Motivic Transformation in Ether-Cosmos No. XIII

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Abstract

Ether-Cosmos comprises of twenty pieces for piano. The length of each piece lasts about 1-3 minutes, except the piece no. 18 which is longer than 12 minutes. *Ether-Cosmos No. 13* is about 2.10 minutes in length. This piece illustrates various techniques of motivic development such as rhythmic manipulation, augmentation, inversion, succession of the developed motives, and so on. No matter how the transformation does, it is still illustrating relationship with the original motive due to similarities of melodic contour and direction of movement, including intervals and harmonies both in vertical and horizontal context still involve with tritone. The pitch ranges are used independently both vertically and horizontally. The rhythmic patterns play an important role in motivic development which the structure of rhythmic motives is the one that can explain the unity of music. Therefore, to preserve the unity in *Ether-Cosmos No. 13*, the development of rhythmic motive plays an important role, especially in this free atonal piece.

Keywords: *Motivic Transformation, Set, Tritone, Ether-Cosmos*

1. Introduction

Ether-Cosmos No. 13 is a musical composition within "Ether-Cosmos Twenty Pieces for Piano" under the creative research project of "Ether-Cosmos: Piano Music Compositions for Analysis." The research was granted funding from the Thailand Research Fund (TRF) and National Research Council of Thailand (NRCT) in 2015. Each piano piece in this set utilizes techniques and composition methods of the twentieth century. *Ether-Cosmos No. 13* is a free atonal work which its raw materials employ two main motives and two distinguished chords.

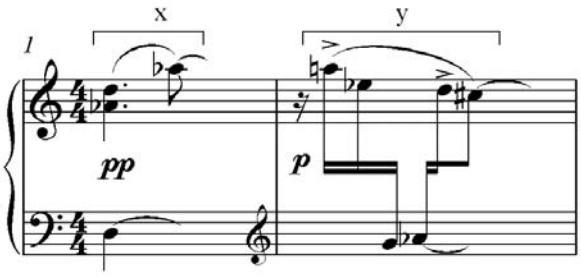
Ether-Cosmos No. 13 was composed by using the composition method of atonal music which is a musical mainstream of the century. There are two types of atonal music: serial and non-serial. Serialism or serial atonal is a compositional technique using rows of some musical elements. The serial atonal, however, is preceded by freely atonal regardless of the importance of rows (Rahn, 1980, p.2.). Miguel A. Roig-Francoli (2008, p. 105) states that most atonal music is based on the use of motivic and intervallic cells according to individual techniques and methods of each composer. Atonal music avoids using melodies, harmonies, and rhythmic patterns under the condition of traditional tonal music. Instead, it uses every note in a series of twelve notes and dissonant sound without resolution. Chord constructions or harmonies from combining various intervals and rhythmic patterns are hardly for listeners to follow (Kostka, 2006, p. 176).

2. Result and Discussion

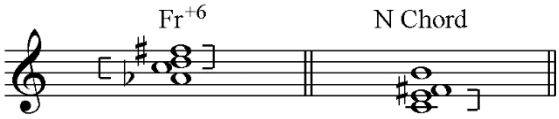
Initially, the composer created a group of rhythmic motive and assigned tritone intervals as the raw materials for this composition. The rhythmic motive x is the vertical interval of a dotted quarter note followed by an eighth note articulated with long tone. Motive y is a five-sixteenth and an eighth note group. When considering the intervals occurred in motives x and y, it was constructed from the tritone intervals. Motive x consisted of D-A♭ while motive y consisted of three pairs of the tritone intervals, A-E♭, A♭-D, and G-C♯ (Example 1).

From the intervals stated, the composer chose to use French Augmented Sixth chord (Fr^{+6}) since it was consisted of two pairs of the tritone intervals. In addition, the composer also constructed new chords that employ tritones as an important component which it is named as the "N" chord in this article (Example 2).

