editorial Committee of Chinese Folk Song Collection)

## Jasmine Flower

Jiangsu Province Version

$\text{♩} = 46 \text{ MM}$

Ho yi do me li hu , Ho yi do me li hu ,

5 Mu yo hu cuo , xia ya xia bu go tao ,

9 ao you sing ce yi do da , you po

12 ku hu di ning er (yao zjen ao) mu . (total duration = 30 s)

The Jiangsu version of "Jasmine Flower" showcases a thoughtful and intricate composition. It is sung in the pentatonic mode based on Eb over 14 measures, and set in a meter resembling 2/4 time. A notable aspect of Wu Liangying's performance of this version was its frequency range, with the melody reaching a peak at G5 (frequency of 783 Hz) and a low at Bb3 (frequency of 246.94 Hz), spanning an octave and a sixth.

This Jiangsu “Jasmine Flower” folksong melody falls into six musical phrases, each with distinct melodic structures. None of these phrases replicate exactly identical melodic patterns. The melodic progression mostly follows stepwise patterns, of ascending and descending motifs with minor thirds especially at the end of musical phrases. The occurrence of perfect fourth intervals is relatively infrequent, appearing only thrice throughout the piece: Bb4-Eb5 in the first measure, Bb4-F4 in the seventh measure, and F4-C4 in the twelfth measure.

At the conclusion of the first and second musical phrases—specifically in the second and fourth measures—a recurring three-note motif emerges: Bb4-G4-Bb4, configured with a rhythm of two sixteenth notes followed by an eighth note (♫♫♫). Additionally, a consistent rhythmic pattern of either (♫♫♫ or ♫♫♫) occurs at the conclusion of each musical phrase. This recurring rhythmic figure appears to act as a cue, indicating the ending of these musical phrases. This intricate interplay between the melodic structure and rhythmic patterns within the Jiangsu version of the “Jasmine Flower” serves as a precursor to understanding the relationship between these musical elements and the speech-tones found in the lyrics.

### Speech-Tones of “Jasmine Flower” in the Jiangsu Dialect

#### (i) The Jiangsu Dialect

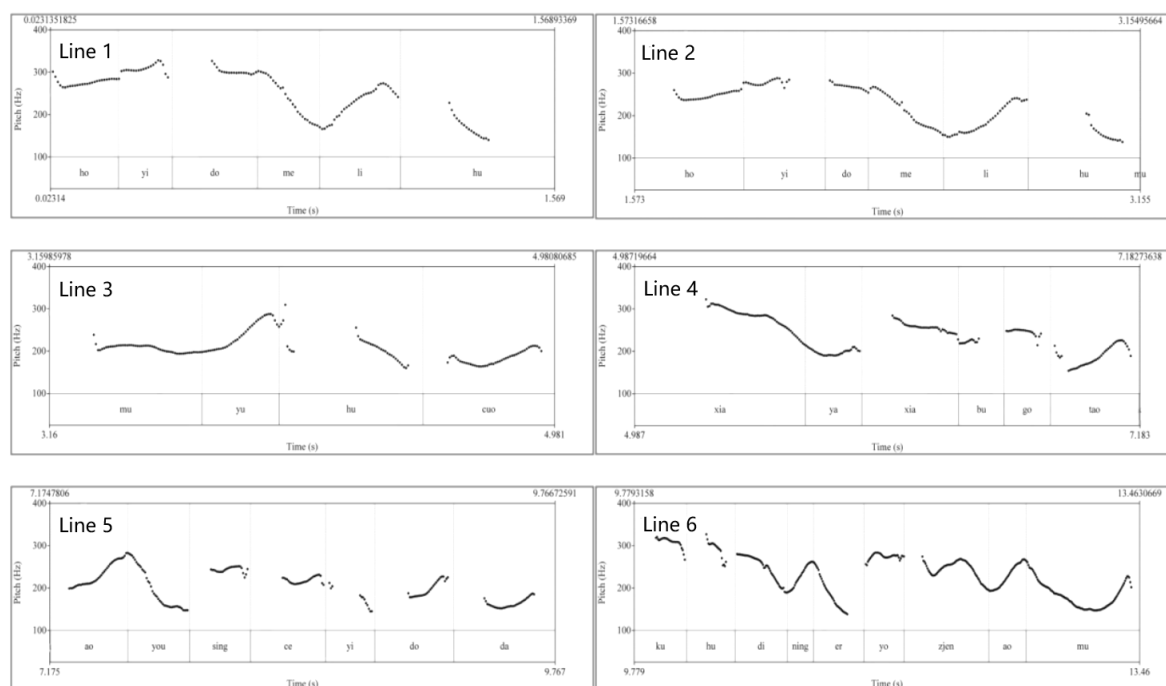
The Jiangsu dialect, which is one of the dialects of the Wu language, is predominantly spoken in southern Jiangsu Province, Shanghai, and specific areas of Zhejiang Province. The Shanghai and Zhejiang sub-dialects of the Jiangsu dialect of the Wu language, share essential vocabulary across these subsidiary dialects. Meanwhile the Jiangsu dialect maintains one of the most conservative tone systems in China, preserving much of the speech-tones from the ancient Wu Chinese. It consists of eight tones, indicating a tonal complexity greater than, for example, that of Mandarin, which has four tones. The speech-tones within this system are represented as follows: each numeral represents a specific pitch—5 denotes a high pitch, 4 signifies mid-high, 3 represents mid, 2 indicates mid-low, and 1 represents low. These numerical notations denote relative pitches, following a structure common in most Sino-Tibetan tonal languages. Moreover, two numerals are utilized to define the tone contour—for instance, 54 signifies a tone starting and ending at a high pitch, resembling a high-level tone, while 35 represents a tone starting at a mid-pitch and rising to a high pitch, indicating a relatively mid rising tone, and so on (Cao & Maddieson, 1992; Pan *et al.*, 1991).

