Children of Time: A Quartet for Flute, Violin, Viola, and Cello

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Preface

For the purposes of providing an organized discussion of the quartet in a way that tells the story of its creation, sections will be broken into a discussion of the source material, the leitmotif and its purpose, history, and uses, and the process of writing and analysis of the quartet itself. Section 1, the discussion of source material, will provide a synopsis of *Children of Time* by Adrian Tchaikovsky and my reasoning behind choosing the novel as source material. Section 2 will introduce the concept of the leitmotif as well as a theoretical look at the design of leitmotifs, discuss their origin, and discuss the uses of them throughout the 20th century. Section 3 will explore my decisions on what parts of *Children of Time* were adapted and why, provide a synopsis of each movement in the tetralogy, and provide an in-depth look at the use of the three major leitmotifs in the tetralogy. I would like to give special thanks to Dr. Gordon Marsh for his nuanced teachings on music theory, composition, and the history and uses of the leitmotif.

Section 1: The Source Material

Adrian Tchaikovsky is a British fantasy and science fiction author, best known for his 2008-2014 series *Shadows of Apt* and more recently his 2015 series *Children of Time*, the source material for this project. *Children of Time* tells the story of the remnants of the human species, and at the same time explores the fantastical world of an abandoned, terraformed planet that was used as an experimental world for a bioengineered virus that accelerates evolution. The novel takes place over the course of thousands of years, simultaneously tracking the downfall of humanity and the development of a hyper-evolved species of spiders.[1]

In Tchaikovsky's *Children of Time*, humanity is left in shambles, reduced to a hundred-thousand people traveling through the cosmos to find a habitable place to live, using Old Earth records to guide their travels. The humans, led by Commander Guyen, captain of the Gilgamesh, head towards an Old Earth terraforming project known as Kern's World throughout the course of the book, traveling for thousands of years. Along the way, there are multiple revolts on the ship, a cult forms, falls, and reforms, and humanity is reduced to only a few thousand by the time the crew reaches Kern's World, leaving them desperate and cornered. When they arrive at Kern's World, they are prepared to wipe out the spiders, even if it means the extinction of humanity.

In the other side of the story, the spiders were born on Kern's World as part of a terraforming project. Dr. Avrana Kern of the Old Earth Empire attempted to use a bioengineered virus that accelerates evolution to create a species of advanced apes that could be used for slave labor. The experiment failed and the virus took hold on all creatures of Kern's World, rather than just apes as intended, resulting in a species of super-intelligent Portia Labiata spiders after thousands of years of evolution. Their technology is incredibly in tune with nature, utilizing pheromones and advanced chemistry to take advantage of the world around them. For instance, their 'computers' run using bred ants that use pheromones to perform complex math on a scale greater than that of real-life technology. Until later in the story (around the time the humans entered the solar system Kern's World occupies), the spiders worshipped a deity they called the Messenger, who is an artificial intelligence version of Kern. As they eventually make contact

[1] Adrian Tchaikovsky, *Children of Time*, *Orbit*, 2015.

with Kern, they are warned of the encroaching threat that is the Gilgamesh, and they prepare for war to defend their home.

The two species confront each other after the humans reach Kern's World, leading to a bloody battle. The conflict ends in a truce when Portia, Bianca, and Fabian create a pheromone that alters the human mind to believe they and the spiders are not enemies. After a short time, the spiders and humans have created a mutually beneficial relationship in which they share technology, advancing together as a single society.

Adrian Tchaikovsky's *Children of Time* is a brilliant representation of the relationship between humanity's tendencies towards destructive technological practices and the ability for nature to adapt to new threats. Although the literary themes utilized in the novel are common, such as man vs. nature, the questions asked by Tchaikovsky elevate the novel to a higher level of science fiction. Tchaikovsky questions the definition of intelligent species through the interactions between humans and spiders, even going as far as redefining what societies can look like, as seen by the vast cities created by the spiders in which the ideas that define our society are flipped on their head. For instance, ideas of gender equality and cooperation across cultural fault lines are brought about by explicit discussion of the matriarchy that is present in modern-day spiders. When Portia spiders mate, the females kill the males afterwards, an idea that is expanded upon by making male spiders in the novel subservient to females. This becomes a major plotline in parts of the novel, intentionally providing commentary on the issues of our modern-day patriarchy through the dismantlement of the matriarchy seen in the novel. Other major topics covered by the novel include gods, war, artificial intelligence, the relationship a species has with their planet, and more.[2]

Tchaikovsky's novel was chosen as the source material for this project for several reasons. The intense, in-depth discussion of its themes, the dramatic and incredibly effective world building, and the massive effort put into the science seen in the novel (for both humans and spiders) provided me with a strong interest in the novel itself. The spider characters are complex, inhuman but still relatable, and are overall fresh and interesting, provided an enjoyable challenge to represent them through music. And perhaps most importantly, there is no other musical, digital, or otherwise audible adaptation of the work to date, providing me with a clean

[2] Tchaikovsky, *Children of Time*.

slate. With nothing to go off, I had free reign over compositional decisions, with nothing to spoil my interpretations of the events and characters seen in the novel.

Section 2: The Leitmotif

To adapt the novel into a series of musical works, research was required to find a suitable way to properly represent the characters, events, and ideas presented by the novel. In doing so, Dr. Marsh pointed me in the direction of the leitmotif. The leitmotif, as explained by Wagner scholar Warren Darcy, is a short, thematic idea in a piece of music that represents a piece of the source material. This can be a character, an object, an idea, a place, even a supernatural force. The important thing is that it is immediately recognizable by the audience as that piece of the source material, announcing the presence and state of being of the material the leitmotif is representing.[3] There can be multiple leitmotifs in a single work, as they can each represent a different part of the source material. To further explain, a leitmotif is a recurring musical idea tied to specific content in the source material. It is removed from the source material itself, functioning only through the implications of harmony, expression, and feeling presented by the musical work. In essence, it is "a messenger of the very thought itself."[4] Functionally, this is only possible if the motif in question is tied to something definite, either verbal or visual. The benefit of this is it allows for foreshadowing to be done within the music itself, subtly hinting at future events through new turns of phrases, changes in harmonic structure, or even the subtle change of a single note by a minor second.[5] As such, leitmotifs are mutable in both function and representation.