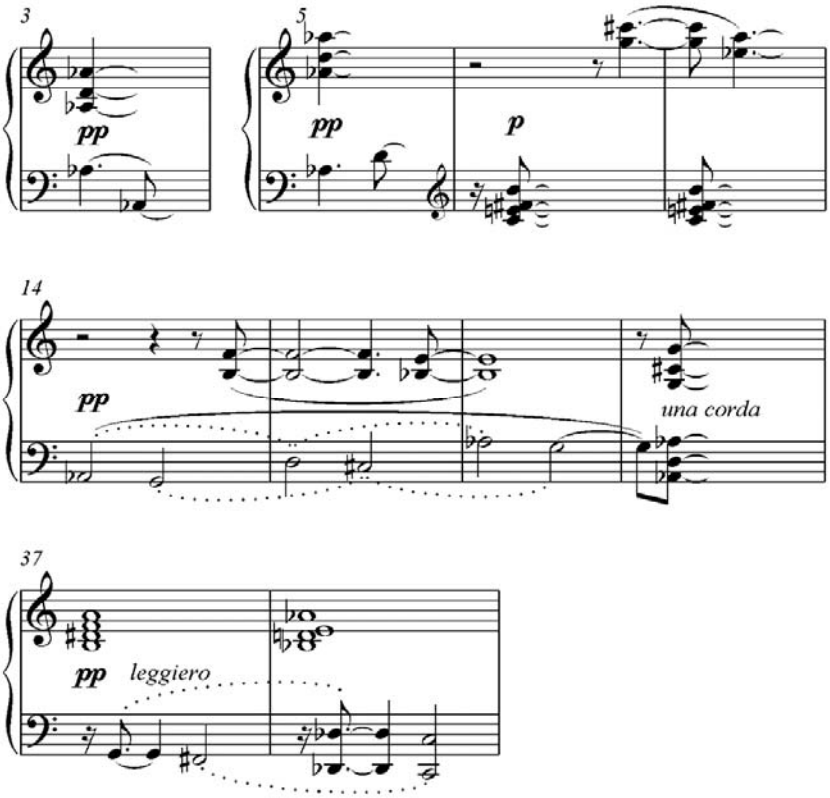
Example 1 Rhythmic motives x and y, and tritone



Example 2 Chord containing tritone(s)



