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Author(s): Bell Yung

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## CREATIVE PROCESS IN CANTONESE OPERA I: THE ROLE OF LINGUISTIC TONES

Bell Yung

**T**he general relationship between words and music in songs has been of concern to composers and a subject of study for musicologists. In a tonal language such as Chinese, the specific relationship between the tones of the syllables of the text and the tones of the melody has interested several scholars (Chao 1956, Levis 1964, Mark and Li 1966, Pian 1972, Schneider 1950, Yang 1981). A tonal language is one in which pitch is used not only as intonation for speech, but also as a syllable-differentiating agent, serving the same distinctive function as vowels or consonants: the relative pitch levels, the contour of pitch movement, and the duration of pitch, may all be phonemically significant in the spoken language. A linguistic tone refers to these pitch properties of a spoken syllable.

In Chinese vocal music, the specific relationship between linguistic tones and musical tones in a song may differ from dialect to dialect, and also among musical genres within a dialectal region. The present paper<sup>1</sup> concerns itself with the Cantonese dialect and with songs sung in Cantonese opera. Its purpose is to illustrate the close correspondence between linguistic tones of the text and the pitch and contour of the melody in Cantonese opera, and to establish the significance of this correspondence in the investigation of the oral compositional process of Cantonese opera.

### THE LANGUAGE

Cantonese refers to the dialect of Canton, the capital of the southern province of Kwangtung. One of the nine main groups of dialects in China, it and its variants are spoken in the western half of the province (including Canton and Hong Kong), in the southern half of Kwanghsi province, and in many overseas settlements. Compared to the other dialects, Cantonese has a relatively complex system of nine tones, involving different pitch levels, rising and falling inflections, and long and short durations. Figure 1

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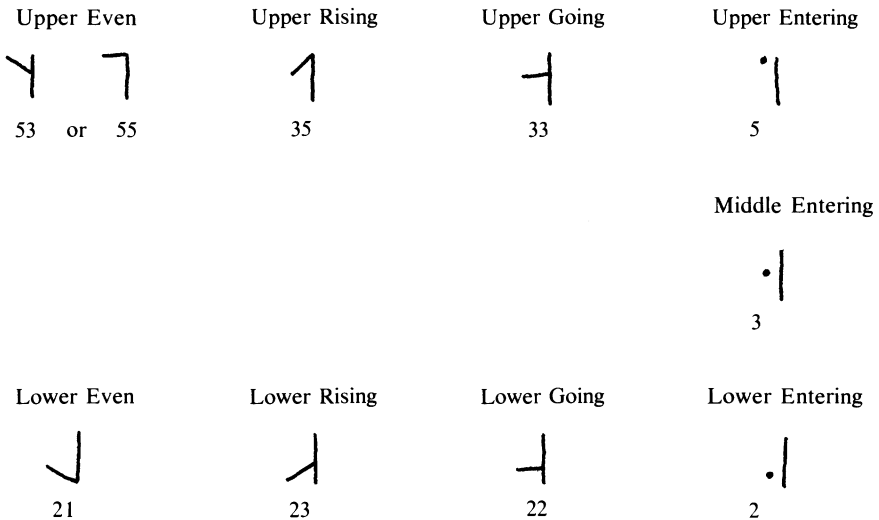


Figure 1. Linguistic tones of the Cantonese dialect.

lists each of the tones with a schematic diagram that acts as a simplified time-pitch graph of the voice (Chao 1947). The vertical line represents a pitch axis, which is divided into five points, 1, 2, 3, 4, 5, representing relatively low to high pitch levels respectively. The horizontal line represents a time line. Thus a sign 7, or 55, stands for a tone that begins high, remains high, and ends high. The sign 5, indicates that the high-pitched tone has a short duration with an abrupt ending.<sup>2</sup> The actual pitch of the levels and the size of intervals depend upon sex, individual style, and the speaker's mood.

#### PERFORMANCE PRACTICE OF CANTONESE OPERA

Cantonese opera is one of the 350 or so regional operas in China.<sup>3</sup> It flourished where the dialect was spoken, especially in the Pearl River Delta region surrounding the Canton-Hong Kong axis. Essentially drama with music, the operas are, at the same time, grand spectacle with dance, pageantry, and acrobatic displays with exceedingly elaborate and colorful costumes, striking facial makeup, and extravagant stage sets and backdrops. In Hong Kong today there are two kinds of performances: (1) commercial performances in urban, modern theaters, often of newly written operas; and (2) ritualistic performances of old operas tied to celebrations of religious and secular festivals. These may be held in either

modern theaters or, more likely, in makeshift theaters. The ritualistic performances are by far the more common in Hong Kong today. Due to particular economic and social conditions, the discussion of which is beyond the scope of this paper, very few new operas have been written and staged since the late fifties.

