Evoking Common Emotions through Scale Degrees and Intervals: A Comparative Example of Western and Asian Compositional Patterns[1]

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Abstract

Taiwan is an island with a beautiful name, Formosa, and a culture that blends several cultures, ranging from Taiwanese, Chinese, and Japanese to western. The first wave of new music occurred in 1959 when the late Professor Hsu Tsang-Houei returned from Paris. In 1981, Professor Ma Shui long, a composer with a longtime passion for merging eastern and western music traditions, founded the Music Department at Taipei National University of the Arts (TNUA), after which a diversity of approaches to composition teaching started to find a place at our university. This paper explores some of the approaches I have taken to teaching composition at TNUA over the past 25 years.

Keywords: Asian music composition; music and sentiment; cross-cultural music composition; scale/modal degree; stable and unstable tones; key-defining progression, tension, and resolution; musical intervals; homophonic and heterophonic textures; *nanguan*; *Fengluowutong*; *Pyong-Sijo*; *pyong-jo*; *Sujecheon*; *Futaiken Reibo*; *changgo* patterns; *shakuhachi*.

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Introduction

Our goals, strategies, and approaches at Taipei National University reflect the cross-cultural approach our program takes to composition teaching:

The Goals of Composition Teaching at the Undergraduate Level :

- possible fusion of two cultural elements into a personal style;
- representation of the outside world through communion with nature by means of artistic expression on the part of creative individuals;
- aesthetic response to musical disposition across time and space.

The Strategies:

- to learn and benefit from the best of different music cultures;
- to build a knowledge bank from a diversity of music repertoires from different cultures;
- to view the aesthetic choices in a music culture as a matter of preference and begin to grasp how this choice affects human sentiment in general.

The Approaches:

- learn a diversity of music repertoires, ranging from both the traditional and the contemporary, from the East and the West, for instruments and styles, including Taiwanese *nanguan*, Chinese *qin* and *luogu*, Japanese *gagaku and shakuhachi*, Korean *A-ak, sijo,* and *sanjo*, Indonesian *gamelan*, traditional European and contemporary western mainstream music, and contemporary Taiwanese and Asian music;

- learn the aesthetic choices in two musical cultures, preferably traditional, one in western and one in Asian music;
- learn the relationship between music and sentiment in different cultures.

Comparing Musical Structures across Cultures: Two Examples

The challenges inherent in desiging composition curriculum that integrates two music cultural elements are multifold. From a historical point of view, a new music culture often results from a lengthy period of acculturation, and finding both similarities and differences in the fundamental concepts of music composition across two cultures is complex. Among the many issues affecting composition teaching and curricula,I will focus on two fundamental interrelated concepts in this paper: 1) tension and resolution; and 2) music and sentiment.

Music, as an art form, evokes emotion and sentiment. It has been argued that the emotion elicited by a piece of music is a multiplicative function of structural features of the piece. Other issues not directly related to composition teaching include performance, contextual, and listener features. Structural features include tempo, scale/mode, loudness, melodic direction, contrapuntal movement, and rhythm. Here, I will examine one particular structural aspect: scale degrees and intervals.

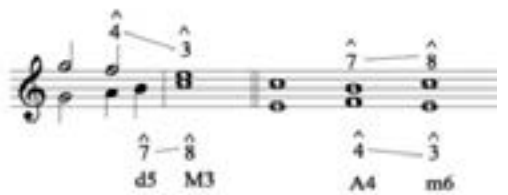
1. Tension and Resolution

1.1. *Western structure*

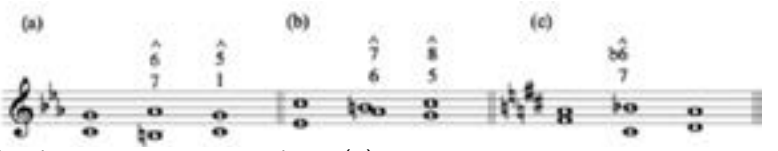
In the common practice period of western music, the idea of tension and resolution is rooted in the linear movements of scale degrees, which depend solely on the principle that unstable tone(s) must move toward stable tone(s). The stable tones are scale degrees 1, 3, 5 and unstable tones are 4 and 7. Scale tones 6 and 2 are free to move in either direction. When superimposing two lines, one establishes interval. There are two types of intervals: dissonance and consonance. There are three categories of tension (dissonance) and resolution (consonance) that form so-called *key-defining progression*[3] according to the scale degree movements:

Example 1: Three categories of *key-defining progression*:

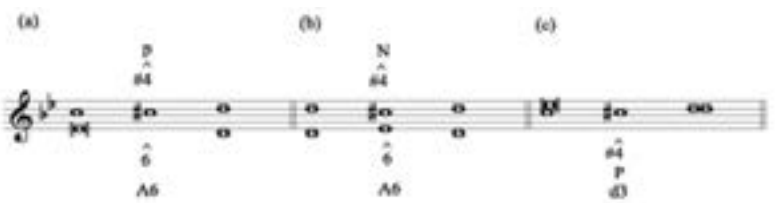
First category: d5-M3, A4-m6; 4-3, 7-8



Second category: d7-p5, A2-p4; 6-5, 7-8



Third category: A6-P8, d3-P1(8); 6-5, #4-5



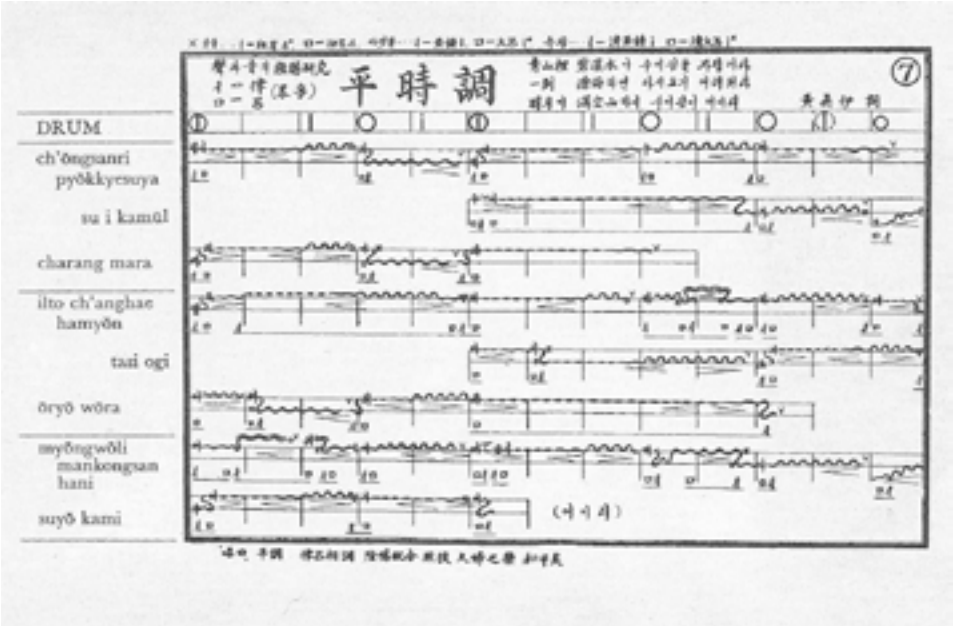
[3] Among the three categories, the first two are more important than the third. The resolution of the first two intervals (augmented 4th or diminished 5th and diminished 7th or augmented 2nd) points to the tonic. The augmented 6th or diminished 3rd is the product of chromaticism.

