

# Another Road: An Intersection of Music and Language

Jiradej Setabundhu<sup>1,\*</sup>

<sup>1</sup>*Princess Galyani Vadhana Institute of Music, Bangkok, Thailand*

*\*Corresponding author. Email: jiradejset@pgvim.ac.th*

## ABSTRACT

The cross-pollination between the two fields is such that it provides a new perspective for people to see what should have been obvious but for some reason was overlooked. Thus, this study proposes the benefits of a cross-disciplinary approach to music and language. It begins with a survey of the parallel between the two then proceeds to observe how language structure and syntax help define musical forms and specific compositional techniques. Moreover, this study also presents how language in the form of lyrics can help explain the difference between the harmonic progressions in art music and pop music. Some type of arts such as drama, mime, poem (Yeats' poem), and song (*Four Orchestral Songs*) are utilized in this study to show how to see the parallel between the two art forms, whether in terms of large-scale structures or detailed components as when we compare the syntaxes of music and language.

**Keywords:** *Centonization, Composition, Cross-disciplinary, Language, Music*

## 1. INTRODUCTION

Specialists tend to stay within their field. Knowledge has become very specific, usually to the point that people outside such immediate circle cannot understand. In a way, this is necessary as we gather more information and dig deeper into its meanings. The downside of this world of super-specialty is that we tend to lose touch with the big picture for the lack of any connecting mechanism that holds together the different parts of the total knowledge. The connections between different branches are lost.

Things have not always been this way, however. In earlier times, a learned scholar often possessed skills in various fields. John Dunstable, a Renaissance English composer, was also an astronomer and a mathematician but one of the numerous examples. Although he is known today chiefly as a composer, there is no doubt that his knowledge in astronomy inspired his music, and the underlying durations, structures, and symmetries of his isorhythmic motets and masses are due in no small part to his prowess in mathematics [1].

Perhaps we cannot go back to the way things were, but accepting what other branches of knowledge can offer will be beneficial for pursuing our own field. Sometimes the cross-pollination between the two fields is such that it provides a new perspective for us to see what should have been obvious but for some reason was overlooked. This study discusses specifically how music and language intertwine in parallel- and contrary-motion dances that have inspired composers to develop their

artistic ideas. This study also likes to share some examples of how a simple approach to language provides a springboard for my musical ideas.

## 2. RESULTS AND DISCUSSION

### 2.1. Music and Language

A poem, a story, a song, and a sonata are all time-based art. They flow through time from the beginning to the end as opposed to, say, a painting that a viewer can perceive as a whole. One can argue that time is required to appreciate a sculpture in its totality as three-dimensional art, but a viewer can view sculpture in a non-linear fashion and still grasp the effect of the work. On the other hand, the coherence of a story or a movement of a symphony would be destroyed if a listener approached its timeline randomly. To be sure, many authors have experimented with linearity, beginning a story from the middle of the plot and so on, but this is intentional, and the result is still linear, although not in the way the reader might expect.

Music is closely related to language to the extent that it metaphorically adopts some of the language terminologies. When we hear a group of musicians perform an improvisatory passage, for example, we say that they are "in conversation". In an academic setting, the terms such as *phrases*, *sentences*, and *periods* have been used in classes on musical form and harmony to describe the various temporal length of a musical unit, although it must be said that the exact definitions of these terms can vary from one school of thought to the next, and are at best a little ambiguous unless applied to

very simple musical excerpts [2]. To some, two consecutive musical phrases, the former ends with weak punctuation (*cadence*) and the latter strong one, form a sentence or a period [3]. A. Schoenberg, on the other hand, provided a more specific description of a sentence where the first part contains two statements of a motive, usually in tonic and dominant, and the second part provides a more developing treatment of the materials from the first, often employing rhythmic reduction and thematic fragmentation, to bring the sentence to a concluding cadence [4].

One can trace back in time to even earlier periods and still finds the interwoven thread of language and music. Around the mid-eighteenth century, a decade before the death of J. S. Bach, a new musical style called *galant* emerged that was to be a link between the learned polyphonic work of the Baroque style and the Classical style that focuses on a more balance of the vertical and linear musical ideas, culminating in the music of Haydn and Mozart. The characteristics of *galant* music include a rejection of counterpoint, clear separation of melody and accompaniment, shorter themes, symmetrical phrase structure, and strophic, regular rhythm related to dancing. The adjectives that perhaps best suit this new style are pleasant, free, spontaneous, and attractive. The origin of the style was closely related to the ideal of the era that also pervaded other art forms. Goethe wrote about a similar writing style that was typically feminine, with short phrases and many sentence breaks—the style that also appeared in J. J. Rousseau’s epistolary novel *Julie, ou la nouvelle Héloïse* and short statements in the libretto of Pergolesi’s opera *La serva padrona* [5].

