

THE MUSICAL LANGUAGE OF YUEN REN CHAO:
A CULTURAL AND EMPIRICAL STUDY
OF THE MODERNIZATION OF CHINESE MUSIC

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ABSTRACT

In the Chinese art song repertoire, “How can I help but think of you” has long enjoyed enormous prestige since its publication in the 1920s. The song is memorable not only because of its innovative use of language by Liu Bannong in the lyrics but also because of the ingenious arrangement of tonalities, forms, and melodies by Chao Yuen Ren in the music. This essay will be devoted to a cultural and empirical analysis of the song, with the aim of understanding the efforts made by eminent scholars at the early stage of modernization of Chinese music and language. To this end, we will first explore how the lyrics are structured phonetically and syntactically. Tonal complexity and ambiguity in the music will then be analyzed, followed by the discussion of *qǐ-chéng-zhuǎn-hé* in the musical form. The pentatonicism embedded in the song and its relationship with what generally makes music “sound Chinese” will also be examined. In the

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end, we will also review an essential concept, *yìjìng* (or mindscape), in Chinese aesthetics and philosophy to better appreciate how various components in the music and lyrics together contribute to the aesthetic success of the song.

KEYWORDS

Ambiguity Modulation *Qǐ-chéng-zhuǎn-hé* Pentatonic *Yìjìng* (Mindscape)

1. INTRODUCTION

Liu Fu 刘复 (1891–1934), also known as Liu Bannong 刘半农, was a Chinese intellectual who was among the earliest to receive Western training in linguistics.¹ While in London in 1920, he wrote a Chinese poem entitled *Jiào wǒ rúhé bù xiǎng tā* 教我如何不想她 (literally, teach me how not to think of her) or, more simply, *Rúhé bù xiǎng tā* 如何不想她 (How can I not think of her). Among other aspects, the poem was noteworthy because it introduced a new sinogram²—*tā* 她 “she.” Chinese did not distinguish the third person singular pronoun by gender, e.g., *he* versus *she* in English; both are pronounced /ta/ and written 他. Liu replaced the left side of the sinogram, which is the radical *rén* 人 “person,” with the radical *nǚ* 女 “woman.” This sinogram makes it clear that the poet intends that the object of the longing is no longer ambiguous, at least when written—it is a woman.

Liu Fu had a very talented brother called Liu Tianhua 刘天华 (1895–1932), who was famous for revitalizing Chinese music tradition and composing music for *èrhú* 二胡, a traditional Chinese two-stringed bowed instrument. Unlike most of his radical contemporaries, Liu Tianhua rose to the challenge of modernizing Chinese music by integrating Western music theories and techniques while preserving national characteristics. In 1926, another musically talented scholar, Chao Yuen Ren 赵元任 (1892–1982)³, who shared similar musical ambition to Liu Tianhua, put the poem “How can I not think of her” to music. Chao was the preeminent Chinese linguist of his day and a leading composer who made the first attempt to compose piano music in China. He composed many art songs to popularize what were regarded as the avant-garde poems at the time, including the one

discussed here entitled *Jiào wǒ rúhé bù xiǎng tā* 教我如何不想他? It is worth noting that Chao used the traditional gender-neutral *tā* 他 for the title of his own musical setting despite Liu's much-lauded use of 她, and he would later supply the English translation of the song as "How can I help but think of you." Chao and Liu Fu were both major moving forces associated with the Chinese vernacular movement in the 1920s. The result of conjoining the work of these two masters here is one of the best-loved art songs⁴ in Chinese music in the mid-twentieth century; it will long remain a classic. We will see that both the linguistic phrases and their corresponding musical phrases undergo a certain amount of repetition. Too little repetition makes the song difficult to remember and hence not so attractive. A suitable amount of repetition, in either the original or a modulated form, gives the hearer a degree of familiarity, which enhances the song's chance for success.

1A	天上飘着些微云,	Tiānshàng piāozhe xiē wēi yún,
1B	地上吹着些微风。 啊!	Dìshàng chuīzhe xiē wēi fēng. A!
1C	微风吹动了我的头发,	Wēi fēng chuīdòngle wǒde tóufà,
1D	教我如何不想她?	Jiào wǒ rúhé bù xiǎng tā?
2A	月光恋爱着海洋,	Yuèguāng liàn'ài zhe hǎiyáng,
2B	海洋恋爱着月光。 啊!	Hǎiyáng liàn'ài zhe yuèguāng. A!
2C	这般蜜也似的银夜,	Zhèbān mì yě shìde yín yè,
2D	教我如何不想她?	Jiào wǒ rúhé bù xiǎng tā?
3A	水面落花慢慢流,	Shuǐmiàn luò huā mǎnmǎn liú,
3B	水底鱼儿慢慢游。 啊!	Shuǐdǐ yú'ér mǎnmǎn yóu. A!
3C	燕子你说些什么话?	Yànzi nǐ shuō xiē shénme huà?
3D	教我如何不想她?	Jiào wǒ rúhé bù xiǎng tā?
4A	枯树在冷风里摇,	Kūshù zài lěngfēng lǐ yáo,
4B	野火在暮色中烧。 啊!	Yěhuǒ zài mùsè zhōng shāo. A!
4C	西天还有些残霞,	Xītiān hái yǒu xiē cánxiá,
4D	教我如何不想她?	Jiào wǒ rúhé bù xiǎng tā?