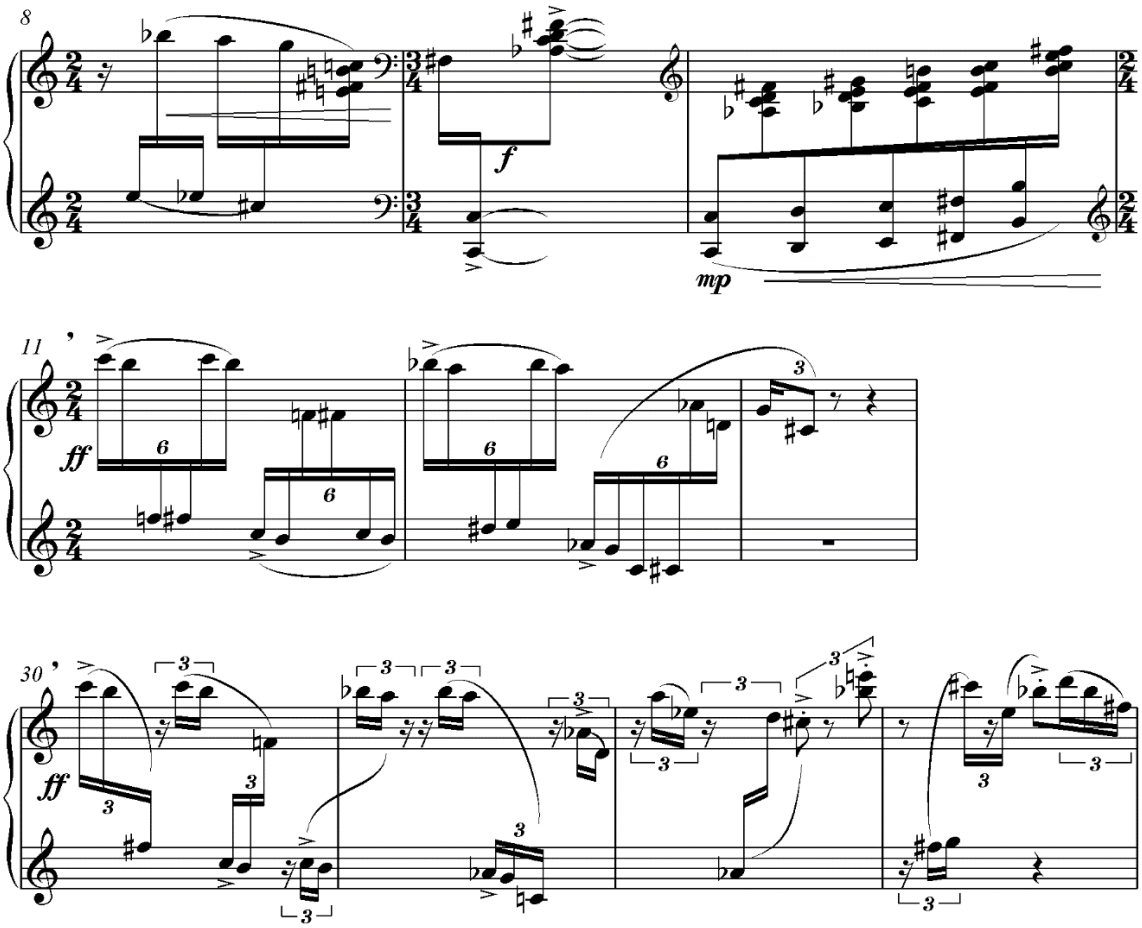
Example 3 Motive x with transformations



Ether-Cosmos No. 13 is 2.10 minutes in duration with obscured musical structure. Most melodies move by leaps and dissonant intervals. However, the composer still focuses on establishing unity through motivic development utilizing transformation including constantly using of tritones. The motivic development was accomplished by manipulation of the rhythmic motives in dimensions of melodic motion and movement.

Example 3, motive x is developed by using elements of tritones vertically and horizontally and the tied notes. Also, mm. 5-7, included Fr^{+6} and N chord in the upper part. Mm. 14-17 is a continuous movement of tritones while the lower part implying motion of tritone intervals horizontally (notice the dotted line) alternate with semitone. Additionally, the same ideas are applied in the bottom part between mm. 37 and38.