Leitmotifs are primarily associated with the composer Richard Wagner, who first utilized the concept in his cycle of four operas titled *Der Ring des Nibelungen* (which I will refer to interchangeably as the *Ring Cycle* or the *Ring*). Written between 1853 and 1869, the *Ring Cycle* contains hundreds of leitmotifs identified by various music theorists and historians over the next 150 years.[6] The word 'leitmotif' was not coined by Wagner himself, rather it was first introduced by music historian Hanz von Wolzogen in his 1876 analysis of the *Ring Cycle*. Wolzogen located

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[3] Warren Darcy, *Wagner's Das Rheingold*, Clarendon (45).
[4] Darcy, *Wagner's Das Rheingold* (46). Darcy cites here *Richard Wagner's Prose Works*, which was translated into English by William Ashton Ellis in 1892. This work is an anthology of writings by Wagner on various musical topics, including the German opera from which this quote originates.
[5] Ibid.
[6] Matthew Bribitzer-Stull, *Understanding the Leitmotif,* Cambridge University Press (Chapter 7)

most of the primary leitmotifs in the *Ring*, including the Valhalla motif and Siegfried's horn call, two of the most prominent motifs in the *Ring Cycle.*[7] Wagner's *Ring Cycle*, a series of operas much longer than anything he had composed until then, required a way to increase thematic repetition, such that the audience would have an easier time following the 15 hour cycle.[8] This led him to utilize a more "nuanced thematic treatment" in order to "bring an emotional believability to his story", leading to an elevated form of the motif which relates directly to the libretto in an opera.[9]

Leitmotifs, or for lack of a better term, leitmotivic design, is musical prose containing a web of references, telling a story through tonality and themes. This concept has been broken into three areas of thought by Darcy, which I am repurposing for a discussion on the mutable nature of a musical structure centered around leitmotifs. The three areas of thought Darcy employs to analyze Wagner's use of leitmotifs are as follows: theme, tonality, and form.[10] Thematic design is the leitmotif itself, the content it represents, and the uses of it to further the storytelling abilities of the music. It is design according to pitch, rhythm, timbre, textural elements, expression, etc. In essence, thematic design is what makes the leitmotif recognizable when separated from its contextual setting.[11] Tonal design is the musical space in which a leitmotif occurs. This includes the key signature, the mode if applicable, a specific chord progression, or even an individual chord. It is the size and nature of the space itself, taking into account the orchestra (i.e. the different timbres present in the room), instrument range, acoustics and mixing, etc.[12] Formal design is the structure of the music. Along the lines of the musical space, this is the structural and temporal space, which includes the time signature, the tempo, and form of the music. For it to qualify as formal design, it must be both organized and intentionally structured for the purposes of the leitmotif.[13] To simplify this, we can think of these areas of thought as a room.[14] Thematic design is an event happening in the room. Similarly, tonal design is the room itself, i.e. the space in which the event takes place. Finally, formal design is the time passing as the event takes place.

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[7] Darcy, *Wagner's Das Rheingold*, (47).
[8] Bribitzer-Stull, *Understanding the Leitmotif,* (168)
[9] Ibid (167).
[10] Darcy, *Wagner's Das Rheingold*, (Chapter 4).
[11] Ibid (45-51).
[12] Ibid (51-55).
[13] Ibid (55-58).
[14] I would like to thank Dr. Gordon Marsh for suggesting this analogy during an independent study on the leitmotif and its uses.

There are other functional ways to allow for music to represent specific ideas in source material, however the mutability and effect of leitmotifs fits the purposes of my project. Other forms of the motif are too rigid in their nature, limiting the amount of motifs that can be used for the purposes of storytelling or limiting the mutability of the motif itself. For instance, the French alternative to the motif, idée fixe, is classified as a recurring, almost obsessive theme in a work of music.[15] This does not necessarily fit the needs of an adaptation of *Children of Time*, especially considering how drastically characters, events, and themes change over the course of the novel. As such, the leitmotif is more appropriate for this project.

Section 3: The Music

To adapt Tchaikovsky's esteemed novel *Children of Time* to music, I first needed to consider which characters and events in the novel would be most fitting for an adaptation. Doing this allowed for a more faithful adaptation that fits within both the time constraints of the project and the lack of experience I have as a composer. To account for both constraints, it was necessary to cut down the amount of material represented in the 600-page novel. The following is a summary of my process on choosing the source material adapted in the quartet.

The Characters

In each part of the novel, Tchaikovsky divides the story into two points of view, allowing for an exploration of both human and spider perceptions of the events in the novel. As a result of this split, there are ten main characters and hundreds of side characters (who still have an effect on the story). The problem that arises is finding a way to properly represent both sides of the story while still fitting within my limitations. After re-reading the novel to prepare to compose, I found that it would be detrimental to the overall quality of my music if I adapted both sides of the story. The characters, events, and locations of the human side are all constrained to the Gilgamesh, the ship the humans are traveling on. This could have resulted in the music representing the human side becoming repetitive in sound over time, with a lack of new, wildly different material to adapt. This is not to say that the human side of events was bland, in fact it was quite the opposite. It simply suffers from the product of its location, and I was more interested in the compositional challenge of the spider perception of events.

[15] Virginia Gorlinski, "idée fixe," https://www.britannica.com/art/idee-fixe

The spider side of the story contains many main characters with their own names throughout the course of the novel, however for simplicities sake they are given four names based on their personalities. Portia, the first spider character introduced, is named after the spider species, Portia Labiata, and is characterized by her leadership roles in much of the story. She is the heroine in a large portion of the story and is quick to act in times of trouble.[16] I chose to represent Portia with a flute, which has an incredibly wide range and versatile sound. The agility of the flute is also beneficial to Portia's character, as it allows for quick movements reminiscent of many action scenes that Portia is part of. On the other end, the flute can play a supportive role with its bright, clear upper range and soft low range, allowing for a wonderful addition to textures in sections where the flute is not a dominant instrument. Bianca is the second named spider character introduced. Initially introduced as a supportive role, almost the 'muscle' of the group, she is recast as an astronomer, chemist, and even a philosopher in later generations. She is Portia's partner in crime throughout and plays dominant roles in a large portion of the novel.[17] As such, Bianca fits well with the violin. The violin is versatile and incredibly expressive, with a variety of different sounds and a wide dynamic range from G3 to A7. Due to the strong relationship between Portia and Bianca, I believe it is necessary to cast the violin as Bianca.