Figure 1 Liu's Poem with Pinyin transcription

First, let us observe how the poem is structured phonetically. As can be seen from the Pinyin transcription above (Figure 1), the poem consists of 4 verses, numbered here 1 to 4; each verse has the structure of 2 pairs of lines, with the A/B pairs separated from the C/D pairs by the exclamation *A!* Each of the D lines is a repetition of the title of the poem. Except for the pairs 1A/1B and 2C/2D, all the other pairs rhyme on the ultimate syllable. Except for lines 1C, 2C, 3C, all the other lines have seven syllables.

Syntactically, each A line parses its syllables the same way as its partner B line. In verses 1 and 2, the parsing is 2, 3, 2, each line ending in a disyllabic noun. In verse 3, the parsing is 2, 2, 3; in verse 4, the parsing is 2, 4, 1; each line in these two verses ends in a monosyllabic verb. The phonetic and syntactic structures are all relatively simple, with a pleasing balance of repetitions and innovations.

Translation across languages is always a challenging task, if not a thankless one, especially poetic language. Often one language has a word deeply embedded in its culture for which there is no simple equivalent in another language. An example is the noun phrase *cánxiá* 残霞 in line 4C. Here *cán* 残 can be roughly translated as “lingering.” However, this sinogram can also be used in the compound *cánfei* 残废 to refer to the physically disabled, and in the compound *cánrěn* 残忍 to mean “cruel.” Therefore *cán* 残 has strong emotional undertones which are altogether lacking in the translation of “lingering.” Translating the head noun *xiá* 霞 is even more problematic since there is nothing in English that is close to its meaning. It refers to the colorful cloud formation reflecting the last rays of the setting sun. The “glow” used here is a poor substitute indeed. As lamented in Italian, *traduttore-traditore*, meaning the translator is condemned to be a traitor. Nonetheless, to give English readers an approximate appreciation of the poem and song, the following attempt is offered (Figure 2).

Semantically, the context is set by all verses referring to natural objects: cloud and wind; moonlight and sea; flower petals, fish and swallow. Feelings of desolation and despair are evoked by the images of the last verse: tree in the cold wind, and brushfire at dusk simulating a setting sun.

Now let us turn to the melodic lines that Chao supplied. We will not use the full version of his composition, but only the melodic lines. To simplify things further here, we will use the Chinese *jiǎnpǔ* 简谱 (literally,

simplified notation) notation for representing the melodic lines; it literally means “simple score” and corresponds roughly to the Italian *solfeggio* notation. Thus, the diatonic scale is represented with seven integers, with 1 being *do*. Notes above and below the main octave are represented with dots above and below the main note respectively.

1A	天上飘着些微云,	Wispy clouds float in the sky,
1B	地上吹着些微风。	Light breeze on the ground.
	啊!	Ah!
1C	微风吹动了我的头发,	A light breeze caresses my hair,
1D	教我如何不想她?	How can I not think of her?
2A	月光恋爱着海洋,	The moonlight is loving the sea,
2B	海洋恋爱着月光。	The sea is loving the moonlight.
	啊!	Ah!
2C	这般蜜也似的银夜,	On this silvery night as sweet as honey,
2D	教我如何不想她?	How can I not think of her?
3A	水面落花慢慢流,	On the water fallen petals are slowly flowing,
3B	水底鱼儿慢慢游。	In the water fish are slowly swimming.
	啊!	Ah!
3C	燕子你说些什么话?	Swallow, what are you saying?
3D	教我如何不想她?	How can I not think of her?
4A	枯树在冷风里摇,	Withered trees trembling in the cold wind,
4B	野火在暮色中烧。	Brushfire smoldering in the dusk.
	啊!	Ah!
4C	西天还有些残霞,	Western sky still shows a lingering glow,
4D	教我如何不想她?	How can I not think of her?

Figure 2 Liu's Poem with English translation

As shown in the *jiǎnpǔ* below (Table 1), the music starts in the key of E major, briefly modulates (tonicizes) to B major in the middle. It then further modulates to E minor and G major before finally returning to E major at the exclamation in verse 4. The music also includes six melodic lines, interspersed among the four verses, labeled as 1O, 1E, 2E, 3O, 3E, 4E. These melodic lines are functionally transitional; they are called *guòmén* 过门, which literally means “passing through the door” in Chinese Opera and may be played instrumentally an octave higher to distinguish them from the sung lines.