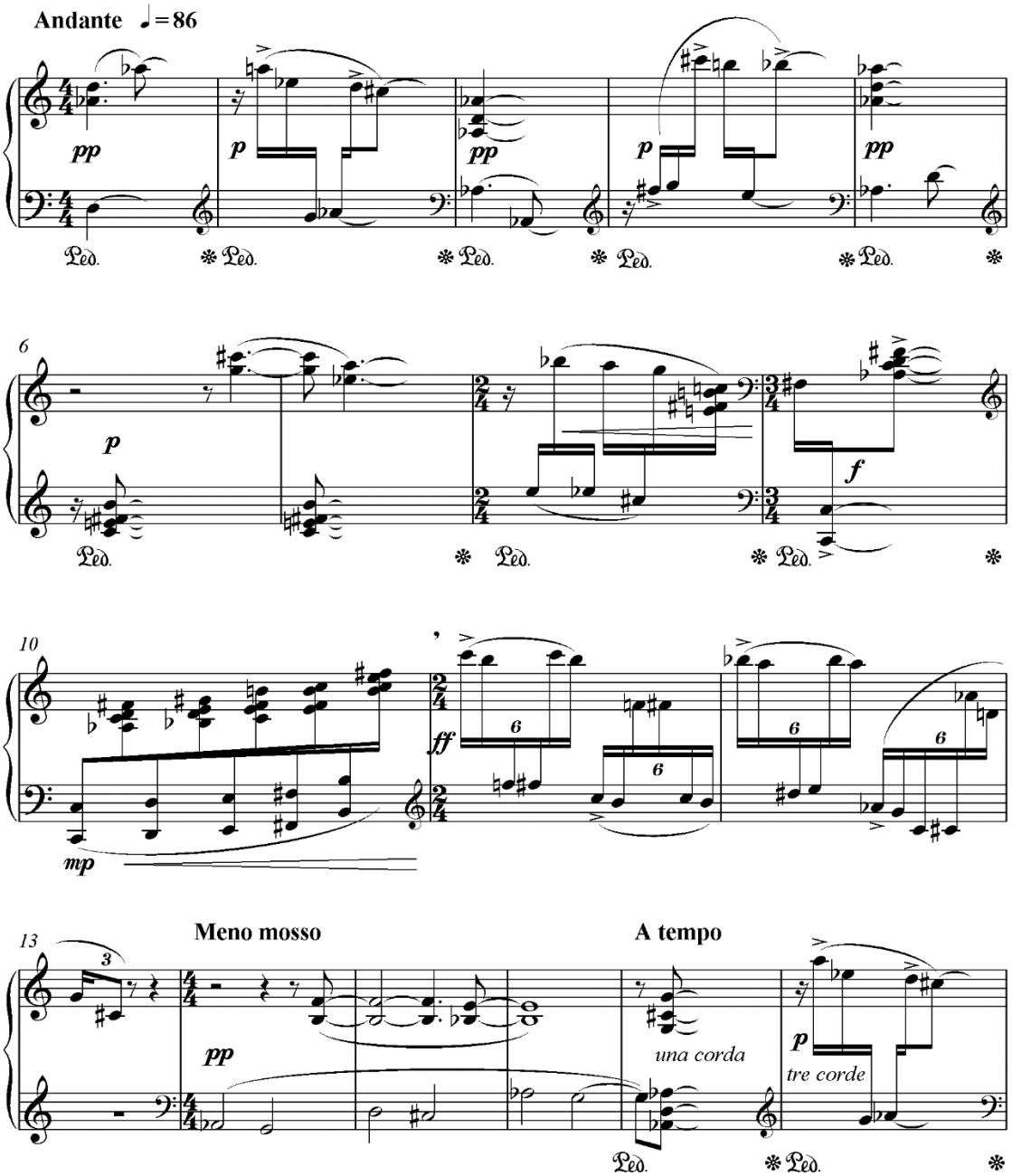
Example 4 Motive y with transformations



For development of motive y (Example 4), the overall texture still looks the same except that the motive is extended to be longer combine with an octave transfer technique. Within the group of motives, the composer still uses the ideas of six-note group, but the note values are changed to sextuplets in order to create a faster motion. Besides, the musical elements of mm. 30 to 32 are continuous development from mm. 11-12, only some notes are eliminated, and syncopations are applied to make the rhythmic motive more interesting. In addition, there still are the ideas of Fr^{+6} and N chord (including inversions) which are inserted during the development as well. For m. 10, the two chords are used in the upper part while the bottom part is a motion of melody that derived from the N chord.

Ether-Cosmos XIII

Wiboon Trakulhun



The score derives from Trakulhun (2016), *Ether-Cosmos twenty pieces for piano*, pp. 64-65.