The third spider character introduced is Fabian, who is placed in an interesting position due to him being the only male main character among the spiders. As a product of the gender equality plotline, he is a supporting role until the latter half of the book, not even being given a name until Schism. However, post-Schism, he is given a major role in all events in the book.[18] As a result, I believe the violoncello is the perfect instrument to represent Fabian. The low range provides a good contrast to the higher violin and flute, and it plays a strong supporting role. Additionally, when the cello becomes a dominant player or gets a solo, it creates a powerful effect, creating a perfect opportunity to represent the gender equality plotline. The final character introduced is Viola. She is a female spider who is a major role in only a few events late in the book.[19] As such, she is assigned as the viola. Although it is cliche and a bit obvious to give the viola to the character named Viola, the nature of the viola matches her character in its versatility and its ability to be both a supporting role and a leader. Given that, in my opinion, Viola never

[16] Tchaikovsky, *Children of Time.*
[17] Ibid.
[18] Ibid.
[19] Tchaikovsky, *Children of Time.*

gains a dominant role (this is left to Portia, Bianca, and Fabian, although Viola does have important roles she plays), the viola works perfectly. This is due both to its wide dynamic range and unique sound that adds to the texture.

The Events

Children of Time is broken into 8 parts: Genesis, Pilgrimage, War, Enlightenment, Schism, Zenith/Nadir, Collision, and Diaspora. As a 600-page novel, over half of it the spider side, it is necessary to cut down the number of events being adapted to music. The requirements I set for an event to be adapted are as follows:

1. Is the event a major portion of the story?
2. Does the event allow for the development of new motifs, and can it sustain old motifs?
3. Does the event create an opportunity for an interesting piece?
4. Does the event provide for an interesting compositional challenge?

Keeping these restrictions in mind, I started my search for which parts of the novel I wanted to adapt. Genesis, while it would create an interesting piece as it tells the story of the first instance of consciousness in the Portia Labiata species, lacks the ability to develop leitmotifs that are able to last through multiple movements. Pilgrimage discusses the establishment of spider society and covers the spiders' elevation from nomadic life to established cities. While it is an interesting challenge, it is a short section of the novel and is not a major portion of the story. This brings us to War. The third part of the novel establishes the relationship between ants and spiders on Kern's World, covers the events of the war between the two parties, and has several dramatic action scenes which would make for both an interesting piece and compositional challenge. Additionally, the story as a whole changes after this part of the novel. Enlightenment discusses the advent of spider technology utilizing ants as biological computers, which causes the society of spiders to progress much faster than before, with more nuanced themes and characters. As such, War makes for a great start to the quartet, as it provides an opportunity to adapt a pivotal moment in the novel.

Movement 1, titled *Infiltration*, works to adapt a specific scene in War in which Portia enters an enemy anthill carrying pheromones meant to destroy the ant colony. In this scene, Portia sneaks into the anthill while covered in ant pheromones, working her way into the center

towards the queen. When she deploys the pheromones, the situation becomes dire as the ants realize that she is a threat, forcing her to make her escape. On her way out, she finds a crystal which the ants seem to be worshipping, which she steals as a trophy due to its fascinating properties.[20] The first movement is characterized by a rapid, chromatic figure which wraps around a Gm chord (mm. 1-2), creating the tense, whispering agitation that mimics Portia's feelings during her infiltration of the ant nest. Tension builds throughout the A and B sections as the melodic lines grow in range, with larger and larger intervals dominating the melody (mm. 10-16). Quick pauses, such as those in measures 10, 13, and 16, represent Portia sneaking around the ants in the nest. The long descent leading into the C section (mm. 32-35) represents the realization that the ants have noticed Portia as a threat to the colony, wrapping around Ab at the end of the descent to prepare for the C section. The C section ends with the familiar rest on Db (enharmonic to C#, which is the resting note at the beginning of the piece), opening the way for Portia to take a breath in the D section. The D section primarily acts as a recapitulation of the musical material in the A and B section, but much slower, giving the music a more relaxed tone (mm. 65-67). This continues until the start of the Rising Heights motif at measure 71, which will be discussed later.

To continue my selection of adaptable parts of the book, my attention turned to Schism. In this section of the book, spider society has progressed to new heights, mimicking the societal norms of the United States in the 1920's (isolationist, patriarchy in full force, etc). The primary struggle in this section is a plague that has hit the society, which indiscriminately kills spiders in a manner similar to the flu.[21] Bianca and Fabian are the two major characters in this section, as the events of this part of the novel are focused on their efforts to find a cure. This part poses an interesting challenge: is it possible to capture the breakdown of spider society, the efforts of Bianca and Fabian to find a cure, and the revival of the society all in the same piece? Movement 2 attempts to do just that. Opening with a powerful, heroic theme that represents the scientists' efforts to find a cure, the piece immediately follows with the A section, a minimalist representation of spider society centering around C major (mm. 6-7). The arpeggiated chords are repeated, alternating between C major and Bb9 until the first musical 'hiccup' occurs in measure 13. After an out of place crescendo on the Bb chord, the music stops, almost questioning itself

[20] Tchaikovsky, *Children of Time.* (Part 3)
[21] Ibid (Part 5)

when it returns to subito piano in the next measure. 'Hiccups' continue to occur, and the first major interruption, representing the plague taking hold on the spiders, comes in the form of a 14/8 measure with a descending line from D to C#, new melodic material in the context of the piece (mm. 17). The corruption of the methodical arpeggiated chords continues as the rhythm is further broken up with the inclusion of 13/8 measures and incredibly disjunct rhythms (mm. 21-26). Finally, everything collapses in measures 27-34 as the arpeggiation is abandoned for an entirely unmelodic, explosive escape into the upper reaches of the violin's range. The B section adapts Bianca and Fabian's efforts to create a cure for the virus, using melodic material from both the opening heroic theme and the breakdown of spider society in the A section (mm. 36-51). This works its way through a corrupt melodic journey, leading way for the return of the heroic theme in measure 52. The theme is played with, slowly becoming closer to the original in a return to tonality. The final section, labeled A', works as Bianca and Fabian's introspective look at the changes made to their world during the course of their adventure.