Ritualistic performances are held in both urban and rural areas. For special occasions such as the Birthday of the Queen of Heaven (the 23rd day of the Third month according to the Chinese calendar), the Hungry Ghost Festival (the 15th day of the Seventh month), and the Chinese New Year, villagers or neighborhood residents of an urban community consider it auspicious to hire an opera troupe to perform, as much for entertainment as for ritualistic reasons. Local leaders and well-to-do merchants of a village pledge enough money to hire a troupe, which then performs, in most cases free of charge, for the general public. In urban areas, these performances have assumed a commercial nature; admission is usually charged.

The size of the troupe depends on the funds available. It may vary from thirty to a hundred: the smallest troupe generally has nine instrumentalists and a dozen or so performers on stage; a large troupe would have about sixteen instrumentalists and more than forty performers on stage, plus helping hands for sets, costumes, makeup, lighting and sound system. One booking usually lasts from three to seven days, most typically five days with both afternoon and evening performances. For these performances temporary giant sheds of bamboo poles and aluminum sheets are erected in empty lots and accommodate several thousand spectators. Different operas are staged for each show, each lasting about four hours. Hence a typical five-day series consists of nine different operas (the first day generally does not have an afternoon performance). The two or three leading singers perform only in the evenings, and the second-rank singers are assigned the leading roles for matinee performances as well as secondary roles in the evening.

In Western opera the music of an opera is written by a composer. In Cantonese opera, on the contrary, the music of all operas is drawn from a common pool of pre-existent material.<sup>4</sup> There is no "composer," in the Western sense of the word, responsible for any opera. The person who serves more or less the function of a composer is the scriptwriter. He sets down the text of the opera and chooses musical materials that he considers appropriate to the text from the common pool.

The pre-existent musical material of this common pool falls into several categories, depending upon its source and musical structure. The present investigation is limited to one of the two major categories known as *bong wong* (see Glossary for Chinese characters), or aria type, a term

first coined by Rulan Pian in her study of Peking opera (Pian 1972, 1975). The other major category is known as *siu kuk*, which is treated in a separate paper (Yung 1979). An aria type normally consists of two short lines of melody (or their variant forms) sung to two lines of text. During a specific dramatic situation such a two-line melody may be sung once or repeated any number of times. The repetition of music will, of course, be to different texts. The same two lines of music may also appear at several different points in the opera in similar dramatic situations. They may, of course, also appear in any number of different operas. Each aria type is associated with a certain dramatic situation and must be judiciously used. Most are accompanied by an instrumental ensemble. There are a total of roughly thirty aria types commonly used in Cantonese opera, each known by name to all performers and to the more knowledgeable members of the audience. No musical notation is used in the scripts for the performers; the scripts simply specify an aria type by name for a passage of text.

The relatively small number of aria types used in all operas in the repertory may lead one to deduce that there is much repetition of musical material in one opera and from one opera to another. Indeed there is. The repetition of two lines of melody for any aria type is, however, seldom literal; any two versions of the same aria type may have different melodic contours. Figure 2 gives the transcription of the vocal line of nine versions of the aria type called *chat-ji-ching*, or Seven Syllable Melody. A comparison of the versions, especially Versions F and G, illustrates the point.

In a previous study (Yung 1981), I examined the structural elements in the music of an aria type that cannot vary from version to version. These invariant elements constitute the melody's identity: the knowledgeable listener is able to identify a particular aria type and distinguish one from another based upon these elements. The singer, when confronted with the task of singing according to a specific name of a melody, will also base his compositional process upon these invariant aspects, but is otherwise free to compose as he sings. In figure 2 the nine versions of Seven Syllable Melody as sung by different singers in different operas exhibit several invariant structural elements of the music to which all singers adhere. They can be summarized as follows. (For a detailed discussion of the invariant elements of aria types, see Yung 1981.)

1. Verse structure of text. The text of an aria type follows certain structural regularities in regard to the number of syllables in each line, the caesura pattern, and in the rhyme and linguistic tone sequences. For example, one of the basic verse structures for the Seven Syllable Melody is that there are to be seven words (syllables) per line.<sup>6</sup>

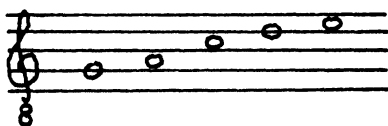
Figure 2 displays nine versions (A through I) of the Seven Syllable Melody. Each version consists of a musical staff and a corresponding syllable line below it. The syllables are represented by numbers 1, 2, 3, 4, 5, 6, 7. The melody is divided into two sections, L1 and L2, by brackets at the top. The syllable lines show how the seven syllables are distributed across the twelve measures of the melody.

Figure 2. Nine versions of Seven Syllable Melody.<sup>5</sup>

2. Syllable placement. The syllables of the text in the nine versions are all similarly distributed in a specific rhythmic pattern within the fixed framework of twelve measures:

Figure 3 illustrates the syllable placement pattern across twelve measures, divided into L1 and L2 sections. The pattern is shown in a rhythmic notation with a 2/4 time signature. The syllables are represented by numbers 1, 2, 3, 4, 5, 6, 7. The diagram shows how the seven syllables are distributed across the twelve measures of the melody.