Despite the apparent difference in communicative capability between language and music, the former able to convey specific information while the latter only general expressions, the difference is simply in degrees. Language, unlike other human institutions such as customs, fashion, or laws, “is limited by nothing in the choice of means, for apparently nothing would prevent the associating of any idea whatsoever with just any sequence of sounds [6].” The linguistic signs and their meanings are related not naturally but instead socially and historically—therefore arbitrary. Any specific language can never be universal because to understand its code, a participant must immerse him/herself in the specific cultural, historical, and cognitive backgrounds. Many subtexts and jokes in sitcoms from the US, e.g., *Seinfeld* and *Entourage*, would be lost to viewers from foreign countries who have no background on the themes—life in New York City in the former and Hollywood extravaganza lifestyle in the latter.

Many think of music as being more universal, but, like any language, its power to convey the meanings,

general as they are require that a listener shares its cultural, historical, and cognitive contexts. In general, it refers to the lack of precision in describing the physical world with the clarity of human language. Of course, we have to set aside some claims as obvious exaggerations to make a point, as when R. Strauss boasted that he could “differentiate musically between a knife and a fork” with his composition and orchestration techniques used in *Symphonia domestica* [7]. What we see as a universal response to a melody, harmony, or rhythm is nothing but a learned experience acquired from years of immersion in a proper environment. An Indian musician unaccustomed to western music would likely find the 12-equal temperament tuning crude and could not relate to the emotional swells of the nineteenth-century western music. Likewise, a western composer never exposed to eastern scales would not understand the flexibility of the Thai tuning and hear the music as out of tune. Film composers have learned the craft of manipulating viewers’ responses to specific formulas well within a particular environment, and it is no wonder—although unfortunate—that many blockbuster hits share similar thematic, harmonic, and rhythmic materials. M. Danielewski saw man’s attempt to relate the concept of echo to God as a reason why the designs of most churches support ample reverb: “Divinity seemed defined by echo,” he wrote [8], “The hallowed always seems to abide in the province of the hollow.” But this is true only to a society where echoes and long reverb time are not common. For a tribe living in a mountainous area, with valleys and peaks, and space in between large enough for sound reflections to be distinguishable from the sound source (longer than 0.1 seconds), echoes would be a common occurrence, and thus would not seem fit to describe Divinity.

More concrete examples can be found in dance, which, like language, communicates through cultural codes. H. Bannerman analyzed the western classical and modern dance and matched linguistic categories, including vocabulary and syntax, the utterance and the speech act, to dance counterparts [9]. The gestures in dances of many Asian countries consist of pre-determined patterns, each of which represents a specific affection and meaning. Indian dance, a part of a larger drama, is divided into three categories. Two of these, *natya* and *nritya*, —drama (story or plot) and mime (gestures of the dancer body) respectively—together convey the meaning of the dance [10]. The dancer/actor communicates the story and expressions via numerous stylized gestures using the movement of head, eyebrows, nose, cheek, chin, neck, breasts, eyes, feet, and hands, of which those involving eyes and hands are the most important. A single gesture may signify many different, unrelated meanings, not unlike human language [11].

Without knowing the relevant cultural codes, it will be impossible for the audience to appreciate the performance.

## **2.2. Music and Structure**

Since music shares many characteristics with literary work, it is no surprise that many composers control the musical structure with those of poetry or story. This seemingly simple action helps to fulfill the logical decision for the musical form. The more specific meaning of language shapes the abstract musical structure, leading the sound along with the parallel flow.

The evolution of atonal music, i.e., music without a tonal center, is a good demonstration of how language can be a great aid to composers. The first decade of the twentieth century saw western art music struggle to move forwards. Tonality, the driving force of music thus far based on the attracting force between the tonic (the tonal center) and the dominant (the tonic's strongest overtone a fifth above), was disintegrating, and there was no other system available. Since tonality governed the connection of chords, it also controlled the pace (or rhythm) of harmonic changes, in addition to the voice leading. Therefore, composing atonal music was difficult because composers had no access to any self-consistent applicable compositional procedures [12]. The only possible guidelines were usually in the form of negative rules to tonality, e.g., the avoidance of traditional chords and conjunct melodies [13].