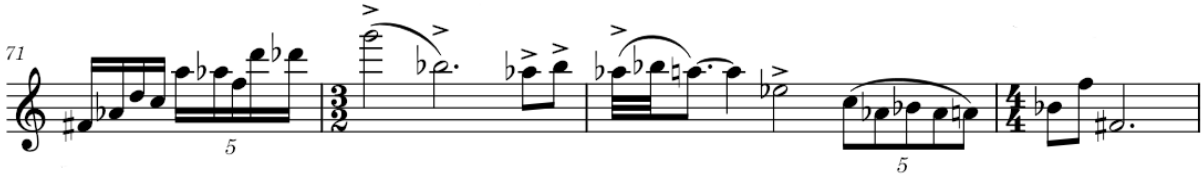
The following section of the book, Zenith/Nadir, contains an incredibly important moment in the novel which I believe was necessary to adapt. In this part of the book, the spiders have finished creating a massive, airborne city known as Sky Nest, which is about to take flight for the first time.[22] Portia, Bianca, and Fabian start the chapter with each of their perspectives on the project, working together to put in finishing touches before the flight. At the end of the chapter, once the flight has been deemed a success, the spiders make contact with the Messenger for the first time, leading them to receive the terrible news that they are about to be under attack by the Gilgamesh, news that guides the remainder of the spider side of the story.[23] If I am to adapt the ending of the story, this moment must be captured in the third movement. At the start of this movement, the listener hears the Rising Heights motif, which is discussed later, but is characterized by a fast ascending line and a slow descent. The motif is played with throughout the A section until measure 20, in which the cello begins an otherworldly transition to the B section, announcing the Sky Nest is about to take flight. The Sky Nest finally takes off at the start of the B section (mm. 34), which can be heard in the sudden textural change. The new texture, which unlike the rest of the music thus far contains more regular rhythms and fully adopts a key signature, reflects the spiders' feelings upon takeoff. It is a dramatic moment that is

[22] Tchaikovsky, *Children of Time,* (428)
[23] Tchaikovsky, *Children of Time,* (Chapter 6.6).

elaborated on over 32 measures, when the music suddenly tapers off in measure 67. The rest of the movement adopts a darker tone, providing an incredible, evil-sounding contrast to the sound of the B section.

Movement 4, like the rest of the novel, is a reaction to the alarming moment at the end of the third movement. It begins with a dark, foreboding air that reflects the efforts of the spiders. This movement is characterized by its use of the motifs that were established in the previous three movements, culminating in a mixture which ties the four movements together in a dramatic ending, functioning as a metaphor for the humans and spiders working together at the end of the novel. The motifs used in the fourth movement are described below.

Rising Heights Motif

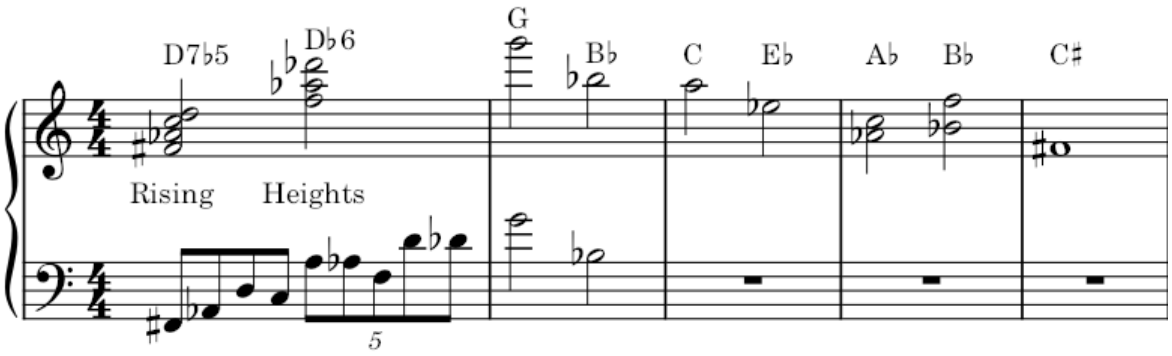


[24]

The first major motif, which I have coined the Rising Heights Motif, is first seen in the last few measures of Movement 1, in which the flute bursts out of the lower notes in its range in a rapid ascent to an accented G6. The flute immediately comes to a rest on a Bb, wraps around a C to continue its descent, then almost flutters in the middle of its range until it comes to another rest on a long, sultry F#4, the same note it started its ascent with. Its ascent is characterized by an arpeggiated D7b5 chord, rising into a Db6 chord, which adds tension until the flute escapes into a loud G, suggesting a new tonic center in the world of G after the long and intense adventure that Movement 1 represents. This new world is abandoned, however, as the descent begins back down to an F#, which has a new dominant sound in contrast to the tonic sound it was given at the beginning of the piece. By exiting the world of G through a descending line that floats through C, Eb, Ab, Bb, and finally contracting into C# through the dominant sounding F#, the Rising Heights motif takes the listener through a short, floating journey that returns to the beginning of

[24] Figure 1: Rising Heights Motif. Crist, Noah, *Children of Time Mvt. 1 Infiltration.* 2020

the hectic, stressful world established at the start of the movement.[25] However, the recontextualization that occurs throughout the D section of the piece as well as through the escape into G in the beginning of the motif removes the tension found in earlier parts of the piece. It instead creates an introspective, relaxed world, which prepares the listener for the second movement.



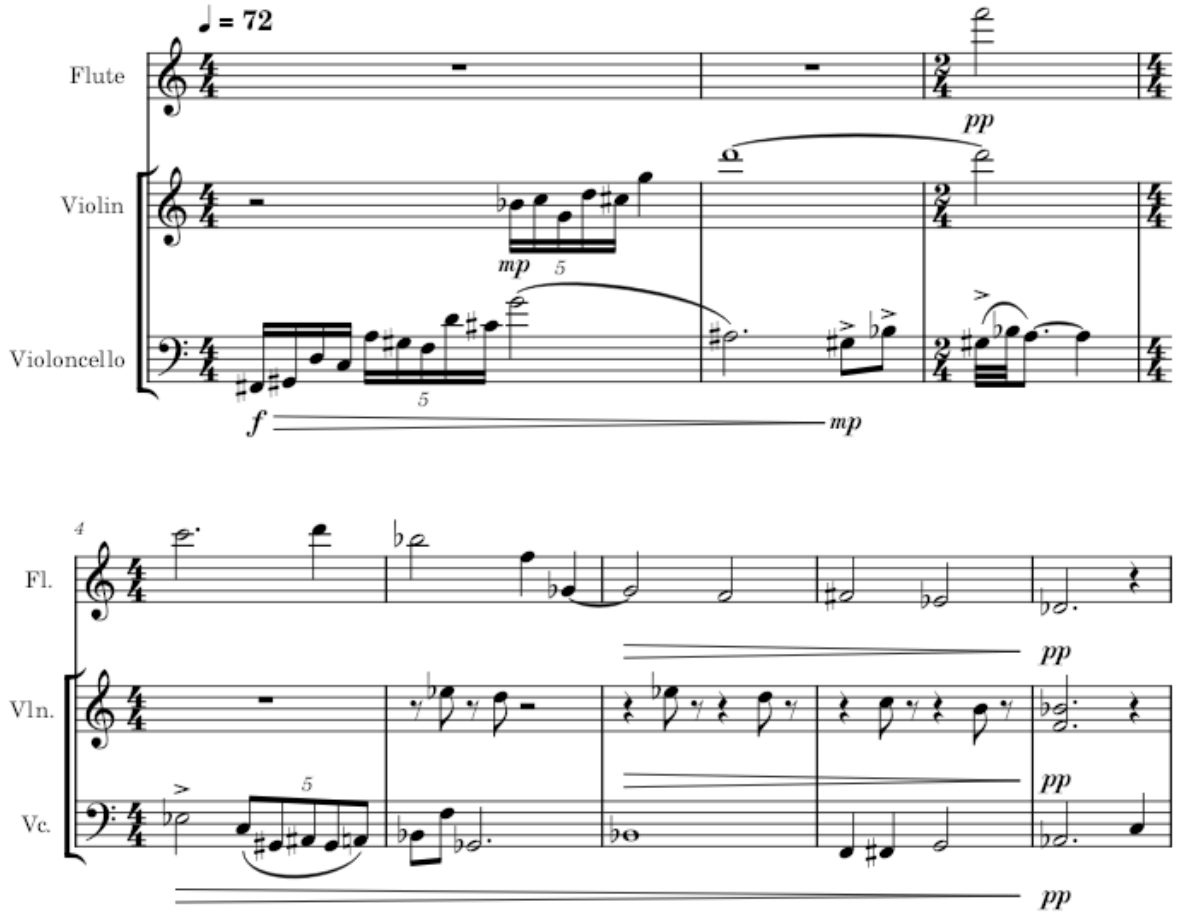
[26]