Table 1 Chao’s setting of the poem as notated in *jiǎnpǔ*

Verse-Line Code and Lyrics		Jianpu (Numbered Notation)				Tonal and Cadential Scheme	
10	Guomen 1 (type I)	13	5·3 56	535 $\dot{1}$	3̣·2̣ $\dot{1}\dot{6}$	5-	E major <i>Half Cadence</i>
1A	天上飘着些微云，	3	5 - 3·5	5 - 6	5 -		E major
1B	地上吹着些微风。	3	5 - 3·5	5 - $\dot{1}\dot{6}$	$\dot{6}\dot{5}\widehat{5}$ -		E major
	啊	5̣·6̣	1· 3 5 3	5 -			E major
1C	微风吹动了我头发，	5 5	3 5 6·6 5 6	$\dot{1}\cdot 3$			E major
1D	教我如何不想他？	2·5	3 2 6 $\dot{1}\cdot 2$	1 -			E major
1E	Guomen 2 (type II)	5 $\dot{6}$	1·3 23	115	1·6 5 $\dot{6}$	1-	E major <i>Authentic Cadence</i>
2A	月光恋爱着海洋，	6̣ 2̣	1· 3 2	5· 3 5	1 -		E major
2B	海洋恋爱着月光。	3	1 - 2	5· 6 2	1 -		E major
	啊	5̣·6̣	1· 3 5 3	5 -			E major
2C	这般蜜也似的银夜，	5 5	3 5 6·6 5 6	$\dot{1}\cdot 3$			E major
2D	教我如何不想他？	2· $\dot{1}$	7 6·3 5 6	5 -			E major ↔ B major
2E	Guomen 3a (type II)	23 5 $\dot{6}$	5·7 67 1·3 23	552 115	5·3 23 1·6 5 $\dot{6}$	5- or: 1-	B major <i>Authentic Cadence</i>
30	Guomen 3b (type I)	13	5·3 56	535 $\dot{1}$	3̣·2̣ $\dot{1}\dot{6}$	5-	B major → E major <i>Half Cadence</i>
3A	水面落花慢慢流，	6̣	1 - 2	1 0 2 5 3	3 1·		E major
3B	水底鱼儿慢慢游。	5̣ 6̣	1· 5 3	1 - 6· 2	1		E major
	啊	6̣· $\dot{1}$	3· #2 3· 4	3 -			E major → E minor
3C	燕子你说些什么话？	3	3̣· 3̣ #2̣ 3̣ 2̣ 3̣	5· 3			E minor
3D	教我如何不想他？	2·5	3 2 6 $\dot{1}\cdot 2$	1--			E minor → G major
3E	Guomen 4 (type II)	5 $\dot{6}$	1·3 23	115	1·6 5 $\dot{6}$	1-	G major <i>Authentic Cadence</i>
4A	枯树在冷风里摇，	3	6̣· 1 7 6 #5 7	6 -			G major → E minor
4B	野火在暮色中烧。	6̣ 7	1· 3 2 1 7 1	7 6 -			E minor
	啊	5̣·6̣	1· 3 5 3	5 -			E minor → E major
4C	西天还有些残霞，	5 5	3 5 $\dot{1}\dot{6}$ $\dot{1}\dot{3}$	3 2·			E major
4D	教我如何不想他？	6̣· $\dot{1}$	2 1 $\dot{1}$ $\dot{1}\cdot 2$	$\dot{1}$ -			E major
4E	Guomen 5 (type II)	5 $\dot{6}$	1·3 25	115 $\dot{1}$	3·2 12	1-	E major <i>Authentic Cadence</i>

Notes: The tonal and cadential schemes of the song are summarized in the rightmost column. “→” indicates modulation; “↔” indicates tonicization.

2. TONAL COMPLEXITY

A hallmark of Western music is its emphasis on tertian harmony, which is constructed by stacking intervals in thirds. Chinese traditional music does not have such ‘functional harmony’ in which every chord has its harmonic goal to accomplish; However, Chinese music does have its own non-functional harmony (Yu 2018). Moreover, the systems of modes

and scales in traditional Chinese music do not have the same evolutionary pressure to develop a dichotomy between major and minor tonality as Western tonal music does. The less focus on the functional harmony in Chinese traditional music is also reflected in the musical texture. Whereas the fabric of Western tonal music is primarily woven in the polyphonic and homophonic textures based on the functional harmony, traditional Chinese music, like many other non-western musical cultures, prioritizes the monophonic and heterophonic textures (see Yu 2018; Mok 1966).⁵ These interesting differences between the Chinese and Western musical traditions left plenty of room for Chao to audaciously experiment with his innovative fusion of East and West. To enrich the harmonic language in Chinese music, Chao had experimented with many modulation techniques in the Western tradition throughout his life-long musical exploration. His unwavering dedication to the modernization of Chinese music can be well demonstrated in this song.

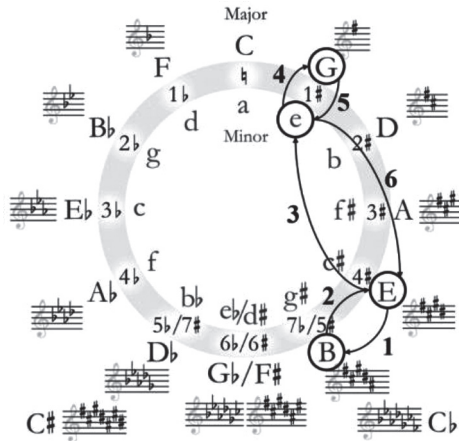


Figure 3 Diagram of ‘circle of fifths.’ Arrows and numbers between letters with circles indicate the modulation/tonicization route of the song. Also note that the sequence of all the modulations and tonicizations can be seen in Table 2.

To better understand Chao’s harmonic arrangement in this song, one can refer to the ‘circle of fifths’ (Figure 3). The diagram lays out the key relationships in tonal music in a comprehensive and user-friendly manner. There are 12 major keys (indicated by the upper-case letters) on the outer

circle and their corresponding 12 relative minor keys (indicated by the lower-case letters) on the inner circle. Each pair of relative keys shares the same key signature. Numbers between the outer and inner circles indicate the number of accidentals (i.e., sharps or flats) on the key signatures. Moving clockwise, each key is a fifth above the previous key. It is arranged so, probably because of the similarity of the rightward motion between moving clockwise and moving up a perfect fifth on the keyboard. Such arrangement based on the fifth relationship ensures that the adjacent keys on the circle have only one accidental difference, hence the closest relationship (if not including the discussion of relative keys). In other words, keys that are physically closer on the circle of fifths are also perceptually closer.