Dissonance provides activity while consonance yields the impression of stability; that is, dissonance produces tension that seeks its resolution in consonance. This dualism of activity (dissonance-tension) and stability (consonance-resolution) has dominated the tonal theory of western music from the time of Bach to the end of the 19th century.

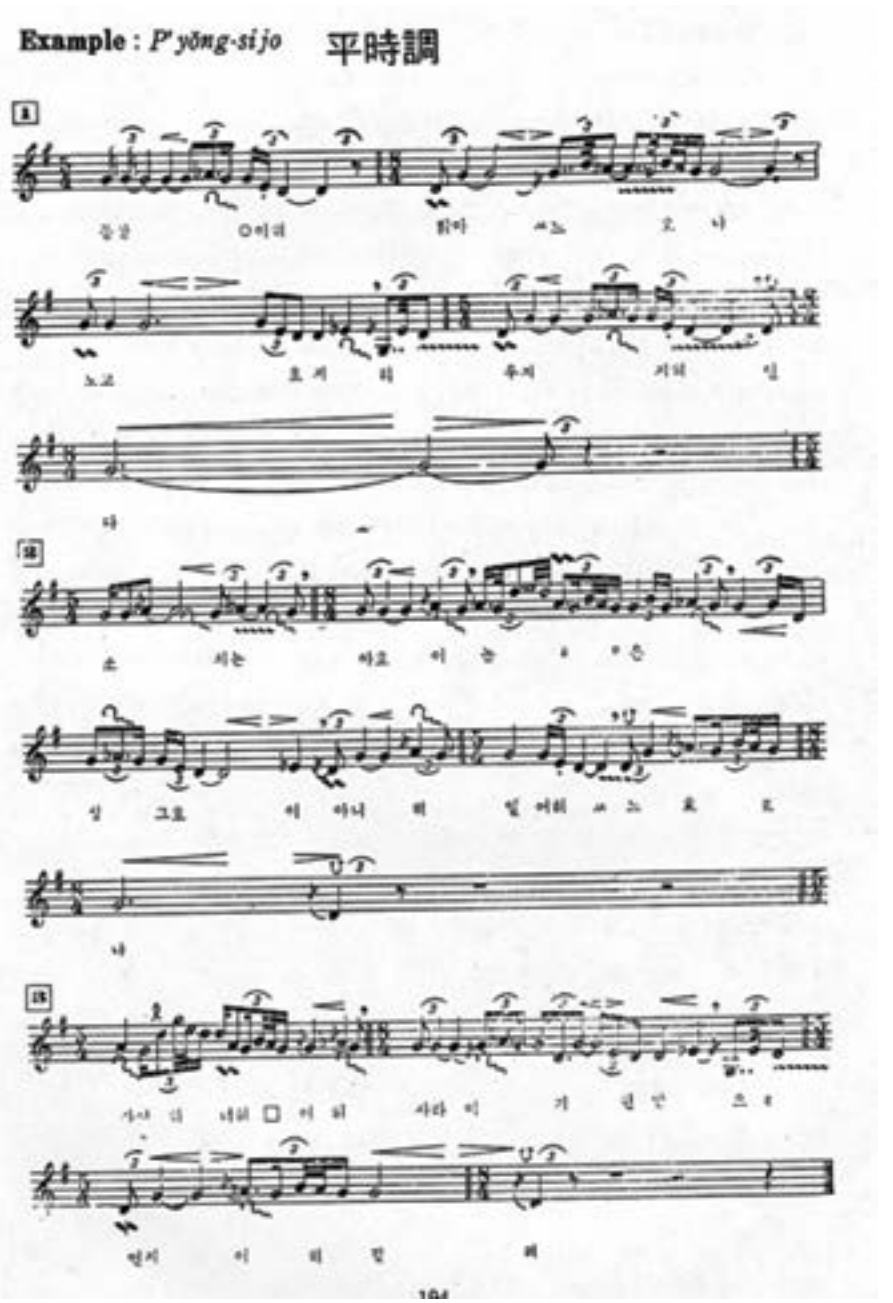
1.2. *Asian approach*

Does a similar dualism of activity and stability appear in Asian music? Can we find tension and resolution in Asian music like that associated with western music? To compare western and Asian approaches to creating tension and resolution, I will provide four examples for discussion: Korean *Sijo* music (Examples 2a & 2b); Korean court music *Sujecheon* (Examples 3a & 3b); the Taiwanese *Nanguan* piece *Fengluowutong* (Examples 4a & 4b); and Japanese *Shakuhachi* music (Examples 5a & 5b). Two types of scores are shown below for each of these examples: one in its original notation and one transcribed in western notation.