3. Cadential notes. Different versions of an aria type adhere to fixed cadential and semicadential notes. For Seven Syllable Melody, they are C and D respectively.
4. All aria types belong to one of three *sin*, a possible translation of which is "mode." Cantonese opera uses a heptatonic scale, somewhat similar to the diatonic scale of the West. But an aria type of a particular *sin* places greater emphasis on five of the seven notes than on the other two. Aria types belonging to another *sin* emphasize a different set of five notes. For the Seven Syllable Melody shown in figure 2, its *sin* is called *jing sin*, and the five emphasized notes are:



5. Instrumental accompaniment. Instrumental accompaniment helps to project the identity of aria types in many different ways. In the case of the Seven Syllable Melody, the most distinctive aspect of the accompaniment is the beating in steady strokes of the woodblock at every strong beat. Although the woodblock is used on strong beats for some other aria types, the Seven Syllable Melody stands out because the voice is usually silent at these strong beats.

Among the five invariant elements, the first, the verse structure of the text, is predetermined for the singer by the scriptwriter and the fifth, the instrumental accompaniment, is provided by the orchestra. The other three may be considered a skeletal structure for the music on which the singer spontaneously composes the music.

#### THE RELATION BETWEEN LINGUISTIC AND MUSICAL TONES

The present paper looks at the factors that cause the differences among the versions of the same aria type. As there is no composer and no musical notation to guide the singers, how or why do they sing as they do? Why do they produce different versions? The answer, it will be demonstrated, lies to a great extent in the linguistic tones of the text.

I proceed by examining the nine versions of Seven Syllable Melody given in Figure 2, which also gives the linguistic tone symbols for each syllable of the text. Figure 3 gives the text in its original Chinese characters, romanized form, linguistic tone symbols, and translation.<sup>7</sup> I shall focus on the three attributes of the linguistic tones (tonal inflection, dura-

- A 你 墮 空 門 遭 不 幸 / 淒 涼 身 世 實 難 堪  
 nei wan do hung mun jo bat e hang / chai leung san sai sat e naan ham e  
 1 1 1 1 1 1 1 1 1 1 / 1 1 1 1 1 1 1 1  
 You have fallen into this gate of a dreary and desolate life  
 emptiness (nunnery), an unfortunate fate; one that is difficult to bear.
- B 我 失 意 科 場 天 涯 悽 隱 一 般 都 同 是 淪 落 人  
 ngo sat e yi fo cheung tin ngai chai yan e / yat bun dou tung si leun lok e yan e  
 1 1 1 1 1 1 1 1 1 1 / 1 1 1 1 1 1 1 1  
 I, having failed my Examination, both of us are lost souls.  
 wander the land;
- C 空 負 才 華 如 綉 錦 / 憐 卿 慧 質 比 蘭 心  
 hung fu choi wa yu sau gam e / lin hing wai jat yu laan e sam e  
 1 1 1 1 1 1 1 1 / 1 1 1 1 1 1 1 1  
 In vain are your talents, I pity your wisdom, and your heart  
 bright as embroidered brocades; like an orchid (purity of heart).
- D 玉 帝 無 情 撕 碎 鴛 鴦 柬 / 凡 夫 有 恨 淚 洒 鳳 凰 壇  
 yuk dai mou ching si seui yun yeung gan / fan fu yau han leui sa fung wong tan  
 1 1 1 1 1 1 1 1 / 1 1 1 1 1 1 1 1  
 That heartless Jade Emperor, this bitter mortal being,  
 he torn up the marriage contract; I shed tears at the Phoenix Altar.
- E 自 笑 多 情 誰 見 憫 / 卻 無 一 語 答 老 人  
 ji siu do ching seui gin e man / keuk mou yat yu daap lou yan  
 1 1 1 1 1 1 1 1 / 1 1 1 1 1 1 1 1  
 I laugh at my own love-sickness; But I have no word  
 who would understand me? to answer the old man.
- F 夢 裡 溫 馨 存 心 坎 / 羞 慚 無 限 語 難 陳  
 mung leui wan hing chyun sam e ham / sau chaan mou haan yu naan chan a  
 1 1 1 1 1 1 1 1 / 1 1 1 1 1 1 1 1  
 Tenderness and dream still lingers embarrassed and shamed I cannot speak out.  
 in my heart;
- G 閑 中 夜 讀 精 文 翰 / 合 教 才 女 配 才 郎  
 gwai jung ye duk jing man hon / hap gaau choi nei pui choi long  
 1 1 1 1 1 1 1 1 / 1 1 1 1 1 1 1 1  
 Studying late into the night, a cultivated lady  
 you know your books well; will match a cultivated man.
- H 則 怕 玉 宇 瓊 樓 難 攀 上 / 豪 門 不 納 布 衣 郎  
 zat pa yuk yu king lau naan paan sheung / hau mun bat naap bou yi long  
 1 1 1 1 1 1 1 1 / 1 1 1 1 1 1 1 1  
 Alas! the jade palace I cannot enter; a noble family will not take this lowly man.
- I 家 父 不 求 金 萬 兩 / 慕 才 選 婿 賢 東 床  
 ga fu bat kau gam maan leung / mou choi syun sai jeui dung chong  
 1 1 1 1 1 1 1 1 / 1 1 1 1 1 1 1 1  
 My father does not seek ten he wants a talented son-in-law,  
 thousand catties of gold; to be drafted into his service.