Having made the circle of fifths at our disposal, we can now discuss modulation in further detail. The key relationships in modulation can be either closely or distantly related depending on the distance between the original and new keys on the circle of fifths. By definition, closely related keys should have no more than one accidental difference in their key signatures, whereas keys that are not parallel⁶ or closely related are said to be distantly related (Kostka, Payne, and Almén 2018). On the ‘circle of fifths,’ closely related keys are adjacent to each other, including both keys that are fifth apart and those in relative relationship.

Overall, Chao experimented with six modulations/tonicization in three different types of key relationships: relative, closely related, and parallel (Table 2). Such an exquisitely sophisticated arrangement of modulations was unprecedented in Chao’s time both in terms of numbers and varieties of modulations/tonicization. All these three types of key relationships are non-distantly-related by definition, indicating that Chao intended to make the transitions smooth. It should be noted that although relative keys are closely related, they are usually singled out for separate discussion since they share the same key signature and therefore are considered one of the most natural transitions between keys one can expect in most musical contexts. All the six modulations are interspersed among the last three verses and *guò mén*. The music starts in the key of E major, briefly suggests its closely related key (tonicization) of B major at line 2B before the new key is fully established at *guò mén* 3a. The key of B major does not linger too long before the original key of E major is restored at

guòmén 3b. The music makes a drastic major-to-minor change from E major to its parallel E minor at the exclamation in verse 3. From E minor, the music goes even further to its relative key G major at line 3D, which is the farthest modulation from the home key E major. In verse 4, the music is nothing but the yearning for home: first back to the E minor at line 4B and finally back to the home key of E major at the exclamation.

Table 2 The key relationship between the modulated/tonicized keys and the original keys in all the modulations or tonicizations used in the song

Verse-Line Code and Lyrics		Change of Key	Key Relationship	Accidental Difference
2D	教我如何不想他?	E maj ↔ B maj	Closely related	1
3O	<i>guòmén</i> 3b	B maj → E maj	Closely related	1
—	啊	E maj → E min	Parallel	3
3D	教我如何不想他?	E min → G maj	Relative	0
4A	枯树在冷风里摇,	G maj → E min	Relative	0
—	啊	E min → E maj	Parallel	3

Notes: “→” indicates modulation; “↔” indicates tonicization.

3. TONAL AMBIGUITY

Another concept closely related to modulation is ‘tonicization.’ Whereas the establishment of the new key is more or less complete in modulation, it is only slightly hinted at and lasts temporarily in tonicization. A quick way to identify tonicization is to look for the chromatic notes because they are the traces left by the tonicization on the score, just like the scratches on the bedrock left by the moving glaciers. For any given keys, the chromatic notes are those five non-diatonic notes outside the diatonic scale. For example, the seven diatonic notes in C major are C-D-E-F-G-A-B; Therefore, the chromatic notes in C major are the five notes other than the seven diatonic notes, namely C[#]/D^b, D[#]/E^b, F[#]/G^b, G[#]/A^b, A[#]/B^b. In theory, any non-tonic major or minor chords may be emphasized or tonicized momentarily before the true tonic key is restored.

Since tonicization only gives the audience ephemeral pleasures of staying in the comfort zone of the new pseudo-tonic, it creates a sense of elusiveness and unstableness. Composers are fascinated by the idea of using tonicization to convey the overall mood or atmosphere, just as impressionist painters are particularly drawn to the fleeting beauty of the ever-changing light and shade on the water. In fact, Chao frequently used

tonicization with considerable subtlety in many of his musical works. Here in bar 34-35, he inserted two tonicized chords to create a quasi-modulation ambiguity (Figure 4). In both the tonicized chords (highlighted by the rectangles), the chromatic note A^\sharp can be derived by first tonicizing the dominant note B in the original key E major and then finding the dominant chord of the new key B major ($F^\sharp-A^\sharp-C^\sharp$). In real-time listening, a hearer may be surprised upon encountering the two tonicized chords due to the change of the tonic from E to B despite its short duration and temporariness. The newly established tonic here in the tonicization is far from convincing, either because it is still too short in duration or because the music at line 1D (which is firmly established in E major with its perfect authentic cadence) has already shaped our expectations for 2D, 3D, and 4D.

In addition to the ambiguity due to the brief undecidedness of the tonal center, one can also argue that the different “strategies” adopted by different listeners when dealing with unexpected events (such as the change of tonic in tonicization) can also contribute to the overall aesthetic effect of tonicization. Scholars once made an insightful distinction between a “radical listener” and a “conservative listener” (see Lerdahl and Jackendoff 1983). Whereas the former wastes no time adapting to the potential changes, the latter tends to make necessary revisions only as a last resort. As a result, radical listeners are supposed to be more susceptible to the temporary ambiguity in tonicization since they are too impatient to wait for the true tonic to return.

The image shows a musical score for lines 2C and 2D. It consists of three staves: a vocal line, a piano accompaniment, and a grand staff. The key signature is E major (one sharp). The time signature is 4/4. The vocal line has the lyrics: "这 般 蜜 也 似 的 银 夜 ， 教 我 如 何 不 想 他 ？". The piano accompaniment features two chords highlighted with vertical rectangles, representing the tonicized chords. The dynamic marking *mp* (mezzo-piano) is present in the piano accompaniment.

