EVOLVING STRUCTURES IN PETER KLATZOW'S DANCES OF EARTH AND FIRE

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Abstract

Peter Klatzow’s *Dances of Earth and Fire* is a staple of modern marimba repertoire. However, there has been no previous music theory-based analysis of this piece, and this thesis is meant to fill that analytical gap. This document will delve into the harmonic techniques utilized by Klatzow in this piece, which is comprised primarily of symmetrical scales such as the Octatonic scale and Hexatonic scale. There will also be an extensive analysis of the unique form of this piece, which Klatzow dubs “Evolving Structures”. Both of these elements are vital to understanding how the music is constructed. The primary focus of this thesis is the first movement of the work, but the second movement will also be touched on.
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Introduction

_Dances of Earth and Fire_ is a staple of contemporary marimba literature.¹ Even though the piece was published in 1987, which is on the older side for contemporary marimba literature, it has stood the test of time and has become a widely known and admired piece of music.² Peter Klatzow constructs this piece, particularly the first movement, with a combination of ever-evolving form, and structural harmony. Klatzow refers to the form he constructed the first movement from as Evolving Structures.³ This paper intends to dissect Klatzow’s use of Evolving Structures in the first movement of this piece, as well as delving into how this piece is constructed harmonically. In addition, this paper will take a brief look at the second movement to see how it differs from the first movement, both in terms of form and harmonic structure.

As far as I was able to find, there are no dissertations or formal academic writings dissecting the musical theory behind this particular work, and there are only two dissertations looking at any of Klatzow’s marimba music, one of which solely focuses on performance and interpretational challenges, rather than the music theory of the piece.⁴⁵ With how integral Klatzow’s music has been to the advancement of marimba repertoire, I hope to help shed some light on one of his most prolific pieces of music for marimba.

⁵ Adams, Cherilee. “THE TECHNICAL AND INTERPRETATIVE CHALLENGES IN THE MARIMBA WORKS OF PETER KLATZOW: A PERFORMER’S ANALYSIS.” Stellenbosch University, Stellenbosch University, 2015.
**Movement 1**

The first movement of *Dances of Earth and Fire* does not use a traditional type of musical form, such as sonata form, rondo form, or binary form. Rather, the form of the piece is based on a concept that Klatzow coins Evolving Structures. This process consists of starting from a small musical idea and gradually expanding upon it throughout the duration of a piece. In the first movement of *Dances of Earth and Fire*, the concept of Evolving Structures generally manifests itself through the introduction of one idea, the layering on of another idea, and subsequently combining the ideas into one before using this composite idea to repeat the process. The first movement of the piece can be divided into 6 sections. The division of these sections is based on the changing of the ideas present in each section, as well as pseudo-cadential moments sometimes used by Klatzow. These moments are not truly cadential, as the piece does not use a traditionally tonal system, but there is often a clear sense of finality at the end of each section, which is similar to a cadence in traditional tonal music. Each section of the piece introduces a new idea or new ideas, while altering the idea or ideas presented in previous sections. By doing this, the piece can constantly morph and maintain forward momentum.

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6 For a thorough explanation of standard common practice musical forms see: wmich.edu/mus-history/TheoryHelp/forms.html.
The harmonic content of the piece is almost entirely made up of symmetrical scales from Messiaen’s Modes of Limited Transposition, primarily octatonic scales with a few forays into hexatonic scales. No traditional Western scales or modes are used. Modulations between scales most often occur using a pivot note or pivot chord. Due to the construction of octatonic scales, each scale has one diminished 7th chord in common with each of the other two octatonic scales. This creates a scenario where half of the notes in an octatonic scale can be used to modulate to another octatonic scale, while the other four notes can be used to modulate to the remaining octatonic scale. For example, the piece’s home key is octatonic (1,2). This scale is made up of the pitch collection C#, D, E, F, G, G#, A#, and B, which can also be viewed as being made of a C# diminished 7th chord and a D diminished 7th chord. C# diminished 7th is also a part of the octatonic (0,1) pitch collection, and D diminished 7th is also a part of the octatonic (0,2) pitch collection. Due to the close relationship between all three of these scales, modulations can occur quite seamlessly and are very rarely jarring to the listener. Modulating between octatonic and hexatonic scales can also be done quite smoothly, as these two types of scales share structural similarities, leading to many common tones. The common tones between an octatonic scale and a hexatonic scale create what is known as split third chord, which is a symmetrical chord.

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consisting of a root, both a major and a minor third, and a fifth. The following graphic utilizes the Tonnetz, a method of visualizing tonal relationships by organizing major thirds in one direction and minor thirds in the other direction. While this graphic is not the intended use of a Tonnetz, it is an effective way of visualizing the interlocking nature of the octatonic and hexatonic scales.