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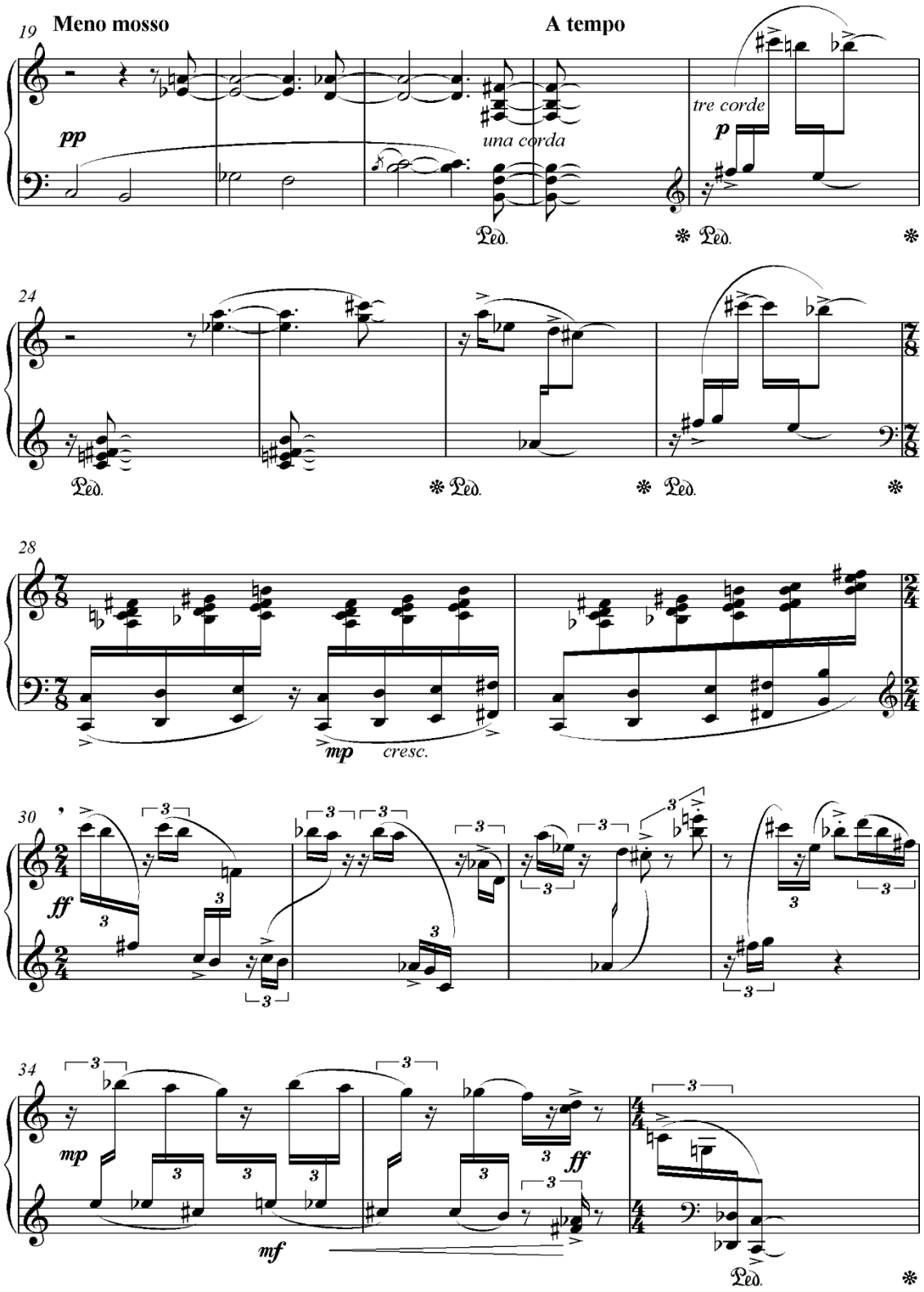