Example 2a: Korean *Pyong-Sijo* score:

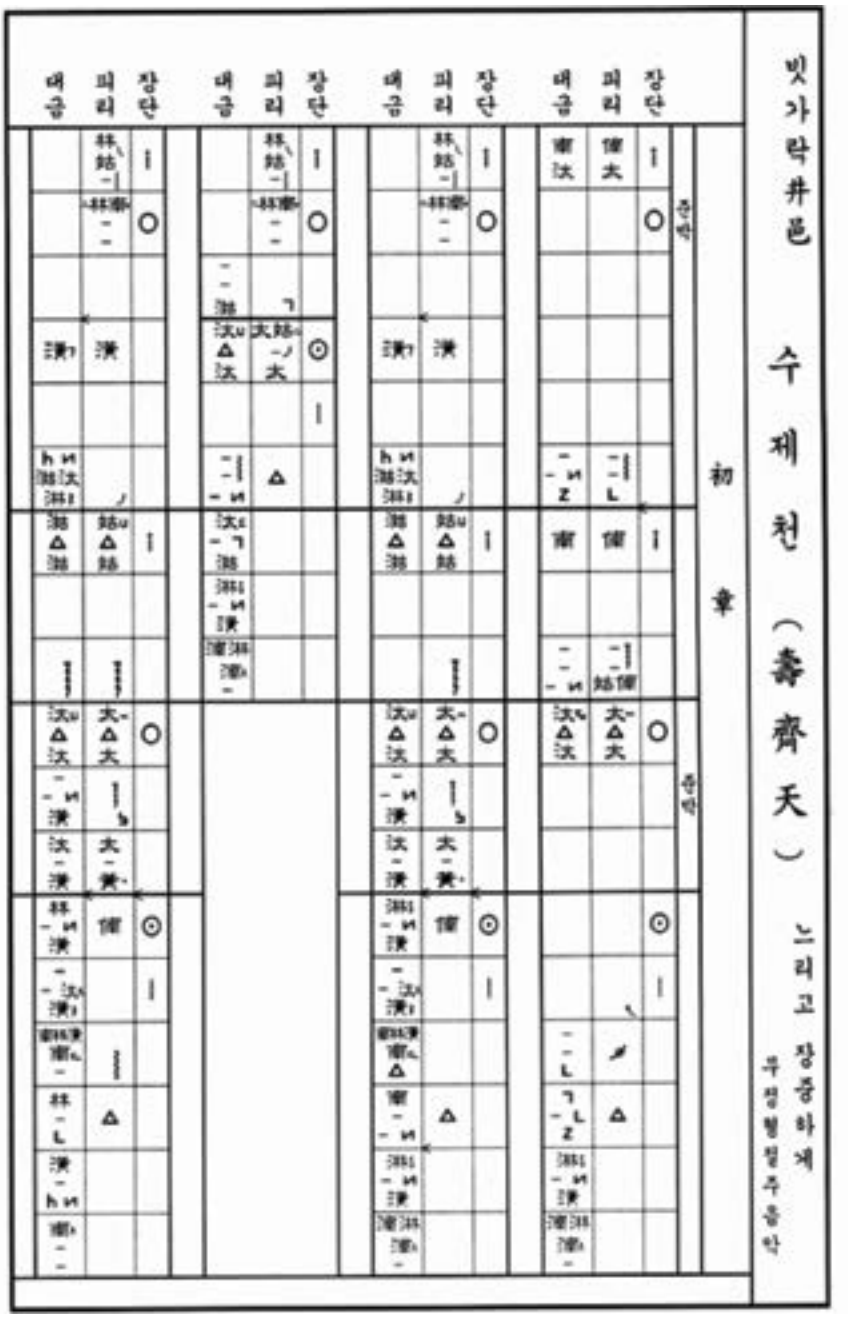


Example 2b: Korean *Pyong-Sijo*, transcription in western notation:

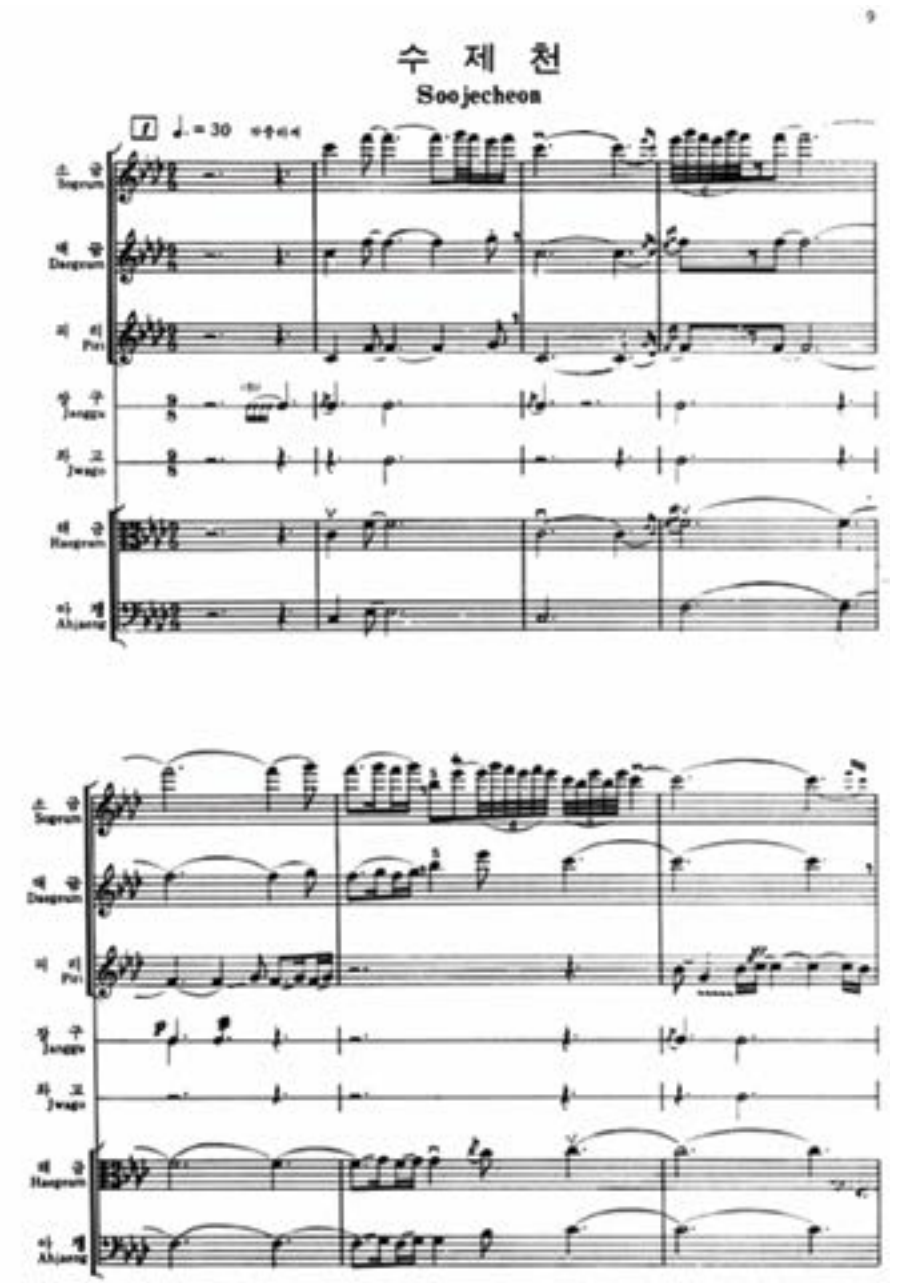


Source: Survey of Korean Arts Traditional Music by the National Academy of Arts

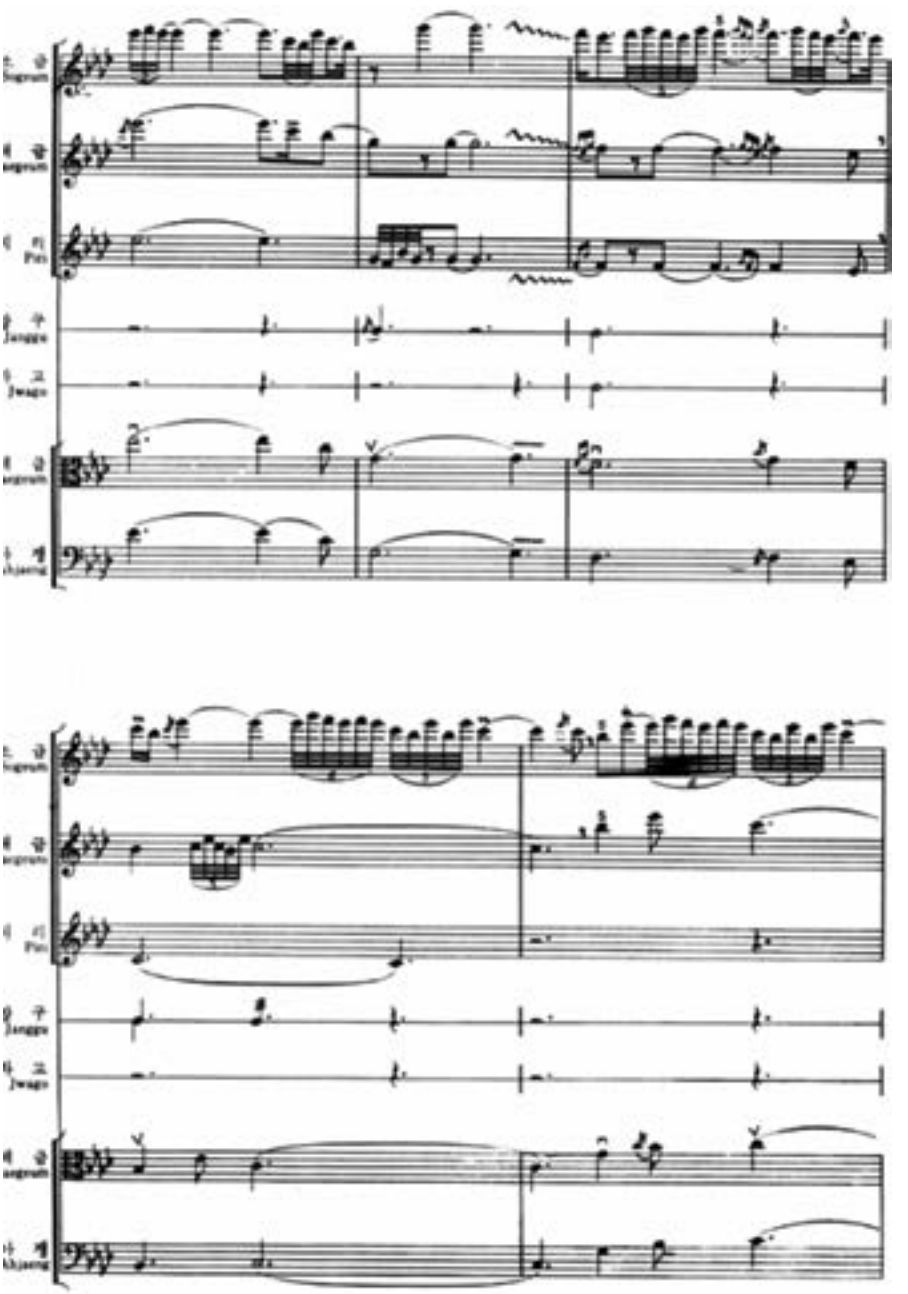
Example 3a: Korean court music, *Sujecheon*, in original notation:



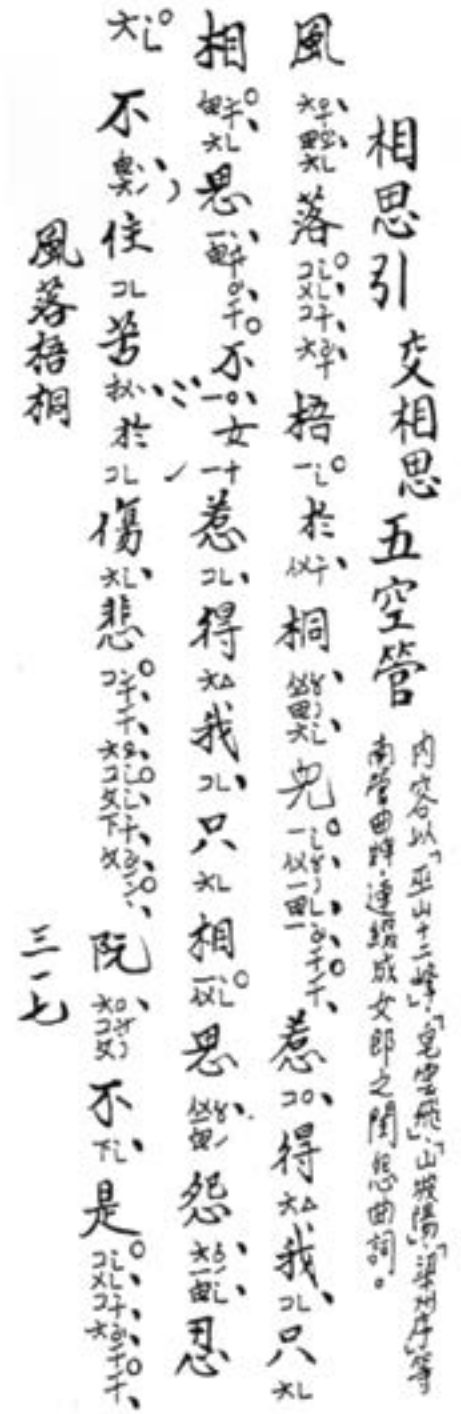
Example 3b: *Sujecheon* (*Soojecheon*) transcription in western notation:



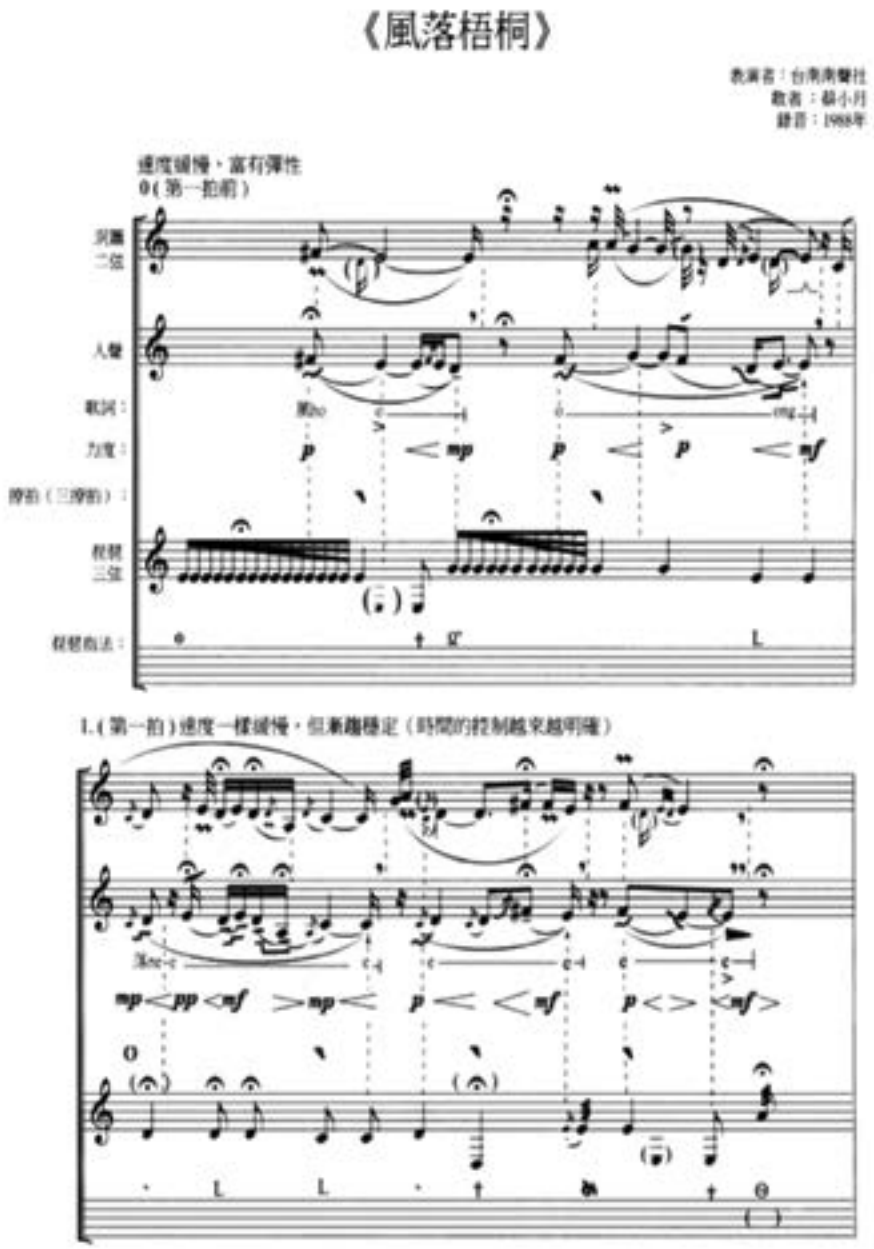
Sujecheon (continued)



Example 4a: Taiwanese *nanguan* music, *Fengluowutong*, in original notation:



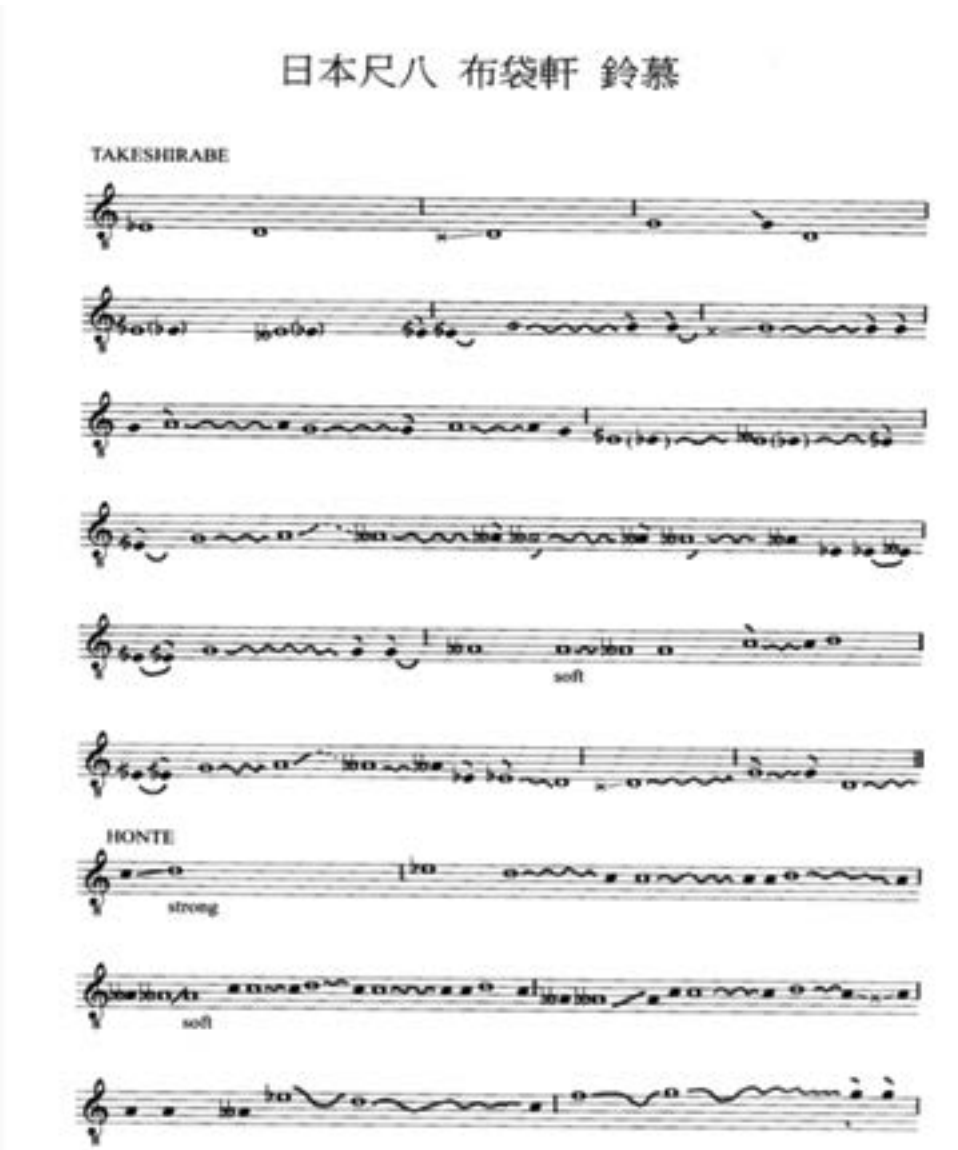
Example 4b: Taiwanese *nanguan* music, *Fengluowutong*, transcription in western notation:



Example 5a: Japanese *shakuhachi* music, *Futaiken Reibo*, in original notation:

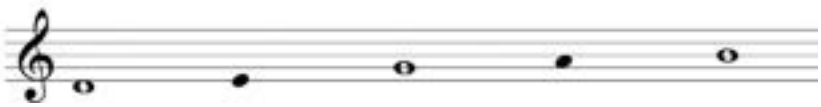
Source: score of Yodo Kurahashi Sensei (first published in 1974)

Example 5b: Japanese *shakuhachi* music, *Futaiken Reibo*, in western notation:



I will use Korean *Pyong-Sijo* to show the use of vibrato with a modal degree for the identification of the mode. The mode for *Pyong-Sijo* uses *pyong-jo*, which consists of D, E, G, A, and B (*see* Example 6). In Korean music, the tone receiving the most prominent vibrato is normally the central tone of a mode. For *Pyong-Sijo*, the D, as the modal degree 1 or central tone, requires wide vocal vibrato (or falsetto ornaments) to perform. The G, as the modal degree 3, is executed without vibrato. The position of the vibrato in *Pyong-Sijo* plays a crucial role in determining the mode. The vibrato is assigned to the modal degree 1, in contrast to modal degree 3, which does not require any vibrato.

Example 6: modal tones of *Pyong-Sijo*



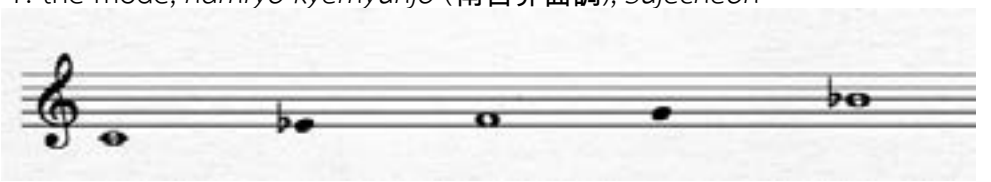
Another important aspect of Asian music is the concept of "single tones as musical entities."[4] A musical entity consists of the elaboration of a deviation from one tone moving into a main single tone through subtle inflections in pitch, specific portamentos from one position to another, and various levels of vibrato, timbre, and loudness. These so-called "ornamentations" are integrated into the musical structure. For example, Korean *Sujecheon* music consists of the instrumental ensemble with *changgo* drum patterns of *kidug kung*, *kidug*, *kung*, and *dung dururu*. Each *changgo* structure consists of these four drum patterns in six measures. The fourth drum pattern is regarded as the structural point.

Let us now examine the elaboration of deviation in the fourth drum pattern of the first two *changdan*. The structural tone for the first *changdan* is the note F and that for the second *changdan* is the note Bb (*see* Example 7). For each of these structural notes it takes two measures in length to elaborate the deviation away from and back to the main

[4] *See* Chou Wen-chung. "Single Tones as Musical Entities."

note (F in the first and Bb in the second). Several auditory features are worth noting. First, one hears the competition between the *daegeum* and the *sogeum* during the execution of the deviation away from and back to the note F of the first *changdan* and Bb of the second *changdan* (measures 5-6 and 11-12). Second, the ending note for the first *changdan* is the note C, which can be viewed as the anticipation of the first important note (C) of the next *changdan* section. The fourth drum pattern consists of two subgroups, the first marking the end of the deviation from the note F and the second anticipating the initial structural note (C) of the next *changdan* section. Third, the tecniques of deviation include the descending vibratos (*t'oesong*), wide vibratos, slides, accented embellishments, and florid coloraturas figures.

Example 7: the mode, *namryo kyemyunjo* (**南呂界面調**), *Sujecheon*



It is interesting to note that G is regarded as the deviation from F and always appears after the note F in the first *changdan*. This linear elaboration of deviation between instruments approaching and moving away from F creates tension. The resolution in arriving at F is expected when all of the instruments rest on the note F without any coloraturas, for instance, from the latter part of measure 3 to the first part of measure 4. After the note F receives a brief moment of no coloraturas, it starts to deviate away from F, starting from the latter part of measure 4 to measure 5, which ends the first *changdan*. The execution of deviation away from the main note through the above-described techniques provokes the sense of tension, and the arrival at the main note, often accompanied without deviation, creates the sense of resolution. The duality of tension and resolution is established with the proper application of deviation.

The music for Taiwanese *nanguan* reflects a similar approach in dealing with its tonal tension and resolution. The "single tones" theory views the deviation away from and back to the main note as a musical entity. A "musical entity" is completed in its linear elaboration by way of voicing competitions among instruments, which results in tension and resolution. It, therefore, offers another perspective through which to view tonal tension and resolution as compared to its counterpart in western music.