**Table 2:** Jiangsu dialect's tonal system, taking *do* as an example

Tone Number	Name	Pronunciation	Chinese Characteristic	English Meaning
Tone 1	High Level 54	<i>Do</i>	东	East
Tone 2	Mid Rising 35	<i>Do</i>	朵	A/ An
Tone 3	High Falling-Rising 435	<i>Do</i>	懂	Understand
Tone 4	Low Rising-Falling 131	<i>Do</i>	动	Move/ Act
Tone 5	High Rising 45	<i>Do</i>	冻	Freeze
Tone 6	Low Late Rising 214	<i>Do</i>	洞	Cave/ Hole
Tone 7	High Falling 51	<i>Do</i>	督	Supervise
Tone 8	Low Rising 15	<i>Do</i>	毒	Poison

(ii) **The Tonal Contours of a Speech Recording of the Jiangsu Version of “Jasmine Flower” Folk Song**

The recitation of the “Jasmine Flower” folksong lyrics in the Jiangsu dialect was performed by Liu Liping, a retired teacher aged 60 from Jiangnan University in Jiangsu province. The recording lasted for 13.46 seconds. Figure 4 provides a graphical illustration of the speech curve extracted from this recording, generated using Praat software. The representation of the dialectal speech-tone's pitch curve is displayed visually as the fluctuation of the fundamental frequency (F0) of the voice over a specific time frame.



**Figure 2:** Pitch contour of speech-tones in each line of the Jiangsu verse

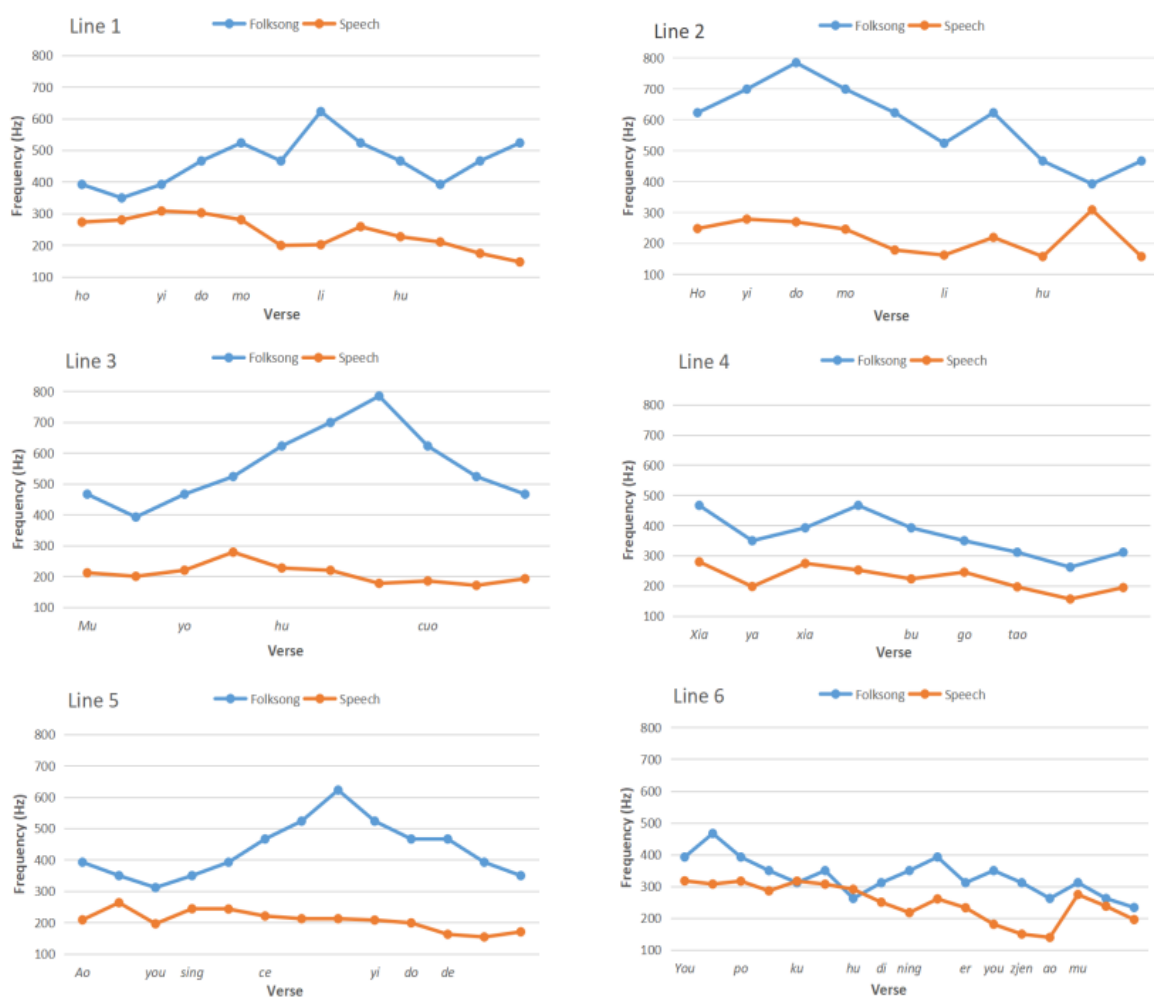
In the speech recording featuring the Jiangsu version of the “Jasmine Flower” performed by Liu Liping, the delineated contours of the dialectal tones of the poetic lines the verse were clearly heard. Seven out of the eight speech-tones present in the Jiangsu dialect were utilized in the recitation, with the exception of the low rising tone. From examining the pitch contours within the lyrics as shown in Figure 4, a noticeable variance can be seen. For instance, in line 1, the term *yi* is identified as having a high-level tone, positioned at a relatively higher tonal level. Conversely, in line 5, *yi* appears at a lower tonal level, potentially influenced by the surrounding words *ce* and *do*, both of which are pronounced within low pitch range.

Across the six verse lines, both line 1 and line 2 start with an ascending tonal contour, distinguished by the *ho* sound in high falling-rising tone. In contrast, line 5 commences with the *ao* sound in mid rising. Line 4, furthermore, begins with a descending trend in the *xia* sound, featuring a high falling tone. On the other hand, the tonal contours at the onset of line 3 and line 6 exhibit relatively stable patterns. These intricate tonal variations within each line are compared with the melody of the folksong in the following analysis, particularly focusing on

speech-tonal differences and melodic pitch.