A certain sense of time is developed in the first appearance of the Rising Heights motif which helps characterize its appearance in later movements and promotes a strong formal design in this motif. The acceleration found in the ascent from F# to G in the first measure through the use of 16th notes into a 16th note quintuplet provides a rushing sensation that, when combined with the 5th relation of D7 to G, articulates the beginning of this motif. The latter half of the motif is characterized by a slow descent, further characterizing the motif as an organized acceleration and deceleration, almost like something taking off and landing.

The appearance of the Rising Heights motif is an announcement of new progress being made in spider society. Movement 1 tells the story of an infiltration scene that takes place in an early portion of the book, in which Portia, a spider, enters a massive anthill to try and stop an encroaching threat. The mission was successful, and she left the anthill with a large crystal, which was discovered to emanate radio signals that vibrate the ground, something that guided both the scientific exploration and the faith of the next generation of spiders.[27] The Rising

[25] While F# is not the dominant of C#, the recontextualization provided by the slow descent in the motif, and even earlier in the D section provides a more dominant function, which seems to rest on C#.
[26] Figure 2*:* Rising Heights Motif Reduction. Crist, Noah, *Children of Time Mvt. 1 Infiltration*, 2020. A chord analysis has been provided, which reduces the motif into its strongest, most audible pitches.
[27] Tchaikovsky, *Children of Time.*

Heights motif is thus established as a marker for progress being made, a concept that is used as the primary thematic material for Movement 3.



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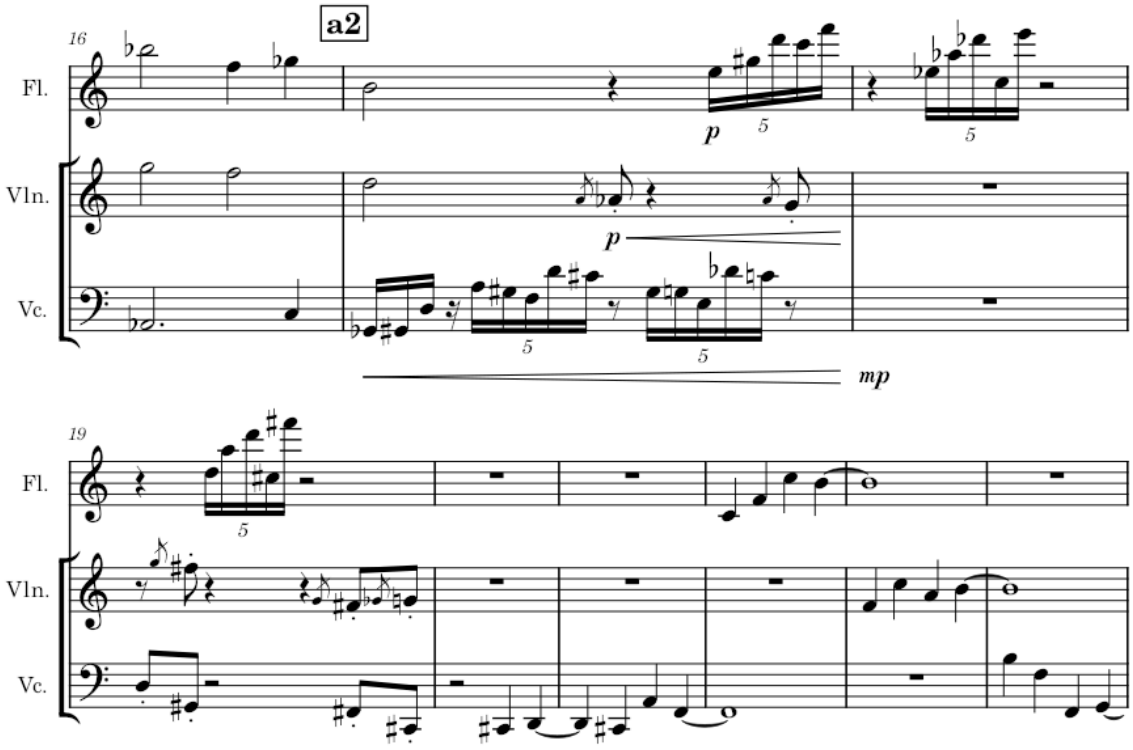
At the beginning of Movement 3, the listener hears the Rising Heights motif for the second time, announcing a new, major progression was made in the spider society. The motif has been expanded out of the cello and into the violin and features a much longer descent than in its previous iteration. This time the final rest is on a Bb7 chord, the penultimate chord in the original motif, suggesting that there is more progress to be made. The story progresses through another instance of the motif, this time with a much more elaborate descent in the form of a cello solo. The true resolution in the form of a contraction to C# does not appear again, however, until the third iteration of the motif seen below:

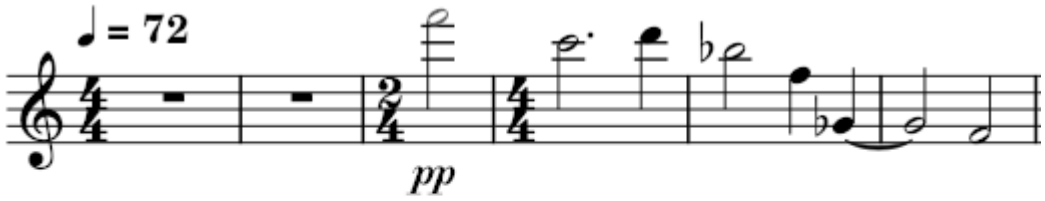
[28] Figure 3*:* Rising Heights Motif in Movement 3. Crist, Noah, *Children of Time Mvt. 3 Zenith/Nadir*, 2022



[29]

The motif is more disjointed now, with rests in between figures in the ascent, with no real descent to allow the music to come to a rest. To replace the descent, there is instead a quick, strong cadence on a C#m chord, opening for the transition to the B section.