Fig 2: The relationships between the octatonic and hexatonic scales illustrated by the Tonnetz

The first movement of Dances of Earth and Fire is, according to Klatzow, the dance of the earth. Klatzow equates the Earth to stability, which plays into the stable harmonic content of the first movement. We will first look at section 1, which is comprised of measures 1-13. This section is the very beginning of the piece and presents two ideas that are recur throughout the entirety of the piece. The first idea presented is the main theme, which takes place in measure 1. This idea is played twice at the beginning of the piece, with a short expansion the second time.

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While this expansion isn’t a part of the first instance of the theme, it is often associated with it later in the piece, and I will therefore consider it part of the main theme. Following the main theme, the second idea, or interjection, is presented. After both ideas in section 1 have been presented, Klatzow begins to manipulate them through a very basic form of his concept of Evolving Structures. After the main theme and interjection are both expanded upon, the two ideas begin to intermix and evolve. This is most easily observed though the notes B♭ and D. B♭ is present in the interjection, but not the main theme, and F is present in the main theme, but not the interjection. These notes begin to show up in the section that they are not associated with and begin to evolve the harmonic content of the piece. In the following figure, red represents the main theme, and blue represents the interjection.

Fig 3: Dances of Earth and Fire¹¹ bars 1-13 with each musical idea indicated

The musical ideas of the opening section used in the next section are derived from the evolved forms of the main theme and interjection. This aids in constantly evolving the material present in the piece by generally using already developed ideas as a springboard for further development.

Due to the amount of different ideas present in this piece, ideas present in earlier sections will not necessarily have the same colors as they did in earlier figures. However, color continuity is maintained within each section, and color continuity between sections is maintained whenever possible.

The format of a main idea with an occasional interjection is utilized again in the second section of the piece, which consists of measure 14 through beat 2 of measure 28. The main idea of section two are rolls with interjections of sextuplet figures. The rolls start out as singular rolled notes, and eventually evolve into dyads and four note chords. The sextuplet interjections are mostly static, and do not evolve much throughout the section themselves, however, the nature of the interjections evolve throughout the section. In the last half of measure 21 the evolved form of the main theme of the piece reappears, this time further altered using additional harmonization on the descending tritone figure. This section demonstrates how Klatzow begins to add previous ideas into current sections, which helps to connect these very loosely related ideas to one another. In the following figure, orange represents the primary idea of the second section, green represents the interjection in the second section, and red represents the material derived from the first section.
The third section is closely related to the second section in its content. The main idea is once again roll figures, but in this section, they are generally much shorter in length than in the second section. The interjections in this section are also like those in the previous section but this time longer in length. The harmonic content of the piece also begins to rapidly shift within this section, with rapid switches between different octatonic modes occurring throughout, and the first instance of another harmonic area, hexatonic (0,3), occurring in measure 36. Additionally, the temporary shift to a hexatonic mode is accompanied using 32\textsuperscript{nd} notes, which Klatzow had not utilized until this point. Content present in the opening section of the piece is absent from this section, as the evolution of material from section two is the focus of section 3. In the following figure yellow represents the condensed roll figures, light blue represents the extended sextuplet figures, and red represents the 32\textsuperscript{nd} note figure.
The following section introduces the idea of two textures occurring simultaneously into the piece. Material transformed from previous sections occur as the upper part of the texture, while dead stroked block chords at pianissimo occur in the marimbas lower register. These two textures could be looked at as a main idea and interjection relationship, similarly to the opening section of the piece. However, due to how overlapped the two can be at times, it is wiser to treat them as occurring simultaneously. However, the marimbist can only play one at a time due to the limitations of only having four mallets. The upper texture in this section is mainly comprised of grace note figures, rolls, and broken up sextuplet figures. The grace note figures throughout this section are consistent in their resolution, always resolving by half step in the opposite direction from the previous note.
The fifth section of the piece contains 4 main ideas. The first idea is a set of four-note chords played at pianissimo with a grace note figures leading into them. These are followed by sextuplet figures broken up over multiple octaves. Once these ideas are established, the third and fourth ideas within this section are introduced, the first of which are rolled figures interspersed with short sextuplet figures. Shortly after this is introduced, the soft deadstroked chords from the
previous section remerge into the texture. Dynamics are the main force spurring the evolution of these ideas, as the dynamics of each idea are manipulated throughout the section.