The concept of tension and resolution in the West is realized by the vertical juxtaposition of two scale degrees to form a dissonant interval, which establishes an increase in tension and requires a release to a consonant interval for its resolution. In *Pyong-Sijo*, the vibrato is assigned to the central tone (modal degree 1), and yet the fourth tone (modal degree 3) above the central tone receives no vibrato. In *Sujechoen*, the deviation away from and approaching the main modal degree note increases tension, while the arrival at the main modal degree note with liquidation from deviation and ornaments provides a sense of resolution. The deviation techniques include vibratos, ornaments, glissandi, dynamics, and coloraturas.

2. Music and Sentiment

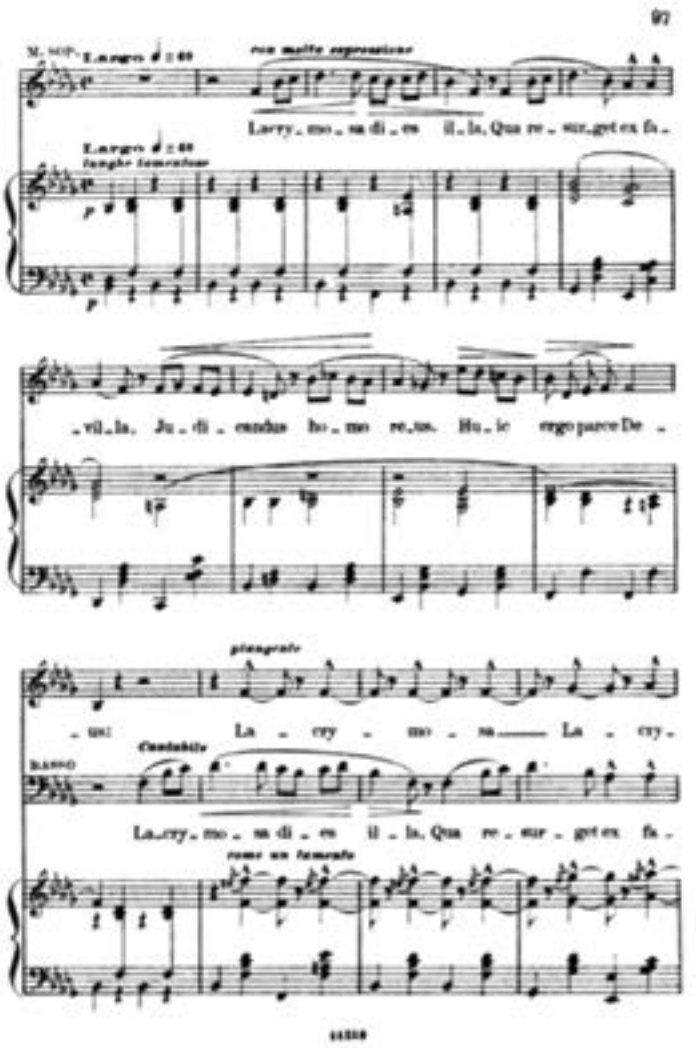
Now, we come to touch on our second issue of music and sentiment for composition teaching and curricular design. Music, as an art form, evokes emotion and sentiment. The power of music to awaken emotion and sentiment is well documented in both western and Asian music literatures. For instance, the *sijo*, which uses *pyong jo*, as discussed earlier, is associated with a brightness of mood expressing refined, calm, and peaceful feelings. The *sujecheon* uses *kyemyun jo*, which expresses a mood of sorrowfulness.

In the West, the philosopher Plato is regarded as one of the first to recognize the power of music on emotion. Later, the 20th century scholar Deryck Cooke, in his *Language of Music*, argued certain diatonic intervals and scale patterns signify particular emotional content. Minor thirds, for instance, represent grief.

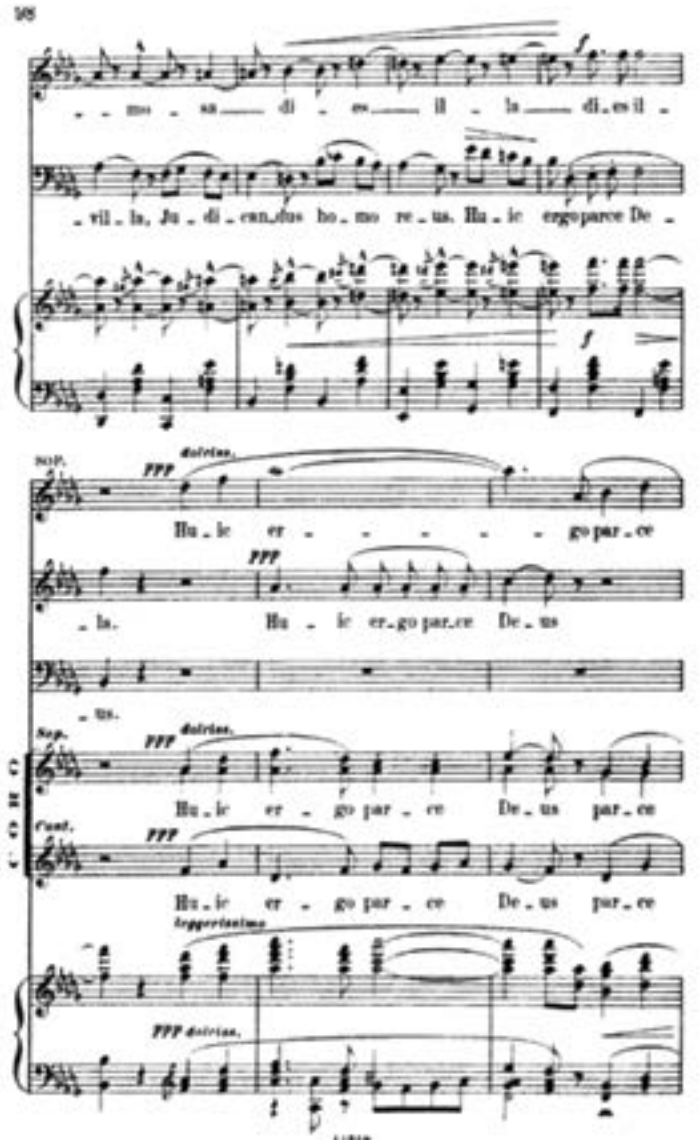
2.1. *Comparing the structures of Verdi's* Lacrymosa *and Ung's* Rain of Tears

Listening to *Lacrymosa*, from Verdi's Requiem (1874), and Ung's *Rain of Tears* (2006), one immediately feels grief. Both use slow tempo to express that emotion. But, when we further examine how Verdi and Ung fill the musical time and space, we discover a significant difference in their musical presentations.