Zenith Motif



[30]

The Zenith motif first appears in the beginning of Movement 3, acting as both the introduction to a new theme and a harmonic line to the Rising Heights motif, allowing for a more lengthy descent in the Rising Heights' second iteration. It is primarily characterized by a note in

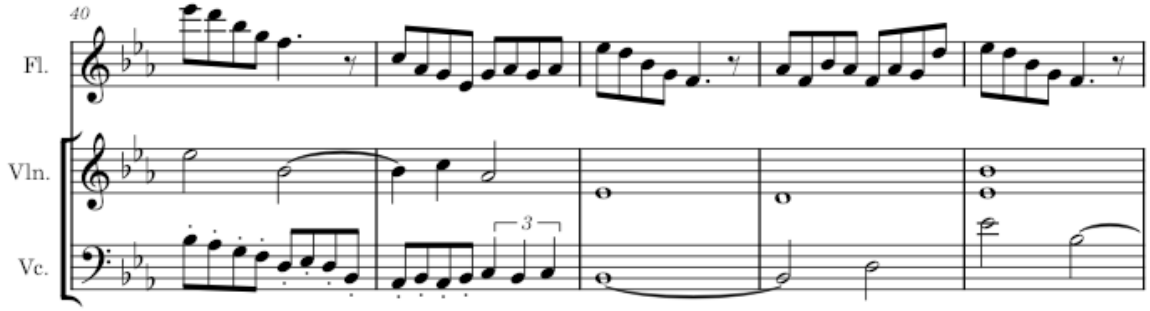
[29] Figure 4*:* Rising Heights Motif Cadence. Crist, Noah, *Children of Time Mvt. 3 Zenith/Nadir*, 2022
[30] Figure 5*:* Zenith Motif. Crist, Noah, *Children of Time Mvt. 3 Zenith/Nadir*, 2022

the upper range of an instrument, with a slow descent into its lower range. This occurs in the flute in the first instance of the motif, with a descent from an F6 to an F4. The Zenith motif is also initially characterized by a major sound in the first half of the motif, with a more diminished sounding descent in the latter half, utilizing dissonant intervals such as a major 7th leading into a minor 2nd. The intervallic design of the motif combined with its association with the 2nd instance of the Rising Heights motif allow for the Zenith motif to adopt an initially mysterious, ethereal air. The formal design of the Zenith motif is simple, being characterized by a slow descent through the use of a half note into a dotted half note followed by a faster descent utilizing quarter notes and larger intervals. As it was designed to both stand out on its own in later instances and provide a harmonic line for the Rising Heights motif, it greatly benefits from a simple formal design.

The Zenith motif is named after the section in the book which Movement 3 attempts to represent, titled Zenith/Nadir. In this section, the spiders have finally invented flight in the form of hot air balloons. The section starts with the spiders Portia, Bianca, Fabian, and many other unnamed spiders working to complete a massive hot air balloon known as "Sky Nest", which will become a massive, airborne city. At this point in the book, the spiders are beginning to reach the pinnacle of spider technology, in which they start to contact the Messenger, an Old Earth satellite orbiting their world.[31] This is the source of the name for the motif, as the spiders are beginning to reach their zenith, the space above their world, contacting the closest celestial body they are aware of.

The motif adopts its namesake in the B section of Movement 3, which symbolizes the Sky Nest taking flight for the first time. The Zenith motif takes a powerful melodic role in this section, guiding the movement and harmonic material of the section. It is stripped of its dissonance, wholly embracing the new tonic of Eb established by the key change in measure 40. In a celebratory manner, the new, major form of the motif is passed around in different instruments, starting in the violin and immediately mimicked in the cello, and finally brought back in the flute in measure 55, with a new, loving tone mimicking Portia's awe at flying for the first time.

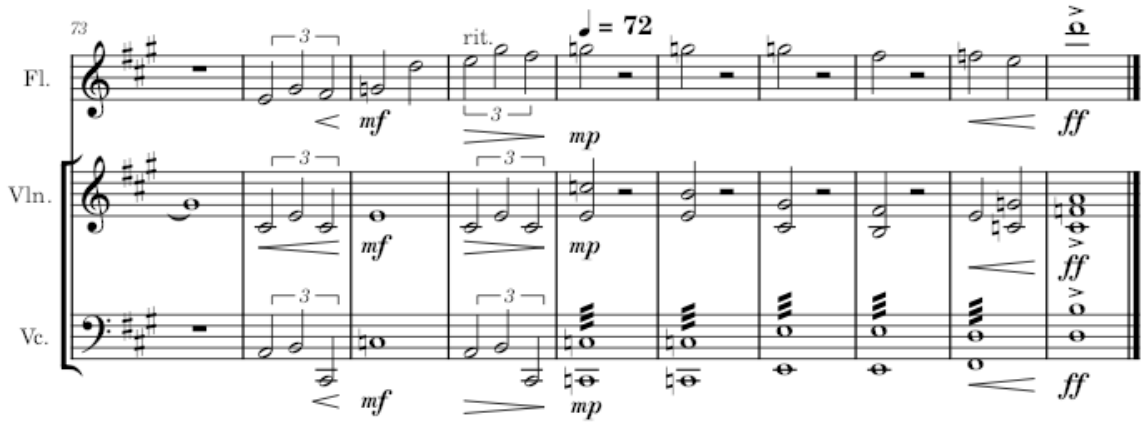
[31] Tchaikovsky, *Children of Time,* (428)



32

Nadir Motif

The Zenith motif is continually played with throughout the B section of Movement 3, until it is wholly replaced by its true foil: the dark, threatening nature of the Nadir motif.