Fig 7: Dances of Earth and Fire *bars 56-67 with each musical idea indicated*

The final section of the first movement serves as recap, while still introducing one new idea. The new idea introduced in this section consists of notes played at mezzo forte in the bottom two octaves on the instrument while notes are played at pianississimo in the upper register of the instrument. According to Klatzow’s instructions these notes should be played as, “the upper 3rds barely audible, like harmonics”. The harmonic imitations alternate with four note chords, which are also at mezzo forte. In addition to the harmonic imitations, this section uses the main ideas from the opening section of the movement. The movement ends with soft
deadstroked notes in the bottom octave of the instrument, which calls back to the previous two sections.

Fig 8: Dances of Earth and Fire *bars 67-79 with each musical idea indicated*

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**Movement 2**

According to Klatzow, the second movement of *Dances of Earth and Fire* is derived from the “Fire” aspect of the piece. Klatzow equates Fire with instability, which explains the often erratic and rapidly changing harmonic content within this movement. The opening statement of the movement is comprised of the notes C, Db, D, E, F, Gb, and G. This is not a

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symmetrical set of pitches, which immediately distinguishes the harmonic content of this movement from that of the last movement. Ab, A, B♭, and B are all added in throughout the next three bars, until the entire aggregate is being utilized. The harmonic content of this movement is of a freely atonal nature and does not adhere to symmetrical scales like the first movement.

The second movement of *Dances of Earth and Fire* is divided into three large-scale sections in a standard ternary form, comprised of sections A B A’. On a smaller scale, each section contains its own set of ideas that are alternated between. To differentiate between these two levels of form, I will refer to the large-scale sections with capital letters, and the small-scale sections with lower case letters. These smaller scale sections are what demonstrate the concept of Evolving Structures that was seen more prevalently in the first movement. In the first iteration of the A section, two main ideas alternate back and forth. The first idea, chromatically swirling grace notes leading into a syncopated rhythm with large range displacements, remains relatively stable throughout the first section of the movement. The idea is slowly developed over time but remains rooted in its original iteration. However, the second idea slowly morphs over time. The second idea starts as sporadic rhythmic bursts with rolls in between. Over time, the rhythms become more consistent, being exclusively made up of 32\textsuperscript{nd} notes and sextuplets, until rhythmic passages overtake the rolls and become the sole content present. Throughout the course of the rest of the movement the sextuplet figures are first turned into an undulating figure, then turned into a broken-up figure, followed by an alternation between the undulating figure and a constantly cascading stream of sextuplets. Double stops are then added on the first, third, and
fifth partials. Finally, the sextuplets morph into octave triple lateral figures before collapsing down to tritones and fading away in the second section of the movement.\textsuperscript{13}

\textbf{Fig 9: Dances of Earth and Fire Mvmt 2: bars 1-34 with each musical idea indicated}

The large-scale B section of the 2nd movement is made of sections a b a’. This section acts as a sort of chorale in the middle of the movement, giving some reprieve from the intensely rhythmic music on either side of it. This section is comprised of two layers. The top layer is made up of rolled dyads, which are executed with the one-handed roll technique. The bottom layer is made up of an articulated bass line, which is syncopated against the rhythm of the changing dyads on top of it. The harmonic content of this section is made up of independent octatonic pitch collections between the two layers, which modulate at their own pace independently from one another. This section, as with the first and last section of the piece, is freely atonal. The ending of the a’ prime portion of this section acts as an elision with the final large section of the movement, as it is comprised of material that blends that of the A and that of the B together.
The final section of the piece starts with a restatement of the opening material of the second movement. It is therefore classified as A’. In addition to this section serving as a restatement of the opening material of the movement, it also further develops the material until measure 89, where the material from the very beginning of the piece is mixed with thematic material from the first movement. The piece ends with a restatement of the movement’s opening statement in the bottom octave of the instrument.
Fig 11: Dances of Earth and Fire Mvmt 2: *bars 64-end with each musical idea indicated*
Conclusion

*Dances of Earth and Fire* was a revolutionary piece of marimba literature when it was published in 1987, and the influence of the piece has continued to this day, causing it to become a seminal work of marimba repertoire. Klatzow’s distinctive compositional voice and love for the resonant and beautiful side of the marimba merged to create this great work of art.\(^{14}\) The compositions of Peter Klatzow helped push marimba repertoire forward and into the 21\(^{st}\) century.

The works of Klatzow could certainly benefit from further academic research. Even within *Dances of Earth and Fire*, the second movement still has much room for analysis that was simply beyond the scope of the project. His plethora of works that are either for solo percussion or a small chamber group including percussion, including but not limited to *Inyanga, Figures in a Landscape, Ambient Resonances, A Sense of Place*, and his *Concerto for Marimba and String Orchestra*, are a great place to start this further analysis.\(^{15}\)

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\(^{15}\) “Peter Klatzow.” Klatzow, Peter, www.sacomposers.co.za/sacomposers/Klatzow,_Peter.html.
Bibliography