Figure 4 Notation for the music at lines 2C and 2D. Note that the rectangles indicate the two tonicized chords before the music is fully established in the new key of B major.

4. QǏ-CHÉNG-ZHUǍN-HÉ 起承转合

While the modulations and tonicizations in the song show a clear impact of Westernization, Chao's arrangement of the musical form preserves much of the national characteristics. Virtually all the forms of Chinese arts (e.g., music, poems, paintings, calligraphies) attach great importance to a concept called *qǐ-chéng-zhuǎn-hé* 起承转合 (Ho 1997).⁷ Specifically, *qǐ* 起 (opening) values the spontaneity and smoothness in the beginning. *Chéng* 承 (inheriting) emphasizes the poise and balance as the tension of music heightens. *Zhuǎn* 转 (turning) demands changes without undue restraint. *Hé* 合 (closing) expresses the yearning for a return and a lasting impression on the audience's mind. On the whole, the essential philosophy behind the aesthetic success of the whole *qǐ-chéng-zhuǎn-hé* idea is to achieve local dynamics while preserving global cohesiveness. In Western music, one can find similar ideas in the "sonata form," a musical structure widely accepted as the most significant compositional design which had prevailed from the Classical period well into the twentieth century. Table 3 shows the comparison between the major components of sonata form (i.e., the primary theme group in exposition, secondary theme group in exposition, development, and recapitulation) and those in *qǐ-chéng-zhuǎn-hé*.

Table 3 The structure analysis of the song by using the concept of *qǐ-chéng-zhuǎn-hé* and its comparison to sonata form in the Western music theory

Section	Chinese Theory	Western Theory	Tonal Scheme
Verse 1	Qǐ 起 (opening)	Exposition I <i>primary theme group</i>	E maj
Verse 2	Chéng 承 (inheriting)	Exposition II <i>secondary theme group</i>	E maj ↔ B maj
Verse 3	Zhuǎn 转 (turning)	Development	E maj → E min → G maj
Verse 4	Hé 合 (closing)	Recapitulation	G maj → E min → E maj

A closer inspection of the song's structure revealed a subtle blend of *qǐ-chéng-zhuǎn-hé* and the sonata form. In verse 1, the music of 1A and 1B functions as the primary theme group, where the theme is presented in a plain and simple manner. Music of 2A and 2B in verse 2 assumes the role of the secondary theme group. They have more twists and turns in the

melodic lines, thus being more lyrical than the primary theme. Towards the end of verse 2, the music departs temporarily from the original home key E major as B major is tonicized. This tonic-to-dominant transition is a common practice between the two theme groups in the exposition. In verse 3, the music of exclamation undergoes a drastic change from the “bright and warm” major to its “dim and cold” parallel minor: E major to E minor. Such a major-minor dichotomy is one of the most perceptually salient differences one can experience in Western tonal music. The modulation is then carried on by 3C and 3D to another key: G major. In terms of perceptual distance, G major is the farthest point from the home key E major. In verse 4, the yearning for return can be vividly felt in its harmonic progression, which is the reverse process of verse 3. It is also worth noting that line D in this verse is an octave higher. This special arrangement not only captures the emotional ups and downs but also drops a few subtle hints about the transcendence of time.

5. GUÒMÉN 过门

Another common practice when analyzing the musical form, in the Western tradition, is to examine the ‘cadence.’ Cadence in Latin means “falling,” it is the harmonic goal a certain passage of music aims to achieve (Kostka et al. 2018). Cadences serve as the indicators for the basic units in the musical structures. It is therefore crucial to examine the cadences at the boundaries of the verses. Since the boundaries of the four verses are all marked by the *guòmén* 过门 (see Table 1), we can extract all these *guòmén* (including the introduction in the beginning, three transitions in the middle, and the coda at the end) for the analysis of cadence.

Guòmén literally means “passing through the door.” A similar concept in Western music is ‘transition.’ However, *guòmén* enjoys a higher functional significance than its Western counterpart since nearly every genre of Chinese operas in the *bǎnqiāngtǐ* 板腔体 (*bǎnqiāng*-system)⁸ (e.g., Peking opera, Cantonese opera) has its own type of highly conventionalized *guòmén*. An experienced listener, therefore, might well predict what kind of genres, role characters, or even moods will be presented in the forthcoming performance by merely judging from the music of *guòmén*.

In this song, there are altogether five *guòmén* interwoven among the four verses. The order and arrangement of these five recurring yet varied *guòmén* bear some similarities to the five intermittent “Promenade” in *Pictures at an Exhibition* by the Russian composer Modest Mussorgsky (1839–1881) in that they both function as separators and connectors between adjacent musical paragraphs. When further examining their cadences, we can categorize them into two types: the tonic-ending authentic cadence (AC) and the dominant-ending half cadence (HC). Compared to HC, AC signifies a more complete resolution of the harmonic progression and thus gives us a stronger sense of closure. In this regard, AC separates more than unites the music that follows. HC, on the other hand, yearns for further tonal resolution back to the tonic, thus uniting more than separating the following music. Below is a cadential scheme of the song (Figure 5). We can see that Chao was more concerned with the global coherence between the first half and the second of the music (as reflected by the more conjoining-functioned HC inserted between the two halves) than the local coherence within the initial two verses or the last two verses (as reflected by the more separating-functioned AC inserted between Verse 1 and 2, and Verse 3 and 4).