It is understandably symptomatic that early examples of atonal music tend to be very short, some of which only a few minutes long. To extend the length beyond this miniature scale, composers often employed text to music. The prose/poem-turn-libretto provided a strong sense of direction on which the music could be carried. It gave a logical structure to the flow of expressions that the composers could hold on. Schoenberg, a leading composer of this period, was able to complete a 30-minutes long *Erwartung* in 17 days because of the libretto. In this expressionist monodrama, the poet and medical graduate Marie Pappenheim told a psychological story of a woman searching in a dark forest for her lost lover whom she might have killed. The libretto does not have any narrative plot per se but provides a backbone for the music, leading it to a progressively more intense emotional state of the protagonist's mind. The athenatic nature of Schoenberg's music reflects the text without any progressive story. When Schoenberg said to Pappenheim, "Then write me an opera libretto, young lady... Write whatever you wish, I need a libretto," [14] he did not just propose a challenge, but also a request. The astonishing speed which he completed the work

indicates the effectiveness of a proper text as a compositional aid.

Although Schoenberg implied that his music did not serve merely as a translation of a text into sound, claiming that he was usually inspired simply by the sound of the first words of the text and composed the music without any regard to the rest of the text, he later backtracked, saying that other composers misunderstood and took his comment too literally [15]. The text structure, indeed, gave him some idea about the structure of the music, as apparent in the 1932 discussion of his own *Four Orchestral Songs*, op. 22, where he stated that, although his use of text did not rely solely on word painting technique, the text did supply the formal organization to the music [16]. In the melodrama for cabaret *Pierrot lunaire*, Schoenberg's seminal work commissioned by Albertine Zehme for a reciter and five musicians, the composer selected 21 poems from a cycle by A. Giraud and organized them into three groups of seven poems—the action that decisively led to the creation of the opening seven-note motive G#-E-C-D-Bb-C#-G that later appeared in various guises in every poem throughout the work.

## **2.3. Music and Storytelling**

The problem exists when trying to integrate a story into music. Many musicians would label the work as absolute music, i.e., music without any associated story as opposed to program music. However, writing the music accompanying W. B. Yeats' *Sailing to Byzantium* can be a solution. The theme of the poem is about a metaphorical journey of a frail old man living in a world of youth, who decided to sail to the mystical Byzantium in search of immortality. The transformation of a wasted body into an immortal golden bird provided the idea of recycling. Together with the arcana theme, this finally guided the project into a multimedia work consisting of a live shadow play and electronic music accompanying a poem reading. The shadow play was a reference to the Thai tradition of *Nang yai* and *Nang talung*, where shadows of puppets made of painted buffalo hide were projected onto the screen. In a piece, wasted objects were used as puppets to emphasize the recycling concept. The obscure images of lights and shadows, the electronic sound of an analog modular synthesizer with complicated cable patches, the dramatic reading of the poem, and the incessant sound of the sea set the tone for the mysterious quest.

There are four stanzas in Yeats' poem. The first two place the narrator in the land of youth while the last two are set in Byzantium. Here presents the problem of form that often occurs when we adopt one art form to another. The bipartite structure based on departure and arrival

works well in the poem, but such an epic seafaring journey could not be portrayed musically with a short “sailed the seas” phrase as in the poem. A longer duration is needed in the music domain to depict the narrator’s quest successfully. Therefore, another poem with a seafaring theme that would not look out of place to serve as a long musical arch between the two cities was searched and S. T. Coleridge’s *The Rime of the Ancient Mariner* was found. 23 non-consecutive stanzas from Coleridge’s were selected and rearranged to form a new cohesive journey. Delightfully, most of the selected stanzas contained references to time of day, e.g., The Sun came up upon the left, / Out of the sea came he! / And he shone bright, and on the right / Went down into the sea were discovered [17]. It turned out that the sequence, as indicated by the selected stanzas, suggested a nine-day journey.

Thus, the final form of the work is tripartite as opposed to the bipartite division of Yeats’ original poem. The placement of the additional Coleridge’s poem in between emphasizes the contrast between the land and the sea. This created fluctuation in tension, which was reflected in the treatment of the light play and the musical texture [18].

#### **2.4. Music and Syntax**

Many eastern composers working in the western compositional domain feel, at one time or another, the pressure to write in their local idiom. This is not an easy task because Thai music has a unique system and method of composing, which is quite different from the western counterpart. Finding the unique characteristics that define Thai music is a solution so that through them, the Thai compositional techniques from a different angle can be approached. It turns out that two characteristics are indispensable: the strict form of centonization and the hierarchical structure.