### Comparisons of Speech-Tone Contours and Song Melody (Jiangsu Version)

Using the methodology of Schellenberg (2009; 2012; 2013), the contours of the speech-tones and melodic patterns were plotted against each other in the combined frequency polygons shown in Figure 5. This used the 71 pitches in the song as melodic plotted points, comparing the melody and speech-tone patterns line by line. Within this analytical framework, a total of 60 instances of contour transitions were analysed over of the 71 melodic pitches, showing the interaction between speech contour and folksong melody. At the words on the end of each line of verse, line 4 and line 6 demonstrate the alignment between the folk song melody and the speech-tone. In contrast, line 1, line 2, line 3, and line 5 show the folk song melody and the speech-tone moving in opposite directions.



**Figure 5:** Comparison of pitch contours line by line for melodic movement and speech-tones in the Jiangsu version

Table 3 provides statistical results on comparative motion categories, comparing the pitch trends in speech-tones and folksong melody. The majority of comparisons are categorized as "similar motion," constituting 53.3% of the total occurrences. When combining "similar"

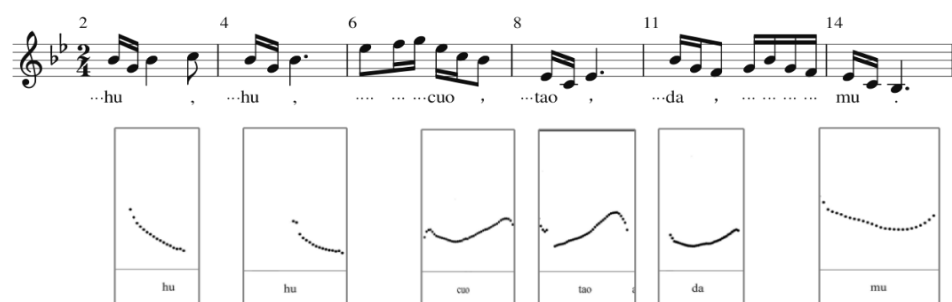
and "oblique" motions (5%), these together account for a cumulative 60.34%. In contrast, "contrary motion" comprises 41.6% of the transformations.

**Table 3:** Statistics of comparisons in Jiangsu version melody and speech contours

Line	Similar motion	Oblique motion	Contrary motion	Total
1	4	1	6	11
2	6	0	3	9
3	4	0	4	8
4	6	0	2	8
5	3	2	5	10
6	9	0	5	14
Total	32	3	25	60
Percentages	53.3%	5%	41.6%	

Further exploration is needed to understand the occurrence of "contrary motion," that is to see why speech-tones and melodic patterns do not correspond but have opposing contours. The subsequent analysis will look at the factors contributing to the formation of "similar motion" and "contrary motion" in the Jiangsu variant, considering each motion separately.

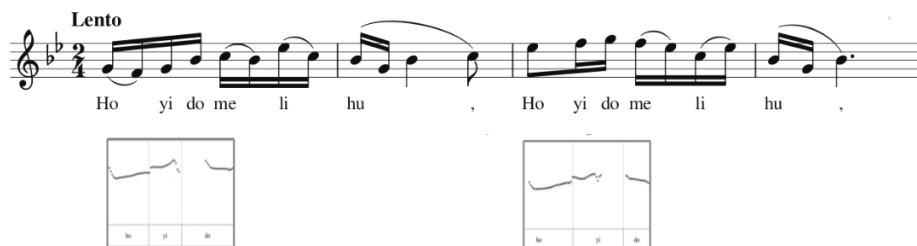
At the conclusion of the second and fourth measures, a pair of sixteenth notes forms a brief ornament that mirrors a minor third, corresponding to the word hu in the lyrics, despite it having a descending tonal pattern (see Figure 6). The rhythmic pattern (♫), consistently emerges at the end of each phrase, signaling a conclusion of the musical phrase. The folk melody diverges from the expected descent or ascent according to the tonal pattern of the word hu, cuo, tao, da and mu. This divergence in folk melody might serve a functional role, providing a cue for the conclusion of the musical phrase. Alternatively, it could be interpreted that neither the language nor the melody dictates the direction of the other; rather, they each express themselves independently (Schellenberg, 2012; 2013). The musical and speech elements seem to adapt to each other only when it is convenient or conducive.



**Figure 6:** Examples of contrary motion between folksong melody and speech-tone for measures 2, 4, 6, 8, 11, and 14

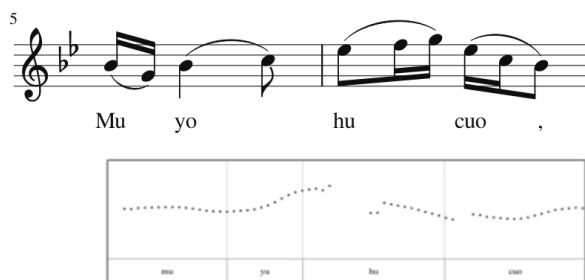
In both the first phrase of measure 1 and the first phrase of measure 3, the speech-tones of *ho yi do* align with the ascending trend of the melody, however the folksong melody in the third measure ascends to a higher pitch without repetition (Figure 7). Measure 3 uses a higher and different melody to express the same lyrics, possibly to avoid the monotony that would

result from repeating both the melody and the lyrics. This demonstrates the creativity of the music.



**Figure 7:** Examples of folksong melody and speech-tone for measures 1 to 4

In lines 5 and 6 of the Jiangsu version, a noteworthy occurrence unfolds within the lyrics *Mo yo hu cuo*, where the word *yo* aligns with the melody in line 5, while the descending speech-tone of the word *hu* forms a contrary motion with the ascending melodic motif of Eb-F-G in the sixth measure (Figure 8). The melodic ascent observed here might be attributed to artistic expression. The subsequent melodic phrase's descent on the word *cuo* also has contrary motion against the word's level-rising speech-tone. Such artistic expression aligns with findings in the research of Li and Choi (2016) on Cantonese songs, where a contrary motion is observed.