Figure 5 Cadential scheme of the song

It is also interesting to note that Chao, when talking about the melodies for the first three appearances of “*jiào wǒ rúhé bù xiǎng tā*” (i.e., line 1D, 2D, 3D), mentioned that they bear a remarkable resemblance to the music of *guòmén* in *xīpí* 西皮, one of the two major vocal styles in today’s Peking Opera (Chao 1960; Pian 1987). A typical melody for *guòmén* in *xīpí* is notated as 尺六工士上尺上 (Pian 1987, 27) in *gōngchě* 工尺.⁹ When it is transcribed (Table 4), we can see it is precisely what Chao used in the song. Such an ingenious fusion of the East and West is also reflected in Chao’s own vocal interpretation of the song, in which he sang with a style more like traditional Chinese opera than the Western singing style, such as bel canto.

Table 4 The correspondence between *gōngchě* notation, *jiǎnpǔ* and solfège

<i>gōngchě</i>	合	士	乙	上	尺	工	反	六	五	乙
<i>jiǎnpǔ</i>	5̣	6̣	7̣	1	2	3	#4	5	6	7
sofège	sol	la	si	do	re	mi	#fa	sol	la	si

Note: For more information about the *gōngchě* notation variants and their corresponding *jiǎnpǔ*, please see the notes¹⁰.

6. VARIOUS CONTRASTS

There are many interesting contrasts in Chao's musical setting, and the note-syllable distribution is one of them. When adapting lyrics to music, an immediate concern for the composers is to determine how many notes should be distributed to each syllable (or sinogram if the lyrics are in Chinese). One can either pack multiple notes into a syllable (the "melismatic style"), as exemplified by certain forms of Gregorian chant and Middle Eastern music, or use just one note for each syllable (the "syllabic style"). In this song, the monosyllabic exclamation in each verse accommodates the greatest number of notes (hence the melismatic style), whereas line C in each verse, which immediately follows the exclamation, is basically set in a one-to-one mapping manner between the sinograms and the notes (hence the syllabic style). Aesthetically speaking, a melismatic style typically features the fluidity of the melody, thus allowing more flexibility and possibilities for the music to display intense emotions. In this respect, Chao's melismatic setting for the most lyrical part of the poem (i.e., the exclamation) made perfect sense. Moreover, the ebbs and flows generated by the contrasting features of the melismatic and the syllabic setting contribute much to the beauty of asymmetry in the song.

Another contrast is concerned with how different verses or stanzas of lyrics are accompanied by music. Specifically, "through-composed" means each verse of the lyrics is sung to different music, as opposed to "strophic," in which all verses are set to the same music. On the whole, Chao composed the music in a through-composed style in order to add more flavor and catch every nuance of the hidden meaning behind the lyrics even though traditional Chinese opera or folk songs does not seem to give extra prominence to the through-composed style. Like many art songs by Franz Schubert (1797–1828), Chao's through-composed style is also not a clear-cut one. For example, the music for the recurring exclamation *A* and

jiào wǒ rúhé bù xiǎng tā in each verse are very similar, making them the memory “anchor points” one can constantly refer to.

There are also interesting contrasts in the rhythmic patterns of the song. In particular, Chao prepared the rhythm patterns with meticulous care by using certain rhythms in music to follow the prosodic or metrical patterns in language. For example, the metrically stronger verbs and their metrically weaker aspect particles, *pīāozhe* and *chūzhe* (Line 1A and 1B), are accompanied by music in the dotted-eighth-and-sixteenth rhythm, in which a long note is followed by a short note one-third of its duration. Likewise, when setting music to the reduplicated words such as *mànmàn* (Line 3B), Chao used the same rhythm to add a slight pause between the two identical syllables to better depict the liveness of a carefree fish swimming in the pond. This is somewhat reminiscent of Schubert’s well-known piece “Die Forelle,” in which the dotted-eighth-and-sixteenth pattern is also used to portray a capricious trout swimming in the pool. When it comes to the phrase *bù xiǎng* (Line 1D, 2D, 3D, and 4D), however, Chao chose the sixteenth-and-dotted-eighth rhythm instead to bring the verb *xiǎng* and its preceding negator *bù* closer. This syncopated rhythm highlights the pent-up emotion and the overwhelming feeling of helplessness when trying not to miss someone dreadfully.

7. THE “SLIGHTLY CHINESE” MELODY

In an interview, Chao shared his thoughts on the relationship between pentatonicism and what makes music “sound Chinese” when discussing the song “How can I help but think of you” (Levenson 1977, 107):

Levenson: When we talked about music a little earlier, you said you tended not to use Chinese influences much because you liked to use western harmony. But this seems to me to have close links with at least one of the Chinese traditions of music.

Chao: What do you mean? It’s slightly pentatonic—not exactly, but the melody is slightly Chinese. But that modulation from E major to G major is very western, and back to E major.

If we examine the scales embedded in the song (Table 5), except for the last line in verse 2, the second half of verse 3, and the first half of verse 4, the music seems to be more than just slightly pentatonic, as commented by Chao. The interviewer had the same concern in the interview, casting doubt on whether Chao had understated the amount of “Chinese influence” in the song. The real question is, however, does “more pentatonic” necessarily make the music sound “more Chinese?”