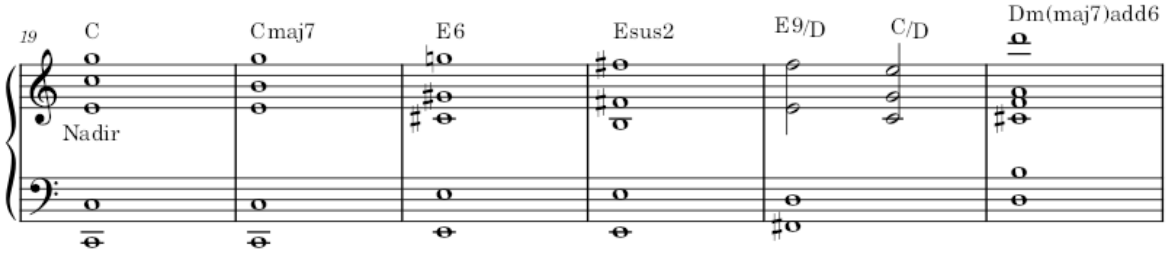


33

The Nadir motif, as seen in Figure 7 above, starts on measure 77 of Movement 3 on a large C major chord, which is a minor iii chord in the key of A major that the piece was dominated by at the end of the B section. The establishment of C major within the context of the piece immediately changes the air around the Nadir motif to be darker than even the measure

[32] Figure 6*:* Zenith B section. Crist, Noah, *Children of Time Mvt. 3 Zenith/Nadir*, 2022
[33] Figure 7: Nadir Motif. Crist, Noah, *Children of Time Mvt. 3 Zenith/Nadir*, 2022

before. The chord progression seen in the motif only further corrupts the free, 'floaty' nature of the B section, moving chromatically through the chord progression seen below.



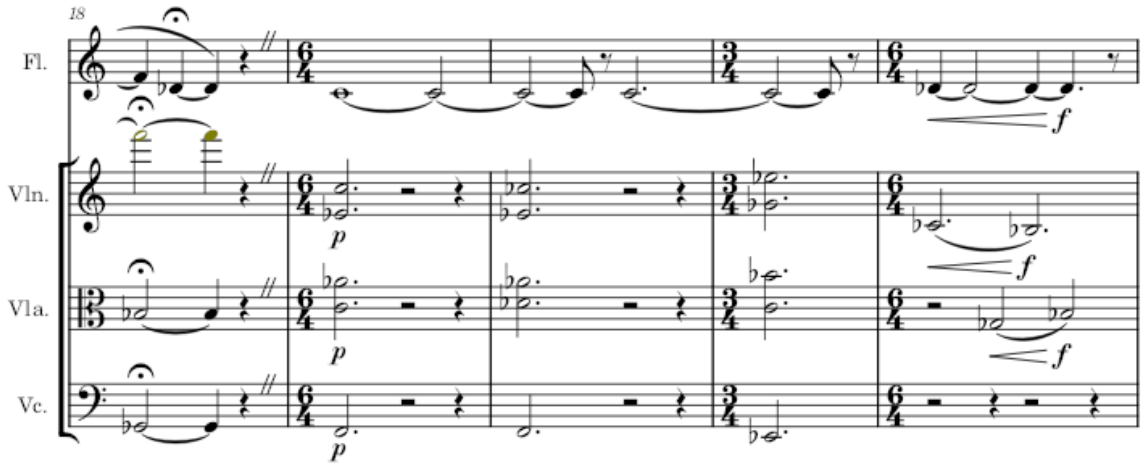
[34]

The ending of both the Nadir motif and the 3rd movement contains the most corrupt, atonal measure of all four movements. It ends on a chord which can most clearly be labeled as a Dm(maj7)add6 chord, which allows for both chromatic movement into the final chord, as well as a relative continuation of the underlying D chord in the previous measure. The result, especially considering the loud, accented D6 in the flute (which provides a bright metallic timbre) and the low, accented D3 in the cello, is a surprising, incredibly dissonant chord that acts to raise alarm, reflecting the reactions of the spiders to what they find after the Sky Nest flies high enough to contact the Messenger. Perhaps the most important, identifiable part of this motif is its formal design. It is characterized by its slow, foreboding tempo, with dramatic short chords over a pedal tone. The primary pattern is four measures with one short chord over a pedal tone followed by a measure containing two short chords over a pedal tone. The dramatic, emotional effect this creates is not only perfect for the ending of Movement 3, but it provides an easy opportunity to create other dramatic moments in Movement 4.

For example, in the A section of Movement 4, after a dramatic transition from the opening material leading into a moment of silence, the Nadir motif returns, as seen below. In this instance of the motif, the harmonic content is more tonal, fitting into the musical world of Gbm established in the beginning of the piece. The motif is additionally stretched, with the musical content repeated (with variations) three times over 21 measures. This drawn-out elaboration creates a necessary amount of drama following the dark, evil tone that characterizes the start of

[34] Figure 8: Nadir Motif Chord Analysis. Crist, Noah, *Children of Time Mvt. 3 Zenith/Nadir*, 2022

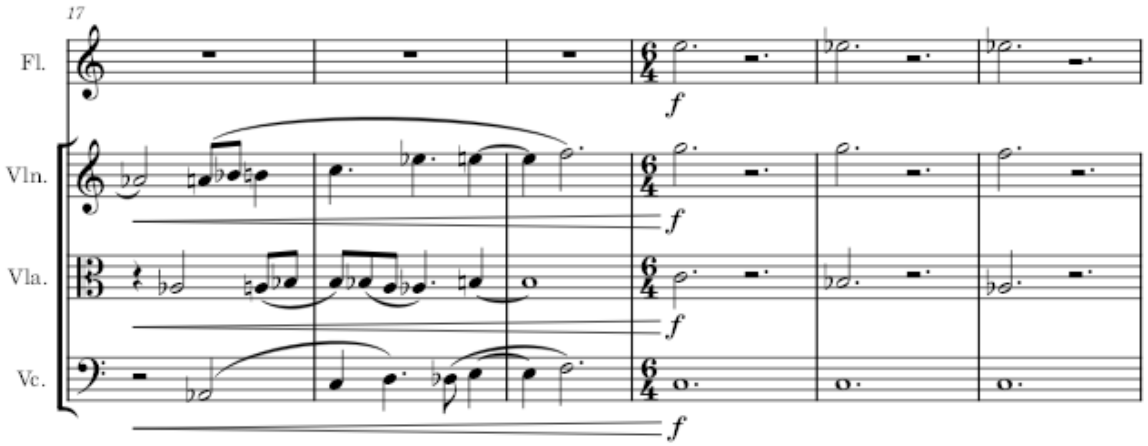
the fourth movement, allowing for an even more dramatic transition into the fast-paced B section of the piece.