**Figure 8:** Example of folksong melody and speech-tone for measures 5 and 6

The melodic descent from Bb4 to F4 (that is from 313 Hz to 201 Hz) on the first beat of the seventh measure encompasses a perfect fourth interval, mirroring the descending contour of the words *xia ya* (Figure 9). The interval between the notes Bb4 and F4 sounds a perfect fourth, and the descent in pitch from *xia* to *ya* in the lyrics ranges from 289 Hz to 197 Hz, also representing an interval of approximately a perfect fourth. This pitch descent in speech-tone also corresponds nearly to a perfect fourth interval in the melody. Additionally, the speech-tone of *tao* in the 8th measure corresponds to the melodic progression of Eb4-C4-Eb4 in the melody.



**Figure 9:** Examples of folksong melody and speech-tone for measures 7 to 8

This intricate nature of the melodic motifs in the Jiangsu version serves as one explanation for its more complex melodic structure compared to other regional variations of the “Jasmine Flower” folksong. This observation aligns with Schellenberg's 2012 proposition, suggesting that melodies in some musical cultures do not always rigidly adhere to speech-tone patterns but may have independent artistic requirements, adapting to speech-tones when deemed artistically fitting. This perspective offers insights to understand the contrary motion between folk song melody and speech-tone in the Jiangsu version of the “Jasmine Flower”.

## THE BEIJING VERSION OF THE “JASMINE FLOWER” FOLKSONG

### Music of the Beijing Version of “Jasmine Flower” Folksong

The most renowned rendition of the “Jasmine Flower” folksong is closely associated with the Beijing version. This particular rendition gained prominence through documentation by British missionary John Barrow in 1804 (Qian, 1997; Wang G. Q., 2005). Subsequently, this melody gradually gained recognition in the Western world during the 19th century (Sheppard, 2015). Russian composer Anton Arensky adapted it into a piano Etude in 1896 and Italian composer Giacomo Puccini incorporated Barrow's recorded melody into his renowned opera "*Turandot*" in 1924, significantly popularizing the tune (Gong, 2013). The version Barrow recorded, known as the Beijing version, is typically performed using Mandarin lyrics. In 2005, Beijing authorities chose this rendition as the official song for the 2008 Beijing Olympics. Additionally, in 2012, Chinese singer Song Zuying and Canadian singer Celine Dion performed this rendition in Mandarin during the Chinese New Year gala. This particular version has become a symbolic representation of Chinese cultural identity. The musical notation of the Beijing version of the “Jasmine Flower” folksong has been transcribed into Western musical notation, derived from the rendition performed by the Chinese folk singer Song Zuying in Mandarin (Figure 10 and Transcription 2).



**Figure 10:** Song Zuying singing the Beijing Version of “Jasmine Flower” in Mandarin  
(Source: <https://www.youtube.com/watch?v=FSZRZFzYwAA>)

**Transcription 2:** The Beijing version of the “Jasmine Flower” folksong  
(Source: <https://www.youtube.com/watch?v=FSZRZFzYwAA>)

# Jasmine Flower

Beijing Version

$\text{♩} = 31 \text{ MM}$

Hao yi duomei li di mo li hua, hao yi duomei li di mo li hua,

5 fen fang mei li man zhi ya, you xiang you bai ren ren kua,

9 rang wo lai jiang ni zhai xia, song gei bie ren

12 jia, mo li hua ya mo li hua. (total duration = 54 s)

The Beijing version of the "Jasmine Flower" folksong comprises 14 measures, set in a 2/4 meter. Like the Jiangsu Province version discussed above, this example is sung in the pentatonic scale Eb-F-G-Bb-C. The melodic range of the Beijing version, however, is slightly narrower than that of the Jiangsu variant. Its highest note reaches Eb5 (622.25 Hz), while the lowest note is Bb3 (233.08 Hz), spanning a range of around an octave and a quarter.

Structurally, the song follows clearly discernible patterns: measures 1 to 4 consist of two fully repeated phrases, each organized in two-measure units. Measures 5 to 10 encompass three distinct phrases, also organized in pairs of two measures each. Additionally, measures 11 to 13 form a phrase unit composed of 2.5 measures.

In terms of musical phrase segmentation, the Beijing version of the "Jasmine Flower" demonstrates a consistent pattern, wherein most phrases are structured in pairs of two measures each. This music feature is similar to some Western musical conventions (Jones & Schmidt-Jones, 2022). In a traditional Chinese music composition, there are rarely repeated phrases with the same melody, and the end of each phrase always provides a certain melodic clue for the beginning of the next phrase (Yung, 2019; Zhang *et al.*, 2022). Thus the pattern of melody in the Beijing version of "Jasmine Flower" deviates from the typical structure found in many traditional Chinese musical compositions, since it starts with a phrase that is repeated, a feature more aligned with some types of Western musical composition (Cook, 2021:69; Weiß *et al.*, 2019).

## Speech-tones of "Jasmine Flower" in the Beijing Dialect

### (i) The Beijing Dialect and Mandarin

The Beijing dialect, also known as Beijing Mandarin, constitutes a significant variant of Standard Mandarin, sharing the same four tones: high-level, rising, falling-rising, and falling tones (Li *et al.*, 2020). The meanings and tonal aspects in most vocabulary are consistent between the Beijing dialect and Standard Mandarin. A distinctive feature of the Beijing dialect, however, is the presence of retroflex sounds, notably the "r" sound occurring at the end of many



syllables. This particular phoneme involves curling or lightly tapping the tongue against the upper palate, resembling the "r" sound found in some dialects of American English (Fu, 2022).