Table 5 Analysis of the scales embedded in each line/verse of the song

Verse 1	Verse 2		Verse 3		Verse 4		guomen
1A-1D	2A-2C	2D	3A-3B	3C-3D	4A-4B	4C-4D	-
penta	penta	hexa	penta	hepta	hepta	penta	penta

A common misconception when drawing comparisons across different musical cultures is to take the pentatonic scale or pentatonicism as a distinctive feature of Chinese music. This is a convenient yet oversimplified notion that could overshadow some of the true natures of Chinese music. To dispel the myths about pentatonicism, one should not only revisit the evolution of Chinese music over time (a diachronic approach) but also compare the different existing musical cultures within the same period (a synchronic approach). Diachronically, one can see a constant application of more than just pentatonic scales throughout the history of Chinese music: the seven-holed bone flutes excavated from the Neolithic archaeological site Jiahu present us with compelling evidence that Chinese ancestors already mastered sophisticated musical knowledge and could play heptatonic and hexatonic scales some 9000 years ago (Zhang et al. 1999). The bronze bells or *biānzhōng* 编钟 from the tomb of Marquis Yi of the Zeng State were an eloquent reminder that Chinese music was by no means pentatonic only, but it already extended well into the heptatonic and even chromatic scales around the Warring States period (475BCE–221BCE) (Von Falkenhausen 1993). In the oldest extant *gǔqín* 古琴 (a traditional Chinese plucked instrument with seven strings) notation *Jiéshídiào-Yōulán* 碣石调·幽兰 (Secluded Orchid), which dates back to the Tang Dynasty (618CE–907CE), the heptatonic scale can be clearly extracted from the melody (Ho 1982). Synchronically, the regional and ethnic variations in different musical cultures also nourish the complex

mosaic of the pentatonic or heptatonic “territories” across the world: Cantonese music has its highly distinguishable *yǐfǎn* 乙反 scale, which has a raised fourth (or subdominant) and a flattened seventh (or leading tone), producing a special kind of melancholic atmosphere. In *qínqiāng* 秦腔 (literally, Qin’s tune), one of the oldest Chinese operas, a similar “bitter-sounding” heptatonic scale called *kǔyīn* 苦音 has been widely used to bring out the light and shade in the music. While Chinese music is much more non-pentatonic than commonly thought, music around the world might use more pentatonic materials than most people would expect (Savage, Brown, Sakai, and Currie 2015). In traditional Japanese music, both the *yo* and *in* scales are pentatonic, although *in* scale is different from the Chinese pentatonic scale in that it contains semitones. Indonesian gamelan music, one of the most influential music from the East, is also heavily based upon the pentatonic *slendro* (together with the heptatonic *pelog*), where notes are equally spaced, making it a kind of five-tone equal temperament. North America is also a hotbed of pentatonic music: major and minor pentatonic scales are ubiquitous from the indigenous music of North America to the trendy jazz music played on the street.

Taken together, pentatonicism has been mistakenly assumed to be the exclusive province of Chinese music; “More pentatonic” does not necessarily make the music sound “more Chinese,” whereas “less pentatonic” should not be arbitrarily equated with “less Chinese.” In this regard, Chao’s remarks were indeed carefully made, without exaggerating or understating the relationship between pentatonicism and what makes music “sound Chinese” in general.

8. CONCLUDING REMARKS

Chao’s musical language was truly phenomenal and unprecedented, given that other pioneers of Chinese music modernization at the time did not succeed in maintaining such a harmonious balance between the Eastern and Western musical traditions as he did. Chao’s music, as evidenced by this song, not only embraces the Western musical compositional techniques but also echoes the Chinese musical traditions and aesthetics. The idea of ‘musical universal’ has gained much attention in the past decades (see Nan, Knösche, and Friederici 2006; Savage et al. 2015), lending empirical support to the rationale behind the fusion of different musical cultures. On

the other hand, one should also consider other cross-cultural factors that might affect how we make and appreciate music differently from an evolutionary perspective (Zou and Wang 2021). All in all, the philosophies that underpin Chao's unique musical language are the idea of change and the positive psychology of ambiguity, among others. The idea of change, as evidenced by his frequent use of modulations in the music, can be traced back to the philosophy epitomized by the *Book of Changes*, or *I Ching* 易经, one of the oldest ancient Chinese texts in the traditional Confucian canon. The positive attitudes towards ambiguity, as evidenced by Chao's skillful manipulation of modulations and tonicization, has always been prevalent in Chinese aesthetics and the philosophy of art. One important concept, among other things, is the notion of *yijing* 意境, which literally means "idea-vision." It is deeply embedded in the Chinese culture for which there is no simple equivalent in English. One admirable attempt to translate this highly cultural-specific word is "mindscape" (Peng 2018). Just like *soundscape*, which encompasses the totality of sounds one can perceive in a specific acoustic environment, *mindscape* indicates the totality of mental conditions, including everything from the most profound thinking to the emptiness of the mind as practiced in the meditation. Such an all-encompassing intrinsic feature of *mindscape* can only be approximated in a vague and ambiguous manner but not pinned down by any explicit or discrete codes such as language. The relentless pursuit of the finest *mindscape* has been a unique philosophy underlying Chinese aesthetics. It is in stark contrast to the Western aesthetics, where the focal point is to understand to nature of beauty from a bottom-up perspective (see Ye 2009).