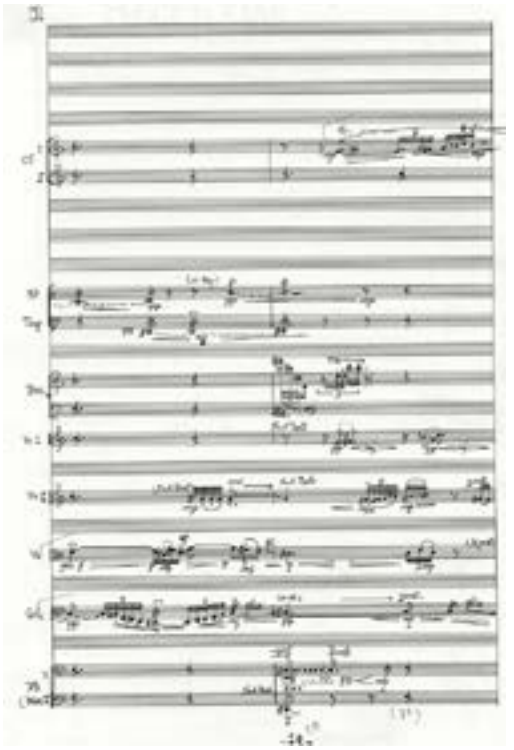
Example 8: *Lacrymosa*, from Verdi's Requiem

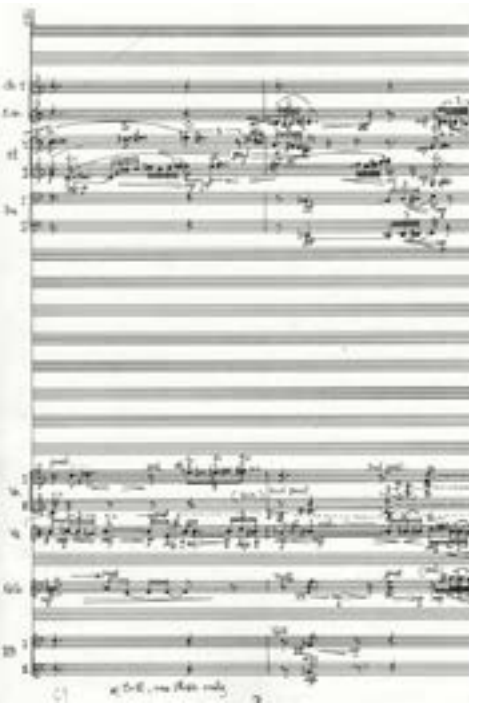


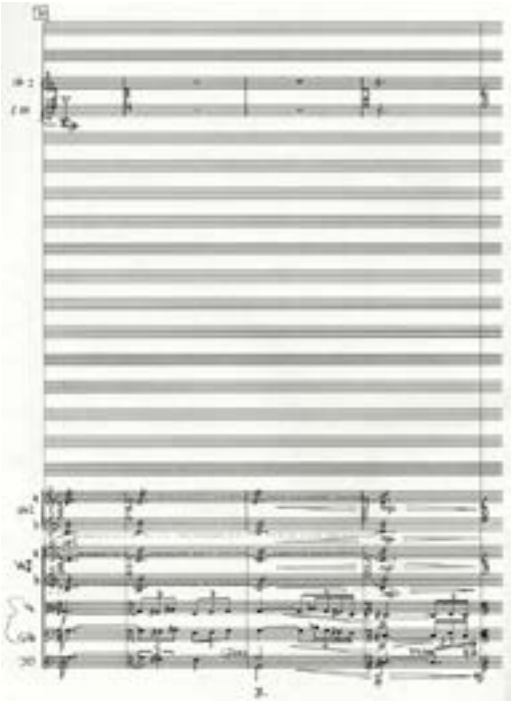
Lacrymosa (continued)



Example 9: Ung's *Rain of Tears*







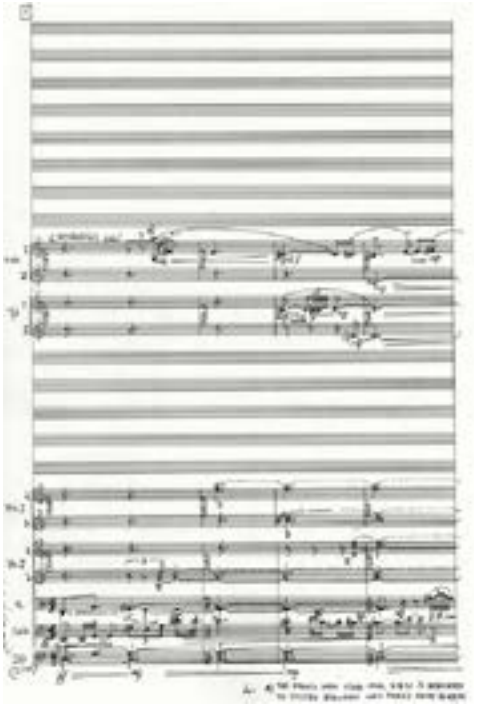


Table 1: Comparing Verdi and Ung

	Verdi	Ung
pace	slow	slow
cell/pattern	unified	diversified
melody	unified	embroidered and dissolved in florid coloraturas
periodicity	regular/repetitive	irregular/non-repetitive
space	triadic	pentatonic
speed	single	variable
theme	appearance in one voice part	simultaneous appearance in more than one voice part
linear motion	contrary motion	parallel motion with small curves in different directions
voice presentation	independent from each other	competing with each other

In Table 1, we can see how homophonic and heterophonic textures distinguish the works of Verdi and Ung. However, these differences do not lessen our feelings of grief when listening to either's composition. The use of minor third intervals in the music of both Verdi and Ung convey a sense of sadness. But, in the case of Verdi, the minor third is part of the Bb minor mode; in Ung's, the minor third is part of his modal scale.

Conclusion

As shown in the above examples, when rethinking teaching methods and curricula for music composition in Asia, one must consider 1) music as a product of the confluence of music cultures; 2) the power of music to awaken sentiment through proper employment of intervals; 3) cultural perspectives underlying concepts of tension and resolution; and 4) textural aspects of presentation.

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