Centonization is a technique of composing with pre-existing melody types. It shows in some music from the Medieval period and also occurs in Arab-Andalusian music [19]. In either case, the technique implies a flexible application of the pre-composed blocks. Thai usage, however, is quite strict. Instead of using loose structural pitch sequences as in melody-types of Arab-Andalusian music, centonization in Thai music is based on *luuk khong*—building blocks of the same length, each of which combines a precise pitch sequence and a rhythmic pattern. A composer selects *luuk khong* and connects them in a specific order to create a new melody. In performance, one musician plays the melody while others perform melodic variations simultaneously on top of the melody. Usually, these variations themselves also make use of centonization. The melody

and all variations meet on specific notes at a regular interval, forming a heterophonic texture. (Some musicologists prefer the term “polyphonic stratification” since it better describes the distinct characteristics of each variation instead of a group of more closely related melodies of the typical heterophonic music) [20].

In itself, the melody created from *luuk khong* contains little information about the rhythmic aspect of the piece. It is just a base layer upon which rhythms are built. Above it is a pattern of regularly spaced, alternating open/closed *ching* strokes. The speed of the strokes determines one of the three metrical levels. In level 3, a single *ching* cycle occurs in a span of one *luuk khong*; level 2 corresponds to the speed of two *ching* cycles per *luuk khong*; the music is in level 1 if there are four *ching* cycles per *luuk khong*. Above the *ching* is the gong stroke, occurring every two *ching* cycles. Lastly, the drum pattern called *na tap* is at the top of the hierarchy. There are many drum patterns, but each always contains three sub-patterns for the three levels. The drum pattern is, again, twice as long as the gong stroke.

Thus, we can create a new structure based on Thai music by utilizing only the Thai concepts of the rhythmic hierarchical system and centonization. We begin by considering music as a simple melody, as many Thai repertoires have been conceived. The first thing is to create a new set of melody types in place of the Thai *luuk khong*. If there are many of these, then there is statistically a potential to create something as complex as the Thai music system. But we also have to establish a logical (and aesthetic) system to put these melodic blocks together. One way to do this is to play with the blocks until we have a sense of what works. After a long enough time, a suitable connection will surely emerge. The other way is to create an artificial and arbitrary system dictating the connection. Then, too, we need to establish the logic of the rhythmic hierarchical system.

The problem of creating a new system lies in the merit of the materials and processes. The Thai musical system has not arrived at the current state immediately. The compatibility of all *luuk khong* and their relation to the rhythmic system indicates a long period of experiments with trial and error. Through this period, any unsuitable *luuk khong* and rhythmic structures would already be discarded. The whole system is the result of the developments by many skilled musicians through generations. This is not the case with a new system created by an individual, and it would be impractical to assume the result to be on the same level as the Thai system.

So, we need as a model a system from which we can extract both the strict centonization and hierarchical structure, one that is a result of collective ideas over a considerable period. Fortunately, there is such a system that all of us are well acquainted with, i.e., language. The parallel between characters and pitches, words and *luuk khong*, sentences and phrases/periods, is just one possible interpretation.

By basing a musical system on language, we solve many problems that would occur if we tried to invent a new system. By setting up a mapping method of the pitch/duration pairs and characters, we can construct *luuk khong* from actual words. The mapping process that we use will affect the tonal character of the new *luuk khong*, but the structure of the language will also determine the sound. Assigning pitch D to the letter “q,” for example, we will not find many *luuk khong* with two Ds in succession if the system is applied to the English language. In any language, some words occur more often than others. Consequently, and naturally, some *luuk khong* will also appear more frequently than others, just like in the Thai system. As for the rhythmic hierarchical system, the relationships between *luuk khong*, *ching* strokes, gong strokes, and drum patterns in Thai music may be translated to those between words, phrases, sentences, and paragraphs, for example.

Bear in mind that we are not trying to represent language through music. We simply use the derived structure to solve the problem of creating a new system comparable to the Thai music structure. In this case, there is no intention to draw a parallel between the two *luuk khong* created from the words “Beautiful” and “Pleasing”. It is enough to see the possibility of replacing the former with the latter when a suitable occasion occurs, i.e., when the word “Pleasing” can substitute for “Beautiful.” The mapping system can be expanded in different ways, covering more parameters, to suit the composer’s needs. In doing so, we will find that our taste has less role in the musical outcome, and the characteristics of the language model will directly affect the result more [21].

## **2.5 Music and Lyrics**

The perplexity of pop music is that it contains nothing unexplainable by the theory of music we have today. It is less complicated than most art music, and any music students completing the sophomore year will be able to analyze everything in most pop songs. And yet, somehow this simple music has moved generations of people. The feeling is that the power of pop music lies in its harmony, simple as it may be. So, investigating the harmonic concept of western tonal music will begin. The idea of tonal music is simple enough: it is music with a

tonal center. This tone, called the tonic, functions as a center of gravity, pulling in the other notes of the scale.