People are usually much less aware of Chao's outstanding musical expertise due to his substantial achievement in linguistics (see Zhou and Yang 2013). However, it is interesting to note that when there were conflicting interests between music and language, it seemed more likely that Chao would prioritize the musical effect over the linguistics concerns. This mindset coincides with the notion of 'music as the highest form of art.' Such an idea was first systematically expounded in Hegel's *Vorlesungen über die Ästhetik* (*Lectures on Aesthetics*) and was later summarized in the famous maxim "All art constantly aspires towards the condition of music" by the English art critic Walter Pater (see Herzog 1996). A clear

demonstration of this maxim was Chao's insistence on using *tā* 他 despite the fact that the original title of the poem by Liu was much-acclaimed because of the innovative use of *tā* 她 (Pian 1987, 27). Liu's main concern was more on the linguistic side. As a vocal proponent of the May Fourth Movement, he endeavored to modernize the Chinese language by introducing the gender-specific pronoun as part of the New Culture Movement in language. Chao's focus, however, was more on the overall artistic success of the work. The ambiguity of the gender-neutral *tā* 他 (i.e., it can be interpreted as a male, a female, one's motherland, etc.) makes a perfect tool for stimulating the audiences' imagination. Chao's idea of preserving an appropriate amount of ambiguities¹¹ was further evidenced by his own English translation for the poem's title, "How can I help but think of you." Chao deliberately avoided using *him* or *her* by choosing the gender-neutral *you* instead (Pian 1987, 27).

Setting poems to music has always been a challenging task, if not a daunting one: one has to maximize the effectiveness of music while gracefully accommodating the lyrics. Chao's seemingly effortless combination between music and language is truly remarkable and will surely be difficult to emulate for a long time. This much-beloved classic song was once presented in the eulogy by Wang (1983) nearly forty years ago. In this essay, we are fortunate to revisit the song by conducting a cultural and empirical analysis hoping that the inspiring legacy left by the song can be better appreciated. Liu's poetic language is memorable in its own right. However, it was Chao's music that makes the song more enduring. Chao's profound musical knowledge had greatly contributed to the aesthetic success of the poem, and it is probably for this reason, this lovely song is still fresh in our minds after nearly a century.

NOTES

1. Liu was the first to analyze lexical tones in Chinese instrumentally. His 1925 monograph, *Étude Experimentale Sur Les Tons Du Chinois*, was awarded the Constantine Prize.

2. Sinograms are commonly called "Chinese characters;" for an explanation of their make-up see: Wang, William Shi-Yuan, and Yaching

Tsai. 2011. “The Alphabet and the Sinogram: Setting the Stage for a Look across Orthographies.” In *Dyslexia across Languages: Orthography and the Brain–Gene–Behavior Link*, edited by Peggy McCardle, Brett Miller, Jun Lee, and Ovid J. L. Tzeng, 1–16.

3. The second author had been a colleague of Professor Chao for many years at the University of California at Berkeley; see the eulogy by the second author: Wang, William Shi-Yuan. 1983. “Yuen Ren Chao.” *Language* 59(3): 605–607.

4. Art songs are a musical genre that requires systematic voice training of their performers.

5. Monophonic, polyphonic, homophonic, and heterophonic are the four major textual categories in music around the world. Specifically, monophonic is when a single melodic line goes without accompaniment; polyphonic is when independent melodic lines are manipulated simultaneously; homophonic is when a single melodic line is accompanied by its supporting harmony; heterophonic is when the same melodic line (or the variations of it) is played simultaneously by multiple performers. For more discussion, see Huron (2016) and Mok (1966).

6. When a major key and a minor key share the same tonic, they are said to be parallel keys. For example, C major and C minor are parallel keys. Parallel keys are not closely related keys since they are not adjacent to each other on the circle of fifths (meaning that their key signatures differ by more than one accidental), nor are they distantly related, since they share not only the tonic but also the dominant chord, which makes it easy for a smooth transition between the parallel keys.

7. For the English translation of *qǐ-chéng-zhuǎn-hé* 起承转合, see Han (1989).

8. *Bǎnqiāngtǐ* 板腔体 is one of the two major styles in the Chinese opera, the other being *qǔpáitǐ* 曲牌体.

9. *Gōngchě* 工尺 is the traditional music notation widely used in the opera and other genres of music in China. It uses Chinese characters to indicate musical degrees (a kind of moveable-do system).

10. In other variants of the *gōngchě* notation, *shì* 士, *yǐ* 乙, and *fǎn* 反 are replaced with *sì* 四, *yī* 一, *fán* 凡. Some scholars also correlate F rather than F sharp to the *fǎn* 反.

11. For more discussions on the ambiguities in language, see Chao (1959) and Wang (2011). For musical ambiguities, see Bernstein (1976), Karpinski (2012), and Temperley (2001).

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赵元任的音乐语言：中国音乐近代化的文化与实证研究

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摘要

在中国艺术歌曲曲目中，《教我如何不想他》自上世纪 20 年代发表以来便一直享有极高的声誉。作品中刘半农创造性的语言用法让人耳目一新，而赵元任融汇中西的和声技法及曲式运用更是中国音乐近代化的代表性诠释。本文旨在通过对该歌曲的文化与实证分析，探讨中国音乐和语言中的近代化元素。我们首先对歌词的语音语义以及篇章结构进行分析，然后在中西方乐理的比较框架下研究音乐的调性、曲式结构以及旋律构成。其中我们将具体讨论曲中转调的丰富性、离调的歧义性、起承转合的运用以及五声调式与中国风音乐的关系。最后，我们还将分析歌曲音乐背后所体现的中国传统美学中的一个关键概念——意境。

关键词

歧义 转调 起承转合 五声调式 意境