Figure 3. Text to the nine versions of Seven Syllable Melody.



tion, and pitch level), and compare them individually to the melodic behavior of the musical line.

With respect to tonal inflections, recall that some linguistic tones have level contours, some have rising contours, and some have falling contours. We want to know whether the melodic behavior of the music is in any way related to the linguistic tonal behavior.

The Seven Syllable Melody is one of the most syllabic of the various aria types: in most cases one pitch is sung to a syllable. Where two or more pitches are sung to a syllable, such a combination of notes, which I call a figure, occurs most often in one of two situations: at the end of a line; and when sung to a syllable with a rising or falling linguistic tonal contour. The first one, since it *always* occurs at the end of a line, can be considered a special musical characteristic of this aria type, independent of the linguistic tones of the text. What interests us most is the second case. By examining the melodic figures, the following observations can be made:

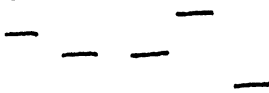
1. For syllables with a rising tonal contour, there is either a figure with a rising contour of two or more pitches (Version B, m. 6; Version F, m. 6), or a single pitch with an ornamental upward glide preceding the note (Version C, m. 6, 10). In a few instances when only one pitch is sung to the syllable without an ornamental upward glide preceding the note, it is because the duration of the note is relatively short (an eighth note); presumably the singer does not have enough time to produce the appropriate tonal fluctuation in the melody.
2. For syllables with a falling tonal contour, there are cases in which a figure with a falling tonal contour of two pitches is sung to the syllable (Version A, m. 4, 7). However, there are also many cases in which the corresponding melody is only one single pitch, which may be considered to correspond to a linguistic tone with a level contour. Figure 1 shows that the Upper Even Tone may indeed be of either a falling or a level contour.<sup>8</sup>
3. For syllables with a level, or flat, tonal contour, there are very few cases where the melodic contour is not also flat. The exceptions are: at the end of a line (Version A, m. 6); and when the first note of a two-note figure has a relatively long duration, so that the second note of the figure becomes a passing note independent of linguistic tonal factors (Version C, m.2).

These observations are evidence that the singer retains the linguistic tonal inflections in the musical delivery of the text, either by producing distinct melodic contours, or by performing ornamental notes.

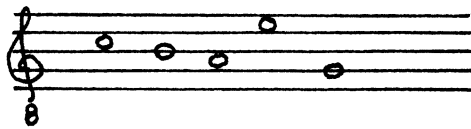
With respect to duration, recall that there are two kinds of linguistic tones: those with relatively long duration without abrupt endings, and those with relatively short duration with abrupt endings of -p, -t, -k.<sup>9</sup> The musical examples show that syllables with such short, abrupt endings are almost always sung with a staccato note, or a note immediately followed by a break in the voice.

With respect to pitch level, a comparison of the linguistic tones of the first five syllables of Version A with the corresponding melodic line shows that they match closely. The sequence of linguistic tones exhibits the following tonal fluctuations:

medium high—medium low—medium low—high—low  
or



The corresponding pitches in the melody are:



The rest of the version and all the other versions confirm that this close matching is quite consistently observed by the singer.

Although there seems to be a clear matching between the melodic contour and the pitch variation of the corresponding sequence of linguistic tones, another question arises. Is the matching merely between contours, or is there a one-to-one relationship between individual linguistic tones and individual pitches? I call the first kind “relative matching,” and the second “absolute matching.” Which kind is in operation in these examples?

The question can be answered by a more systematic counting of the number of occurrences of a particular pitch with a particular linguistic tonal category. The results are plotted in figure 4, which consists of nine separate graphs for the nine linguistic tonal categories.<sup>10</sup> Figure 4 shows that certain pitches and certain linguistic tonal categories have definite affinities. This is particularly apparent for the Upper and Lower Going Tones, Middle and Lower Entering Tones, and the Lower Rising and Lower Even Tones. While there are many exceptions to the rule, the possibility of an absolute matching between musical pitches and linguistic tones is quite strong. The exceptions will be discussed in a later section in this paper.