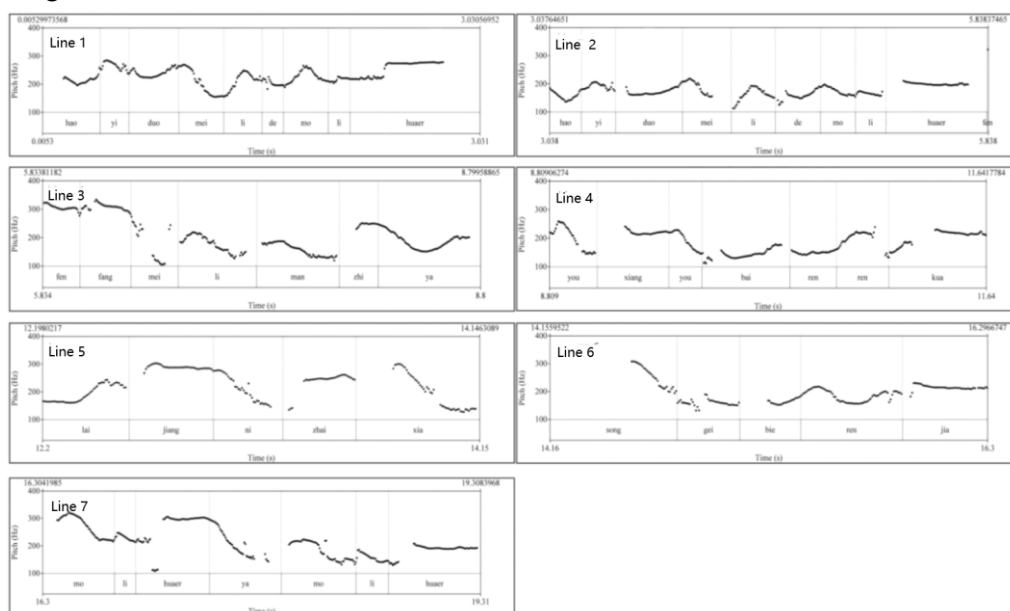
As shown in Table 4, for example, the word *ye* in Mandarin has four meanings, depending on the particular speech-tone of the word. It can mean “coconut,” “Grandpa,” “also” or “night” according to whether its tone is high-level, high rising, falling then rising, or high level falling tones. If singers cannot accurately deliver the pitches and listeners cannot discern the semantics from the surrounding words, the meaning of words may become distorted.

**Table 4:** Speech-tones of word “*ye*” in Mandarin tones

Tone Number	Name	Pronunciation	Chinese Characteristic	English Meaning
Tone 1	high-level	<i>Yē</i>	椰	Coconut
Tone 2	high rising	<i>Yé</i>	爷	Grandpa
Tone 3	falling then rising	<i>Yě</i>	也	Also
Tone 4	high level falling	<i>Yè</i>	夜	Night

**(ii) The Tonal Contours of a Speech Recording of the Jiangsu Version of “Jasmine Flower” Folksong**

The informant for this recording was Fu Yu, a 39-year-old female piano teacher employed at Guizhou Normal University in Guizhou province, who originally hails from Beijing. In this recording, Fu Yu recited the lyrics of the folksong “Jasmine Flower” in the Beijing dialect. The recording session took place on 15 March 2023, at her residence and lasted for 19.31 seconds. Figure 11 displays the pitch contours extracted from this recording, segmenting each phrase, utilizing Praat software.



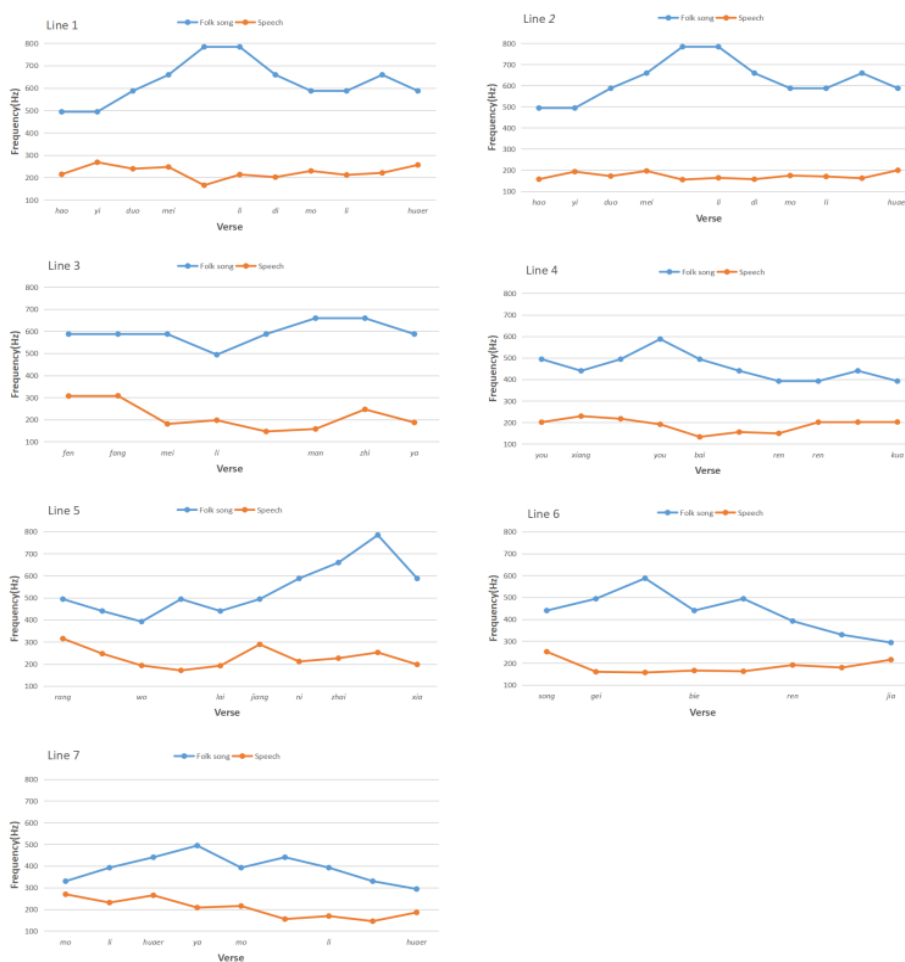
**Figure 11:** Pitch contours of dialectal speech in each line of the Beijing version

The speech-tone contours from the Beijing "Jasmine Flower" version encompass the four speech-tones. In contrast to the seven speech-tones detected in the Jiangsu version of the lyrics, the Beijing version exhibits a comparatively simpler and flatter tonal profile.