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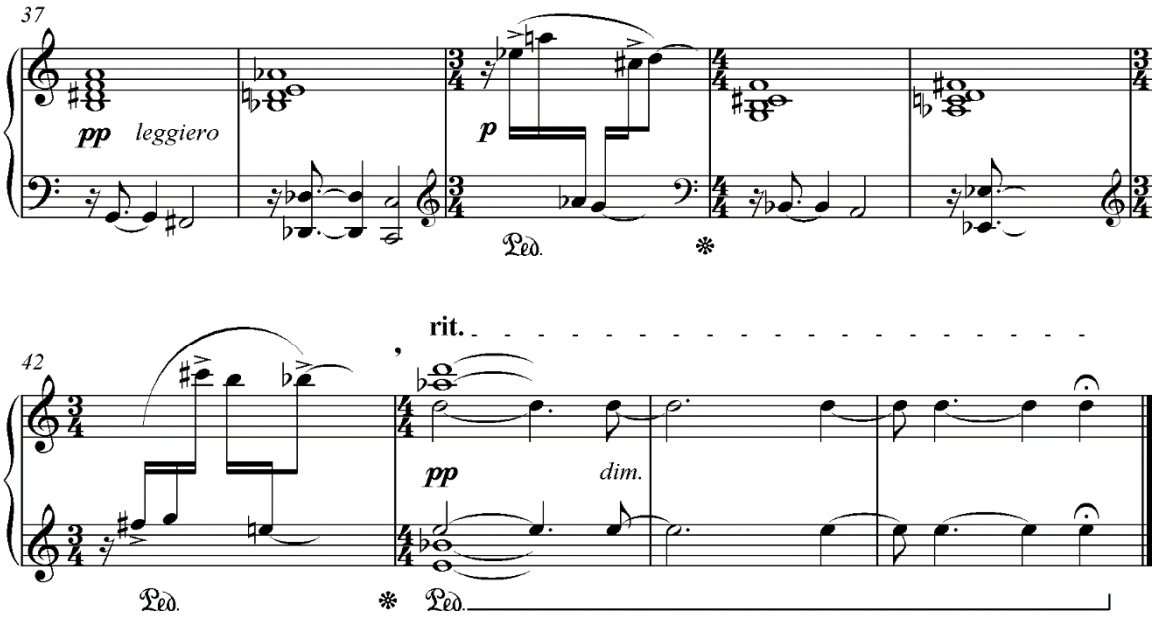
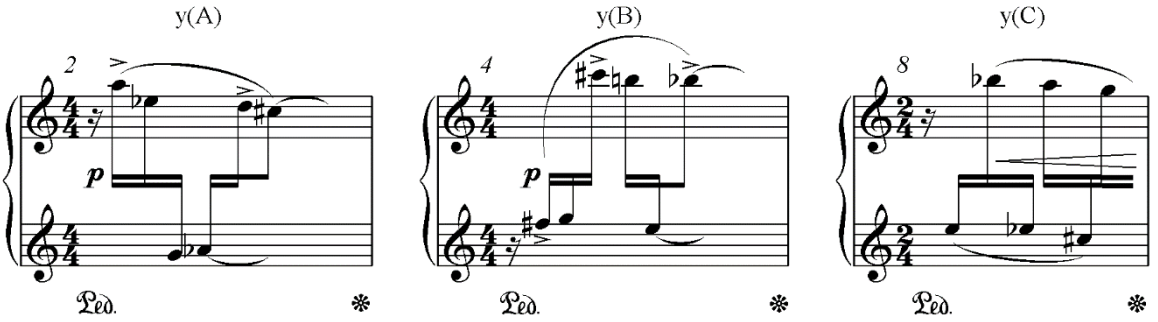


ca 2'10"
Mar. 3, 2016

Nanthakorn Ponglertwut (2018, pp. 41-42) analyzed the relationship of key materials used in *Ether-Cosmos No. 13*. About motive y and its transformations (A, B, and C), he showed that motive B and C, which developed from A, have a close relationship in terms of set theory (Example 5).

Example 5 Relationship of motive y (A, B, and C)

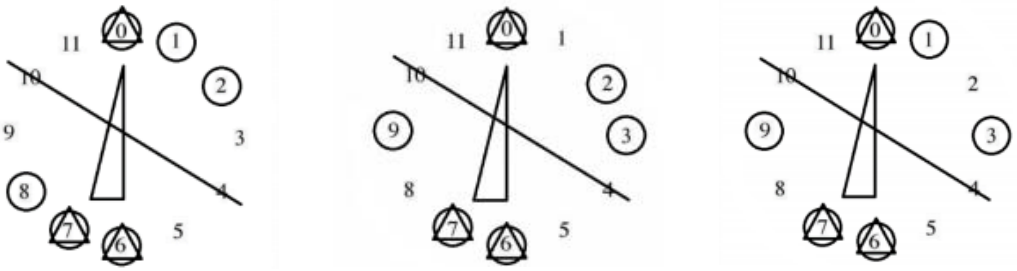


Nanthakorn Ponglertwut describes that if considering the relationship of all motives (A, B, and C) in set theory, the prime form of set A, B, and C is closely related to interval and ordered pitch-class interval. Moreover, all sets are symmetrical set that share the same positions of the axis of symmetry.[1] The supersets of them are; set A (012678), set B (023679), and set C (013679), and all sets also share the same abstract subset (016) (Example

[1] In my opinion, the axis of set B should be between 4.5 and 10.5 that is different from set A and C. However, all sets still are symmetry.

6). Therefore, set B and C are definitely developed from set A, and set class (016) is used as a raw material for motivic transformation.