Additional evidence for an absolute matching can be brought forward. Consider the numbers assigned to the linguistic tones to indicate

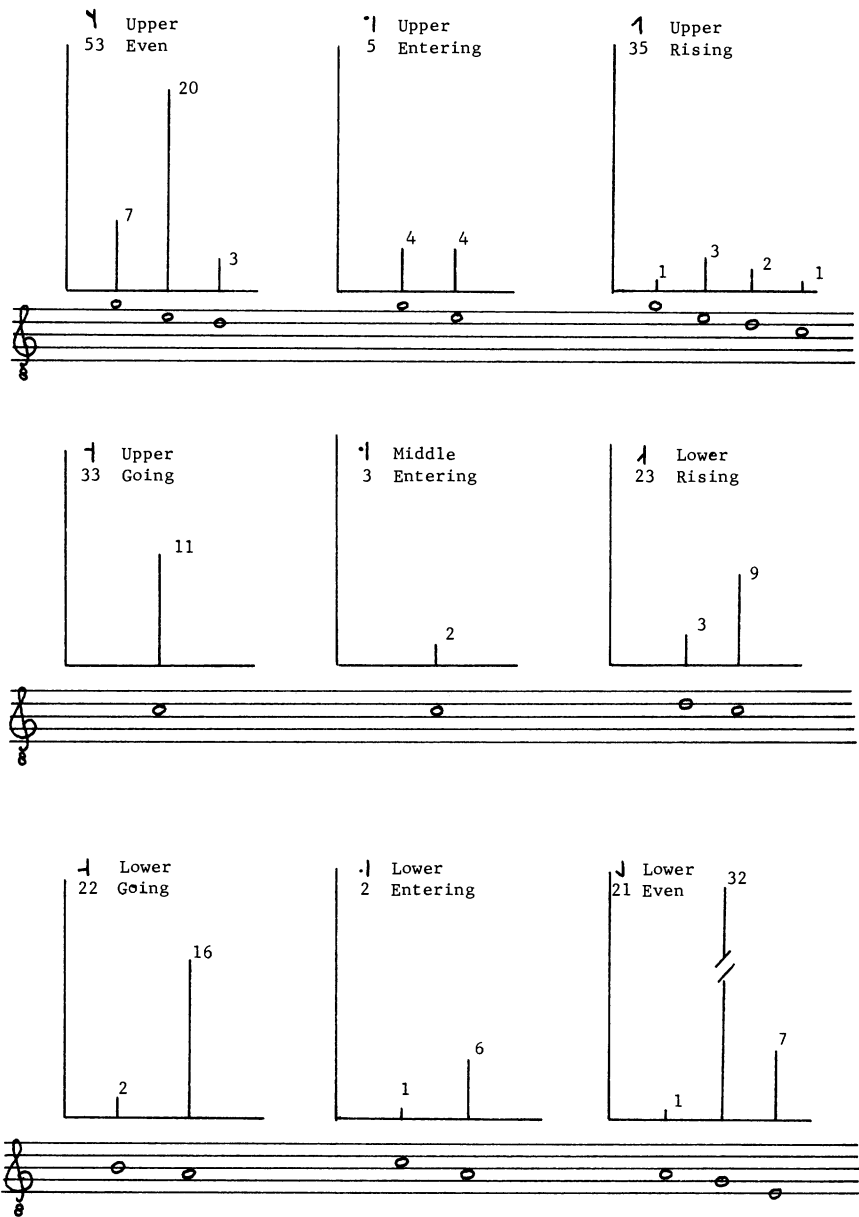


Figure 4. Number of occurrences of pitches according to linguistic tone categories.

pitch levels by the linguists, none of whom indicate that their models might have been based upon musical behavior in Cantonese opera. For Upper Going Tone ㄨˊ, it is “33”; for Middle Entering Tone ㄓˊ, it is “3”; and for Lower Rising Tone ㄨˋ, it is “23”. They share the same pitch level “3” as the principal pitch level. The graphs in figure 4 show that the musical pitches corresponding to each of these linguistic tonal categories are all C. Similarly, for the Lower Going Tone ㄨˋ, the number assigned is “22”; for the Lower Entering Tone ㄓˋ, it is “2”. They share the same pitch level “2”. The corresponding musical pitch turns out to be A for both. The Lower Even Tone ㄨˊ has the number “21”, and we have already explained that the principal pitch in that case should be the lower of the two pitches, that is, “1”. The graphs show that the corresponding musical pitch is G, which is one tone lower than A, the pitch that corresponds to the linguistic tonal level of “2”. These data indicate that the pitch relationships among linguistic tones as proposed by linguists are, to a great extent, preserved in the singing. While speakers of Cantonese use a variety of pitch levels for a given linguistic tone, singers translate these indeterminate pitch levels into fixed musical pitches so that the corresponding musical pitches retain the same relationships as those between the original linguistic tones.

This discussion, which covers tonal inflection, duration, and, most significantly, pitch levels, suggests that the specific pitches and the melodic contour of the aria type are to a great extent determined by the linguistic tones of the text. The many exceptions to a simple rule of absolute matching between linguistic tones and musical pitches indicate that other factors, in addition to linguistic tones, are involved. However, the most important factor in the formation of melodies is probably the linguistic tones of the text.