A tone produced by a musical instrument is a complex collection of pitches comprising of a fundamental pitch and related pitches above it called overtones. We do not perceive the overtones as individual notes due to their low amplitudes, but they are responsible for the tone color of an instrument. As demonstrated by Schoenberg, a single pitch already implies, by its overtones, a major scale plus the associated harmony on all scale degrees [22]. Among these, the fifth scale degree, the dominant, is the most important one because it is the loudest overtone. The pull on the dominant toward the tonic is considered the most important driving force in tonal music, which leads to the harmonic progression V-I. Likewise, the tonic itself is the overtone of the imaginary fundamental a fifth below, which is the fourth scale degree or the subdominant. The three chords—tonic, dominant, and subdominant—are called the primary chords because they are the first-order derivatives from the overtone concept. The other chords are viewed as the primary substitutes. Using this descending fifth movement as a model, a simple theory of harmonic progression is thus established: the dominant (V, vii<sup>o</sup>) goes to the tonic (I, vi, iii); tonic goes to the subdominant (IV, ii); and subdominant goes to dominant.

It is interesting that while art music is predominantly dominant-tonic driven, the same cannot always be said about pop music. Analyze the harmonic progressions of many pop songs, and we will see that they are less dominant-tonic-driven. On the contrary, the dominant-subdominant progressions—rarely seen in art music—are very much prevalent. This observation implies two contradictory explanations: either the harmonic theories of art music and pop music are different, or both genres rely on the same theory of harmony, yet somehow interpret it differently. Since both use the same tonal materials, this has led to a tendency toward the second explanation. Moreover, the different interpretation is caused due to the language of the lyrics.

Let us now look at pop music briefly in terms of historical development to understand the implication of the lyrics. Pop music can be traced far back to the blues music of the African American musicians since the late nineteenth century. Ragtime, then jazz and swing music in an urban dance setting, and country swing of the 30s are the next evolutionary steps, leading to the rhythm & blues and country music of the 40s, and finally, the rock and roll of the 50s, which would evolve into pop music [23]. In the nineteenth century, all Africans in the US working as slaves brought their music with them. Blues can be seen now as a mixture of African music, call-and-

response shouts and field hollers of slaves working, and imitation of white man music [24].

The 1862 presidential Emancipation Proclamation that was in effect in 1863 did not change the slave status overnight, and many African Americans lived in fear and without jobs for many years afterward due to racism. Against this background, blues music prospered. It is not surprising, however, to see that the lyrics of many early blues songs are about sadness, “personal woes in a world of harsh reality: a lost love, the cruelty of police officers, oppression at the hands of white folk, hard times” [25]. This sadness was to be combined later with the angst and yearning that would define rock and roll and pop music.

Should it be surprising, then, that pop music has a different harmonic progression? The tonal music of the eighteenth century is one manifestation of the Age of Enlightenment, the time when humans celebrated the power of logic and reason. The descending fifth progression reflects the physics of sound, so to speak, and thus fulfilled the aesthetic need of the period. But certainly, this fulfilling progression is not suitable to the music that needs to portray “harsh reality,” “lost love,” and “oppression.” To reflect them, blues musicians opted for the opposite direction, favoring the dominant-subdominant instead of dominant-tonic progression. The love was unfulfilled in the harsh world, so to do anything else would be a lie. Thus, the chord progression of the second half of the twelve-bar blues form is I-V-IV-I, and the reversal of the standard I-IV-V-I progression of art music. Yes, the theory and physics are still the same, but the mournful lyrics demand this retrograde progression. And their legacy has continued to this day in pop music.

### 3. CONCLUSION

Writers tasked with a cross-disciplinary subject are always at risk of being overly technical or overly superficial regarding the content. Likewise, being a musician discussing music matter among linguists made me careful of using too technical concepts. With many double-degree or dual-major programs in many schools today, perhaps researchers and scholars in the future can cross the boundaries between specialized areas better. This discussion is expected to help in seeing the potential of cross-disciplinary study, especially in related fields such as music and language. In addition, it is hoped that this discussion will help in seeing the parallel between the two art forms, whether in terms of large-scale structures such as ABA or detailed components as when we compare the syntaxes of music and language. Most importantly, this research will hopefully aid to see that by taking the time to observe

other art forms or any human endeavors, people place themselves on an unfamiliar path.

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