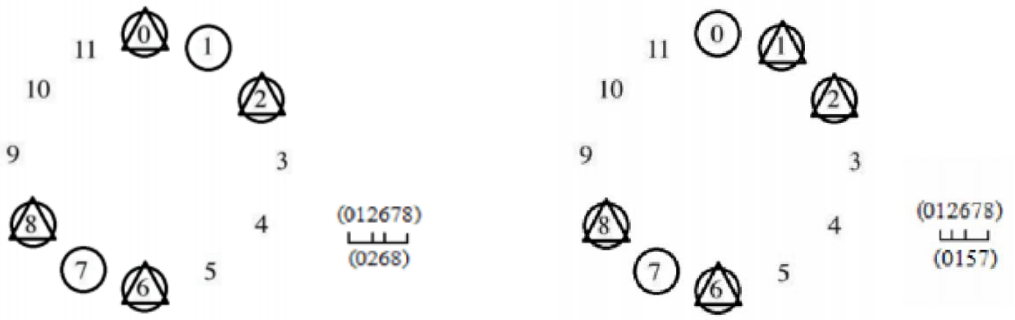
Example 6 Superset, abstract subset, and axis of symmetry



Note: circle is prime form of superset, and small triangle is prime form of abstract subset

In addition, Ponglertwut (2018, p. 43) continues that the raw materials of *Ether-Cosmos No. 13*, especially chords containing tritone, Fr^{+6}, and the N chord, relate to superset A. Prime form of Fr^{+6} is (0268), and the N chord is (0157). Both prime forms are subset of superset A (Example 7).

Example 7 Fr^{+6} and the N chord; abstract subset within superset



Note: circle is prime of superset, and triangle is prime of abstract subset

3. Conclusion

These developed motives illustrate how they are transformed in various ways, such as increasing the length of notes, changing of note values, extending of motives to be longer, motivic inversions, continuous playing of the developed motives, etc. But regardless of the way the motives are transformed, they still show a relationship with the original main motive due to the pattern and direction of melodic movement. Also, the intervals and harmony, vertically or horizontally, still relate to a tritone interval.

The development of rhythmic motive plays an important role, especially in free atonal music. This is to preserve the unity in music that, if considering only the dimension of pitch range, it is hard to say which motive to be developed from. In atonal music, the pitch ranges both vertically and horizontally are used

independently, so the rhythmic patterns play an important role in motivic development. The structure of rhythmic motives is unique, so it can explain the unity of music very well. In addition, the movement of the melody from one note to another with a big leap and dissonant interval will easily create confusion when considering the relationship between various motives. Since each melody is full of note jumps that were put together in harmony, the issue for consideration of a rhythmic motive that is developed is, therefore, considered in parallel with the direction of melodic movement which can be seen more clearly than other dimensions. Therefore, it can be said that the development of motives in free atonal music should consider the dimension of rhythmic motive, motion of melody, and the direction of movement more than the dimension of the pitch range.

4. World Premiere

Ether-Cosmos Twenty Pieces for Piano was presented as a lecture-recital. The 20 compositions were premiered on August 31, 2016 at Auditorium Building 11, Rangsit University. *Ether-Cosmos No. 13* was performed by Visudhisom Roong-In.

5. Acknowledgement

Ether-Cosmos, twenty pieces for piano, is quite flexible. In many pieces, the composer gives opportunities for pianists to freely interpret the music such as emotions of the music, choices of piano pedals, using right or left hand on different melodies, flexibility of tempo, etc. Furthermore, the composer intends to have each piece played at intermediate level (or a little higher) because the music might be taught by those who weren't pianists. Consequently, they could play for students. However, there are some requirements that pianists should follow due to the concept of musical composition.

Ether-Cosmos No. 13 is a musical composition of twenty pieces for piano that is under the creative research project, Ether-Cosmos: Piano Music Compositions for Analysis. The creative research was granted funding from the Thailand Research Fund (TRF) and National Research Council of Thailand (NRCT) under the Humanities Research Funds for the Arts (2015). The creative research received the National Outstanding Research Award from NRCT in 2017.

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