#### A MODEL OF MUSICAL CREATIVITY

A singer of Cantonese opera is often called upon to sing a different opera a day for five consecutive days. Some singers may have to sing two different operas in a single day. He may have performed some of the operas before, but others may be new to him. Usually he is given the script only a few days before the performance, for which the Western concept of “rehearsal” does not exist.<sup>11</sup> The singer must, therefore, on very short notice memorize the texts of full-length operas, perhaps two in one day. He also has to sing a vast amount of music on stage without any musical notation or rehearsal. In other words, he has to “compose” spontaneously as he performs. The close correspondence between the

linguistic tones of the text and the melodic contour strongly suggests that the linguistic tones play an important role in this compositional process. The following three-level model is proposed for the creative process of the singer on stage.

First, names of aria types provided in the script specify invariant elements of the music which the singer would have learned through training and performing experience. These elements form the skeletal structure of the music.

Second, based upon the skeletal structure, the singer uses the relatively less defined pitches of linguistic tones as a guide, or as a frame of reference, in creating a series of well-defined musical pitches to form the melodic line of the music: he follows the rule of absolute matching. The singer barely has time before a performance to learn the text, and during the performance he certainly does not have time to consider and consciously choose the pitches for each word. His experience nurtured through many years of listening and singing guides him to certain pitches for certain linguistic tones. This ability to transform linguistic tones to musical pitches becomes second nature to him, just as speaking the dialect with the proper tones becomes second nature to every Cantonese speaker.

Third, the role of linguistic tones in the creative process is but a guide: it certainly does not determine the melodic contour rigidly. That is to say, knowing the linguistic tone of a word does not automatically allow one to predict what pitch would be sung. Figure 4 shows clearly that, although there are strong affinities between certain pitches and certain linguistic tones, there are cases in which different pitches are sung to words with the same linguistic tone. Indeed there are cases in which two identical strings of linguistic tones are given different musical treatments. Other factors that lead the singer to depart from a simple absolute matching between linguistic tones and musical pitches are obviously at play. These factors constitute the third level of the model for the creative process.

What the factors in this third level are, and in what way they determine melodic behavior is beyond the scope of this study. One can, however, speculate on them as a guide to further research:

1. When invariant aspects of the aria type conflict with the linguistic tones and the rule of absolute matching, the singers must make adjustments to accommodate the two factors;
2. Influences of neighboring linguistic tones;
3. Meaning of a word or a phrase;
4. The dramatic situation of the story;

5. Stylistic factors of the music of Cantonese opera;
6. Individual singer's idiosyncrasy;
7. Other elusive factors impossible to isolate.

One anomaly in Figure 4 can be explained by considering a factor in the third level of the model: the conflict between invariant elements of the aria type and the rule of absolute matching. The linguists label the Upper Rising Tone 𪛗 as "35" so that it shares the pitch level "5" with the Upper Even Tone 𪛖 "53" and the Upper Entering Tone 𪛗 "5". Figure 4 shows that all three tonal categories indeed share the same musical pitch E, thus verifying the linguists' observation. However, how can the two occurrences of the pitch D for the upper Rising Tone be explained? Similarly, the linguists label the Lower Rising Tone 𪛗 "23" so that it shares the pitch level "3" with the Upper Going Tone 𪛗 "33" and the Middle Entering Tone 𪛗 "3". Figure 4 shows that all three tonal categories indeed share the same musical pitch C, again verifying the linguists' observations. However, how can the three occurrences of the pitch D for the Lower Rising Tone be explained? Both of these anomalies can be explained by considering the fact that the cadential notes of the first line of the two-line couplet are required to be the pitch D: this is an invariant element to preserve the identity of this aria type. The last syllables of the first line, therefore, are required to be sung to a melodic line that ends on D. The first lines of Versions C and D end on Upper Rising Tone syllables. The first lines of Versions E, H, and I end on Lower Rising Tone syllables. Their respective corresponding melodic lines all end on the pitch D, thereby creating the anomaly in Figure 4. It is interesting to note, however, that the singers in Versions B and F face the same problem but solve it in a different way.

A concrete example illustrates how neighboring syllables may override the second level of the model, that is, the rule of absolute matching. Among the nine versions given in figure 2, the same linguistic tone occurs in consecutive syllables many times, for example, Version A, m. 2; Version C, m. 3; Version F, m. 3. In these cases, the singer seems deliberately to avoid the repetition of a single pitch. Since most singers do the same thing, could this be a stylistic feature of Cantonese operatic music?<sup>12</sup> Although I am not ready to give a definite answer in the present study, this behavior at least explains some of the anomalies in Figure 4. For both the Upper Even Tone 𪛖 and the Upper Entering Tone 𪛗, the large number of G's are the result of such double occurrences of the same linguistic tones in the text: instead of singing E twice to the double occurrences of the Upper Even Tone (Version F, m. 3; Version G, m. 1, 2), the singer uses the pitch G for the first syllable and E for the second. Simi-

larly, the significant number of E's for the Lower Even Tone ˩ can be attributed to the fact that, in the case of two consecutive Lower Even Tone syllables (Version C, m. 3; Version D, m. 3; Version D, m. 11, 12; Version F, m. 11, 12; Version H, m. 3; Version H, m. 7, 8), the singer sings the first one with an E, followed by the expected G for the second one.