Most contours display distinctive waveform characteristics, often presenting peaks or valleys. Several word endings in various lines exhibit relatively flat and nearly linear characteristics. For instance, the word *huaer* in lines 1 and 2 ends with *er*, leading to a flattened contour for the entire word—an identifiable pronunciation feature in the Beijing dialect. Similarly, in lines 4, 6, and 7, the final words also exhibit this flat level.

### Comparison between Speech-Tone Contours and Song Melody (Beijing Version)

The following analysis of the Beijing version comparing speech-tone patterns and melodic aspects of the “Jasmine Flower” verse text, is depicted in the combined frequency polygons plotted for the 67 notes of the folksong in Figure 12. Figure 12 illustrates a count of 27 instances of contrary motion and 18 occurrences of similar motion, accompanied by 14 instances of oblique motion. When considering entire lines, a consistent congruence emerges between melodic patterns and dialectal pitch movements, notably evident in lines 3, 5, and 7, illustrating the seamless integration of melody and dialectal expressions. This identified 60 instances of speech-tone contour transitions, unraveling the intricate interplay between speech contours and the folksong melody.



**Figure 12:** Comparison of pitch contours line by line for melodic movement and speech-tones in the Beijing version

Table 5 numerically illustrates the distribution of motion types within the Beijing

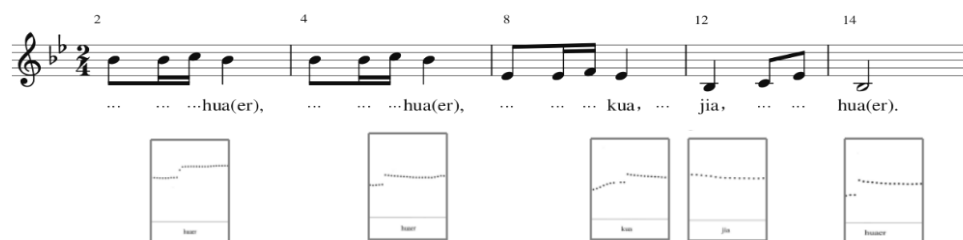
rendition of the Jasmine folksong. Similar motion accounts for 31.66%, while oblique motion constitutes 23.33% of the transformations. The combined impact of similar and oblique motion amounts to 53.33%, indicating a significant influence on the interplay between speech-tones and melodic sequences. Conversely, contrary motion holds a substantial share of 45.00%, signifying a notable presence of divergent movements between speech-tones and musical melody.

**Table 5:** Statistics of movement trends in Beijing version melody and speech contours

Line	Similar motion	Oblique motion	Contrary motion	Total
1	3	3	4	10
2	3	3	4	10
3	2	3	2	7
4	2	3	4	9
5	6	0	3	9
6	1	2	4	7
7	2	0	6	8
Total	19	14	27	60
Percentages	31.66%	23.33%	45%	

In the Beijing version of the Jasmine folksong, each phrase concludes with an emphasized quarter note (♩), diverging from the rhythmic pattern observed in the Jiangsu variant, which typically employs a consistent rhythm of two sixteenth notes followed by an eighth note (♫♫ or ♫♫♫ rhythm pattern) to mark the phrase endings.

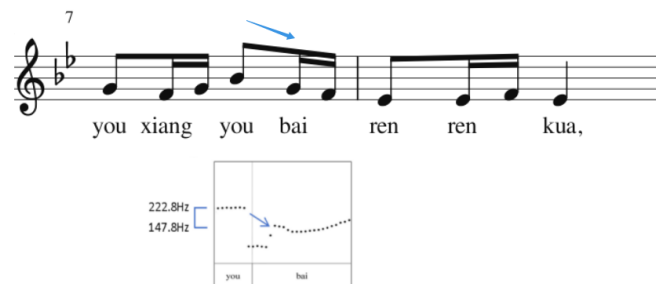
Interestingly, in the Beijing version, the occurrences of quarter-note endings in the second, fourth, eighth, twelfth, and fourteenth measures perfectly coincide with the concluding speech-tones of line 1, line 2, line 4, line 6, and line 7 (Figure 13). These lines culminate with a speech-tone of high level, and the quarter-note melodies emphasize and sustain this steady tone. This synchronization between speech-tone and song melody demonstrates a functional and artistic alignment. For instance, the sustained Bb4 note on the second beat in the second measure aligns precisely with the level contour of the high level speech-tone of the word *huaer*, as does the sustained Bb4 note on the first beat of the twelfth measure with the level contour of the high-level speech-tone on the word *jia*.



**Figure 13:** Conclusions for measures 2, 4, 8, 12, and 14

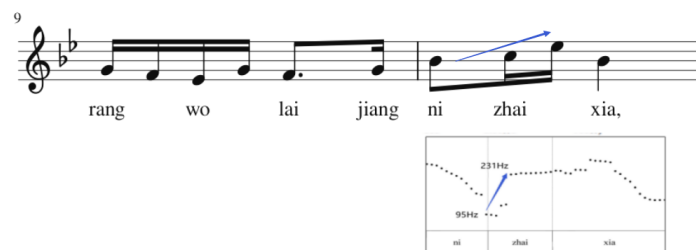
The melodic descent from Bb4 to G4 on the second beat of the seventh measure

encompasses a minor third interval, mirroring the descending contour of the words *you bai* (Figure 14). The interval between the notes Bb4 and G4 sounds around 300 cents or a minor third, and the descent in pitch from *you* to *bai* in the lyrics ranges from 222.8 Hz to 147.8 Hz, also representing an interval of approximately a minor third. This pitch descent in speech-tone also corresponds nearly to a minor third interval in the melody.



**Figure 14:** Example of folk song melody and speech-tone for measures 7 and 8

The upward pitch ascent found in the lyrics *ni zhai* within the tenth measure aligns with the melodic rise of Bb4-C5-E5. Specifically, in terms of ascending pitch, the speech-tones of *zhai* in speech rises from 95 Hz to 231 Hz (Figure 15).