A detailed discussion of all the anomalies in Figure 4 is beyond the scope of the present study. While this paper gives evidence to support the existence of the second level of the model of creative process, the verification of the third level awaits further study. The first level of the model provides the skeleton of the music and the stamp of identity of the aria type. The second level of the model allows the skeleton to be realized into concrete music sound: it yields different "physical appearances" to the versions of the same aria type. The third level, on the other hand, allows each singer to exercise his individual creative power. Different speakers of the same language use the same basic vocabulary and the same syntactic structures; yet in expressing the same ideas, one can be a very dull, matter-of-fact speaker, while another is a moving orator. So it is with a singer: he can be an automatic converter of speech to a passable Cantonese opera melody, or a truly "artistic" singer.

The present investigation uses only one aria type, the Seven Syllable Melody, as an example. It is one of the most syllabic of the thirty-odd aria types commonly used in Cantonese opera; others are more melismatic. In such cases, the creative process could involve different, or additional factors, though the role of linguistic tones is still powerful. The three-level model is probably still valid; however, the importance that each level plays in the total creative process may vary.

## CONCLUSION

The musical structure and the creative process of Cantonese opera are obviously quite different from that of Western opera. This paper has shown that the existence of tones in the Chinese language and the demands of performance practice play important roles in causing this difference. The relationships between Chinese language, musical creativity, and performance practice are summarized here.

First, the present model shows that this manner of singing allows the listener to understand the text easily since the linguistic tones of the text are generally preserved in the singing. However, in some other dialectal regions of China, the linguistic tones in vocal music do not play as important a role, or a different role, as in Cantonese opera (Pian 1972, Liu

1974). Ease of linguistic communication, therefore, may not necessarily be the only, or most important, reason for this creative behavior.

Second, since there are only about thirty-odd aria types in the total repertory of Cantonese opera, the material may seem rather limited and restricted. Nevertheless the present model has shown that, because of differences in the text, the same aria type is realized in performance with many different melodic contours. The aesthetic requirement of variety is met by this specific use of linguistic tones in the creative process. The opposite argument, on the other hand, is that the Cantonese opera draws its melodic material from such a limited source as a consequence of the creative process rather than its cause. Since the melodic contour varies automatically according to the text, there is no need for a large number of aria types. Whichever way the argument goes, one thing is clear: the musical structure and creative process in Cantonese opera are closely related to the use of a limited source of pre-existent musical material.

Third, since performance practice demands that singers sing a large amount of music in a short time without rehearsal and without the aid of musical notation, the singers use the linguistic tones as a guide in their creative process, a solution that aids a difficult task. Again, one may propose an opposite argument: the absence of musical notation and rehearsal is the consequence of the use of linguistic tones rather than the cause. That is to say, this manner of using the linguistic tones frees the singer from the necessity of notation and rehearsal. Whichever way the argument goes, one thing is clear: musical structure, creative process, and performance practice are all closely related, and the linguistic tones play a vital role in this relationship.

#### NOTES

1. This is a greatly revised and expanded version of a paper, entitled "The Role of Speech Tones in the Creative Process of Cantonese Opera," read at the Northeast Chapter Regional Meeting of SEM at Brown University in March 1974, and subsequently published (Yung 1975). It is based upon field work in Hong Kong in 1973 and 1975.

2. The abrupt endings are often indicated specifically with consonants -p, -t, -k when romanized into English. The symbols for the three Entering Tones have been modified from Chao's short, horizontal strokes: ㄗ ㄘ ㄙ to dots in this paper: ㄗ. ㄘ. ㄙ. to avoid confusion with the other tones. Linguists do not completely agree on the behavior of the nine tones and have published different models of the tones (Hashimoto 1972, Peiching 1962, Wong 1940). For the purpose of this paper, only Chao's model has been presented in Figure 1. The discrepancies among the models will not cause any major problem in the discussion. Indeed it is hoped that the result of this study will shed some light on the discrepancies (see note 8).

3. For general studies of Cantonese opera, see Mackerras 1975, Mai 1941, Ou-yang 1954, Tanaka 1981, and Yung 1976. For discussion of the music, see Ch'en 1952 and Yung 1976.



4. Occasionally today when a new opera is written one new tune is introduced. This may be composed by the chief musician in the orchestra (the fiddler) or other musicians, who may or may not be part of the troupe.

5. Versions A, B, C are from *Yuk jaam gei* [Story of the Jade Pin]; Version D is from *Tin gei sung ji* [The Heavenly Maiden Delivers a Son]; Versions E, F are from *Mau daan ting* [The Peony Pavillion]; Versions G, H, I are from *Leung Saan Baak yu Juk Ying Toi* [The Butterfly Lovers].