**Figure 15:** Examples of folksong melody and speech-tone for measures 9 to 10

In measures 12 to 14, the lyrics contain two repetitions of *mo li huaer*. Notably, the first occurrence is an ascending pattern based on eighth notes, while the second is mainly a motif based on a descending direction (Figure 16). In the speech tonal patterns of the Beijing dialect, when identical phrases are repeated, the second often adopts a lower and more subdued tone compared to the initial one. This aligns with the descending trend in the melody, transitioning from G4 down to Bb4, occurring in the 13th to 14th measures of the musical score. This analysis has elucidated the reasons behind the similarities between speech-tones and melodic contours in the Beijing version. It illustrates the impact of everyday speech-tone on the melodic construction of the Beijing version of the folksong.

Since the ending melody of the last two measures of the Beijing version is almost the same as the melody ending of the Jiangsu version, the conformability between speech-tone and song melody in ending of the Beijing version is significantly more consistent than Jiangsu version. It illustrates the impact of everyday speech-tone on the melodic construction of the Beijing rendition of the Jasmine folksong, confirming that there is no real divergence.

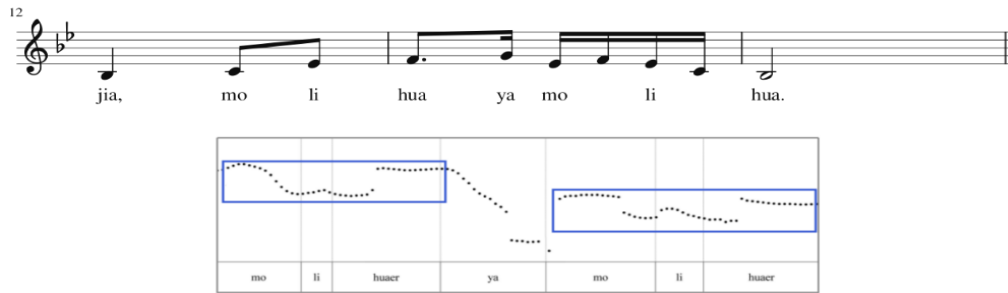


Figure 16: Examples of folksong melody and speech-tone for measures 12 to 14

## COMPARATIVE ANALYSIS BETWEEN THE JIANGSU AND BEIJING VERSIONS

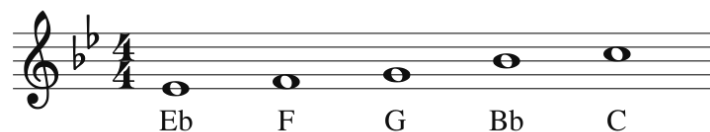
### Comparative Musical Analysis

To understand further the differences between these regional versions, this study will undertake a comparative analysis of their musical and poetic attributes. The utilization of modern music notation software, such as MuseScore, enables a convenient juxtaposition of the scores of the “Jasmine Flower” folksong from these distinct versions, facilitating this analysis (Figure 17). This comparative analysis aims to explore elements such as, speech-tone, rhythm, and poetic verse content to discern the similarities and differences between these two variants.



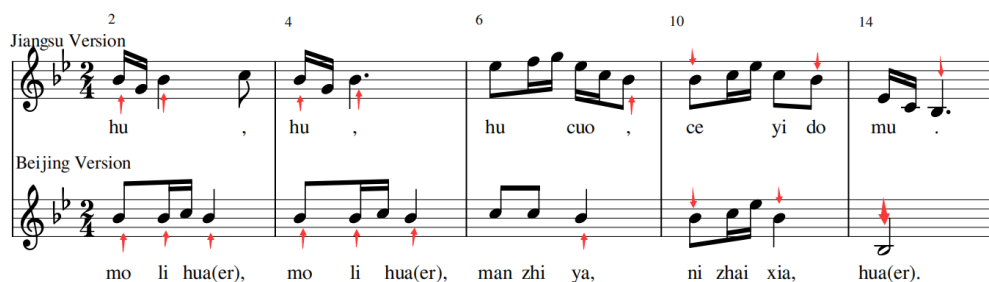
Figure 17: Combined musical scores for Jiangsu and Beijing versions

The two versions have been transcribed into the Bb major key for comparative analysis. Both renditions of the Jasmine folksong from their respective regions follow the Eb-F-G-Bb-C pentatonic scale, depicted in Figure 18.



**Figure 18:** Pentatonic mode for transcription of the Jiangsu and Beijing versions of “Jasmine Flower”

This singular mode form, when extended, may evoke a sense of tonal ambiguity (Zhang & Hu, 2023). Traditional Chinese music, however, often employs specific emphases to indicate central tonality, which can involve repeated rhythms or elongated note values (Thrasher, 2016, p. 136). In the 2nd, 4th, 6th, 10th, and 14th measures, both versions accentuate the presence of the Bb note, although the tonic centre is Eb (Figure 19). Measure 14 is the conclusion, and both versions of the melodies use the Bb note as the end, which is a feature of many Chinese musical styles.



**Figure 19:** Comparison of melodic motifs between Jiangsu and Beijing version of “Jasmine Flower” folksong, measures 2, 4, 6, 10 and 14

There are several other similarities between the two versions. They both use similar opening motifs, but the Beijing version has a more simple and less ornamented melodic style compared to the Jiangsu version. Other than that, the melodies in measures 9, 10 and 13 of both versions are almost identical.

Although the Jiangsu and Beijing versions share various melodic similarities, determining the original source and the derivative variant between the two presents a challenging task. In fact, tracing the origins within folksong variants poses a considerable challenge, as acknowledged by Herzog (1951, p. 1039) and Mark and Li (1966, p. 168). It can only be inferred that Jiangsu and Beijing version of “Jasmine Flower” may have originated from a common melodic tune, but the specific origin of this common melodic tune is currently difficult to find.

## Comparative Analysis of Language and Poetry

While both the Jiangsu and Beijing renditions of the “Jasmine Flower” folksong convey admiration for the jasmine flower, each version utilizes different poetry, both in terms of language and meanings. The following comparison illustrates these differences.