#### Transcription notes

1 1 —the first of the two lines of the aria type.

1 2 —the second of the two lines of the aria type.

· —a staccato note.

↗ —an upward or downward glide to or from a note. The interval is indefinite but is usually small. The duration is indefinite but is usually short.

↑ —slightly higher or lower than the given pitch. The departure from the given pitch is indefinite but does not exceed a quarter note.

▼ —a short break in the continuity of the voice.

The symbol “1” is added to the set of nine linguistic tonal symbols to represent a meaningless vocable.

6. The actual texts of operas often employ so-called padding words (syllables), which are extra words, whether written into the script by the scriptwriter or ad-libbed by the singer on stage. Several of the nine versions in figure 2 employ such padding words: Version A, line 1 has eight syllables; Version B, line 1 has nine syllables. For further discussion on padding words, see Yung 1976:161.

7. The Cantonese romanization system follows the so-called Yale system (Huang 1960).

8. The fact that our musical examples show several Lower Even Tone syllables being also sung to a level musical contour (and not a short, eighth note) supports the model that the Lower Even Tone may indeed have a level contour at times, as suggested by Hashimoto.

9. Among the syllables with abrupt endings (Entering Tones) linguists distinguish some which have relatively longer duration than the others. Similarly, among syllables without abrupt endings (all other tone categories except the Entering Tones) linguists distinguish some that have relatively longer durations than others. For the purpose of this paper all Entering Tone syllables are considered to have a relatively shorter duration than the other tonal categories. This has been experimentally verified (Fok 1974).

10. A word on the method of counting must be said. The Seven Syllable Melody is among the most syllabic of all aria types. The counting of pitches is therefore relatively routine. There are, however, some cases in which one syllable is sung to two or more pitches (for tonal categories with falling and rising contours). One has to decide therefore which pitch is to be considered the principal pitch and which the ornamental. For the present paper, the following principles are consistently followed:

1. In the case of Upper Even Tones, examples involving more than one pitch to a syllable consist mostly of a two-pitch figure with falling contour (Version A, m. 4, 7; Version B, m. 3, 5). According to Kao (1971:82), when the Upper Even Tone assumes a falling contour, “this Tone starts with initial stress at the high register, from which it falls to middle register accompanied by a gradual decay of the voice during the fall.” Since the voice decays as it falls, we assume that, in singing, the second and lower of the two pitches is an ornamental pitch. Therefore, the first pitch, the higher one, will always be considered as the principal pitch.
2. In the case of the Lower Even Tone, examples involving more than one pitch to a syllable consist mostly of a two-pitch figure with a falling contour (Version F, m. 11; Version G, m. 11; Version H, m. 3). Kao states: “The voice starts from below the

middle register and falls to low, then becomes drawn out at the bottom pitch" (ibid.). Since the voice "becomes drawn out at the bottom pitch," we assume that, in singing, the second and lower pitch of a two-pitch figure is the principal pitch, and the first and higher pitch is the ornamental pitch.

3. In the case of Rising Tones in which the corresponding melodic figures are two- or three-pitch figures with a rising contour (Version B, m. 6; Version D, m. 6), Kao's description does not offer any clue as to which pitch should be considered as the principal one. For the present paper, the final pitch, the higher one, is assumed to be the principal one based on the following reason. Consider the syllables with Rising Tones that are sung to only one pitch (Version A, m. 1; Version B, m. 1; Version C, m. 6, 10). It has been mentioned earlier that the single pitch may or may not be preceded by an ornamental upward glide. We shall disregard the cases in which there is no preceding ornamental glide; these are cases in which the duration of the notes are too short to allow for such glides. For the relatively long notes in which there is an ornamental glide, these glides always *precede* the pitch but never *follow* the pitch. In other words, the ornamental pitches are of the form  $\overset{\cdot}{p}$  rather than  $\underset{\cdot}{p}$ . We deduce from this observation that, for a syllable with a rising contour, the end of the contour is more stable than the beginning. Thus, for a two- or three-pitch figure with a rising contour, we choose the last and highest pitch as the principal pitch.

11. In the last two decades, from time to time, an adventurous individual would experiment with rehearsals and the service of a stage director. One particular singer, Lam Ga-sing, has consistently rehearsed his performances for several years now. But the majority of the performances are not rehearsed. The situation in the People's Republic of China today is quite different: rehearsals are held as a rule rather than as an exception.

12. John McCoy has suggested, during one of our conversations, that this may be the musical equivalent of tone sandhi in speech, which refers to a change in the actual value of the linguistic tone when certain syllables are juxtaposed.

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## GLOSSARY OF TERMS AND TITLES

bong wong 柳王

chat ji ching 七字清

jing sin 正線

Leung Saan Baak yu Juk Ying Toi 梁山伯與祝英台

Mau daan ting 牡丹亭

sin 線

siu kuk 小曲

Tin gei sung ji 天姬送子

Yuk jaam gei 玉簪記