### Line 1

Jiangsu version: *Ho yi do me li hu.* (What a jasmine flower!)

Beijing version: *Hao yi duo mei li de mo li huaer.* (What a beautiful jasmine!)

### Line 2

Jiangsu version: *Ho yi do me li hu.* (What a jasmine flower!)

Beijing version: *Hao yi duo mei li de mo li huaer.* (What a beautiful jasmine!)

### Line 3

Jiangsu version: *Mu yo hu cuo.* (The garden is full of flowers.)

Beijing version: *Fen fang mei li man zhi ya.* (Fragrance and beauty fill the branches.)

### Line 4

Jiangsu version: *Xia ya xia bu go tao.* (No flower that smells so sweet can exceed it.)

Beijing version: *You xiang you bai ren ren kua.* (People praise it because it is sweet and white.)

### Line 5

Jiangsu version: *Ao you sing ce yi do da.* (I have the heart to pick one to wear.)

Beijing version: *Rang wo lai jiang ni zhai xia.* (Let me pick it off.)

### Line 6

Jiangsu version: *Yo po ku hu di ning er yao zjeng aoo mu.* (Afraid to be scolded by people who look at the flower.)

Beijing version: *Song gei bie ren jia.* (Give it to someone.)

### Line 7

Jiangsu version: [Null]

Beijing version: *Mo li hua ya mo li hua.* (Jasmine Flowerer, Jasmine Flower.)

The lyrics of the Jasmine folksong in the Jiangsu and Beijing versions exhibit a close resemblance only in lines 1 and 2. The Beijing version introduces an additional adjective, *mei li de* (beautiful). Significant differences emerge in the poetry from line 3 onward, where both regional versions diverge notably in pronunciation and textual meaning. For instance, in line 1, while expressing the meaning of “jasmine flower,” the Jiangsu dialect uses *mo li hu* whereas the Beijing dialect uses *mo li hua*. These differ in conveying the meaning of “flower”, accompanied by variations in speech-tones. Individuals familiar with Mandarin and the Beijing dialect might potentially misinterpret the pronunciation in the Jiangsu version, possibly mistaking *hu* for the meaning of “tiger” without contextual understanding.

Another potential misunderstanding by individuals interpreting Mandarin speech-tones arises in line 3 of the Jiangsu version, *Mu yo hu cuo* (“The garden is full of flowers”), which might be mistakenly misunderstood by those acquainted with Mandarin tones as “What mistake did the tree make?” Similarly, in line 6, *Yo po ku hu di ning er yao zeng aoo mu* (“Afraid to be scolded by people who look at the flower”), might be misconstrued as “Afraid that people will cry and see my mother”.

From the perspective of poetic significance, the variations in poetic meaning naturally raise issues of comprehensibility. Given the distinct pronunciation backgrounds of the Jiangsu and Beijing dialects, the melody needs to closely align with the speech-tones for better comprehension, while still maintaining a certain artistic independence. The divergent expressions of different dialects through the, poetry, serving as a carrier of language, further influence the melody through the speech-tones. This results in the differences observed in the melodies of the two versions of the Jasmine folksong. Naturally, the formation of these differences includes inherent musical expression techniques unique to each language.

## DISCUSSION AND CONCLUSIONS

For each folksong, the innovative use of Praat Speech Analysis software to derive the spoken contours of each line of poetry, enabled the comparison of spoken speech-tone patterns with their sung melodic structures through plotted frequency polygons. Then, the utilization of the comparative motion trend categories of Ladd and Kirby provided a descriptive outline of the relationship between speech-tones and their sung melodic motifs. At the micro-level, these comparisons supported Schellenberg’s findings that while speech-tones are largely the primary determinants of melodic contours, musical creativity may sometimes overtake language in given stylistic motifs.

At the macro-level, the comparison between the two folksong versions has uncovered some intriguing results. The findings from this study comprehensively show how distinct linguistic characteristics from two Chinese regions contribute to the unique melodic interpretations of this folk song. It was observed that the melodies of “Jasmine Flower” folk song variations from Jiangsu and Beijing are influenced by the differing speech-tone patterns of local dialects. Furthermore, the lyrics of the “Jasmine Flower” folk song in each of the regional versions have undergone some alterations, incorporating specific vocabulary from the local dialects. This highlights how speech-tone variations and pronunciation differences shape the melodies, thereby illustrating the diversity and adaptability of this traditional piece in the context of regional cultural influences. This influence is partly derived from the inherent speech-tone characteristics present in the dialectal lyrics, wherein the speech-tones of the lyrics generally correspond to the melodic structures. Moreover, any disparities between the speech-tones of the words sung and the melodies lead to distinct creative musical characteristics as noted above.

At the structural and melodic levels, these variants exhibit noticeable differences. The Jiangsu rendition showcases six distinct musical phrases, each presenting a unique melody



devoid of repetition. Conversely, the Beijing variant includes recurring segments, a characteristic that is somewhat similar to some Western vocal musical styles. Despite these divergences, both versions share certain common melodic traits. While the exact origin of this shared melody remains elusive, it suggests a common source, hinting at the possibility that either version might serve as a prototype or influence for the other.

Concerning the semantic comparisons between the two folksong versions at the poetic level, there exists some alignment in the meanings of the initial and secondary lines of the lyrics, although these are not entirely congruent. Despite the varied meanings and pronunciations in different dialects, within the frameworks of these dialects, they adhere to their respective poetic characteristics. The primary essence of both versions remains the praise and celebration of the jasmine flower, achieving a unified purpose in honoring the subject of the song. Additionally, these differences emerged due to the inherent speech-tone differences between the Jiangsu and Beijing dialects and the use of distinct poetry, leading to adjustments in the song's melody. Moreover, these variations were also shaped by the inherent need for artistic expression within the music. Through a superimposed contrastive analysis of the two regional variants, this study elucidates how these versions maintain common characteristics across different levels of melody and poetic structures. This study, thus, not only enriches understanding of the musical heritage embodied in "Jasmine Flower" but also underscores the broader interplay between language and music within regional folk traditions.

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