35

The Nadir motif is designed to be incredibly troubling and dramatic, working to progress the story and provide a dark contrast to the beautiful and melodic material of the Zenith motif. It represents the looming threat of the encroaching Gilgamesh, which could spell the end of spider society if left unchecked. As such, the use of the Nadir motif in the C section of Movement 4 provides an even stronger contrast to its previous iterations. It remains just as dramatic, but with the recontextualization of musical material using the Zenith motif, the drama of the Nadir motif suggests changing times rather than the end of times. This is further reinforced with a return of the Zenith theme, this time starting on a higher pitch than it ever has before, symbolizing the new heights that both spiders and humans can reach through their combined efforts.

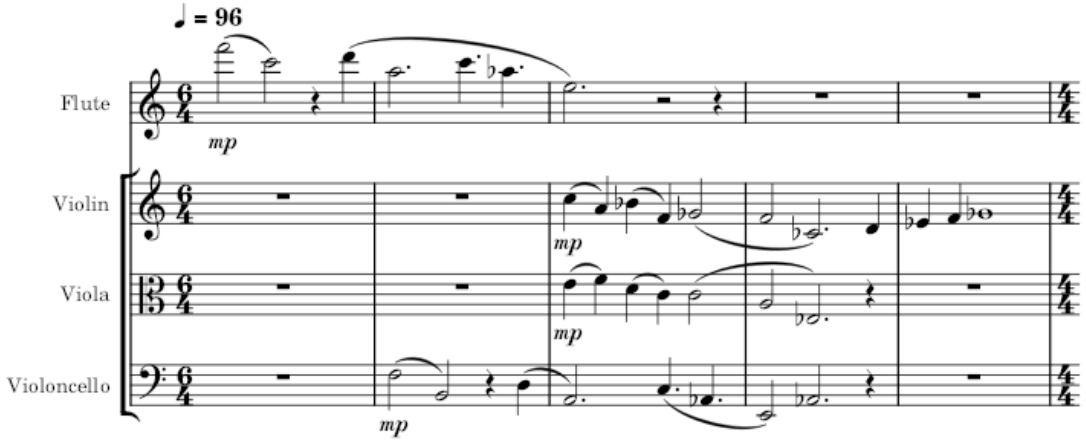
[35] Figure 9: Nadir Motif Chord in Movement 4. Crist, Noah, *Children of Time Mvt. 4 Collision/Diaspora*, 2022



[36]

The Ending

The C section of Movement 4 attempts to adapt the ending of *Children of Time*, in which the spiders win the battle on the Gilgamesh. After a short skip in time, the book ends with the spiders and humans sending a research team into space to search for other worlds, leaving Kern's World as one, unified group for the first time. The moment is reminiscent of the launching of Sky Nest, and is a logical, dramatic conclusion to the events of both the spider and human sides of the novel. Overall, it is an event which, if one is to adapt it properly, requires a massive amount of effort to be put into joining all themes in a satisfying conclusion.

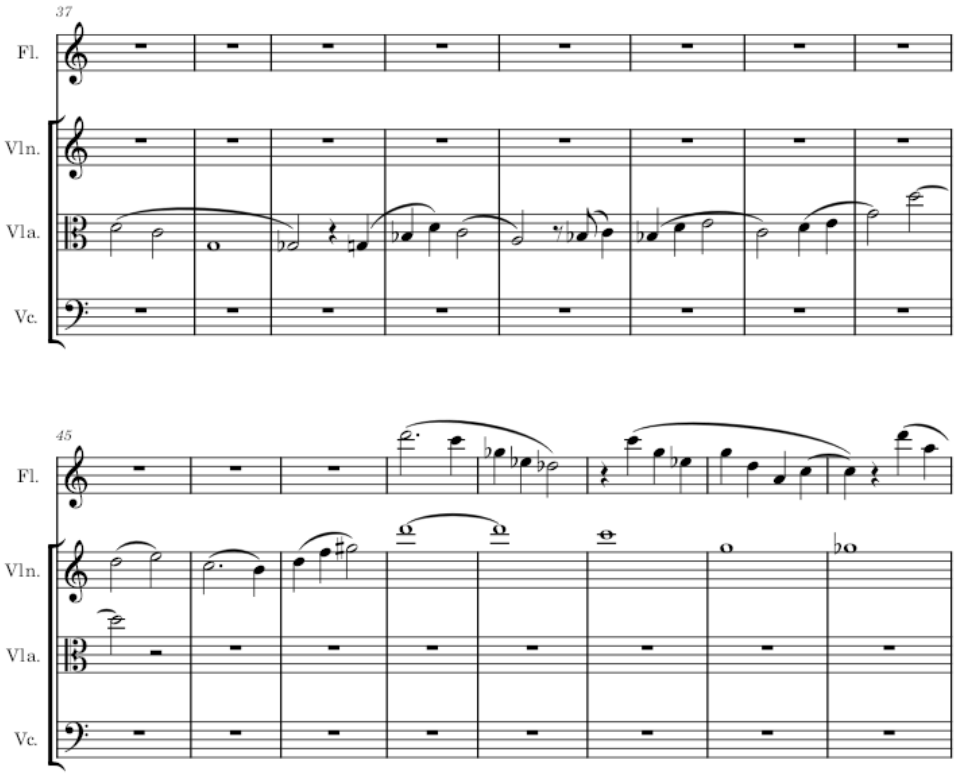


[37]

[36] Figure 10: Nadir Motif Movement 4 C Section. Crist, Noah, *Children of Time Mvt. 4 Collision/Diaspora*, 2022
[37] Figure 11: C Section Opening. Crist, Noah, *Children of Time Mvt. 4 Collision/Diaspora*, 2022

To open the C section, which has a long pause after the hectic B section, representing the end of the battle on the Gilgamesh, it was deemed necessary to open with a new version of the Zenith motif, as seen above in Figure 11. Although the new version is not intervalically any different, it contains a slight pause after the initial, slow descent. This acts as a second breath for the listener after the long pause between the B and C sections, letting the listener more quickly adjust to the new musical world established by the fall from F6 to C6. The Nadir motif returns in measure 20 as discussed above, being newly recontextualized after the reintroduction of the Zenith motif, representing the new cooperation seen by the humans of the Gilgamesh post-battle.

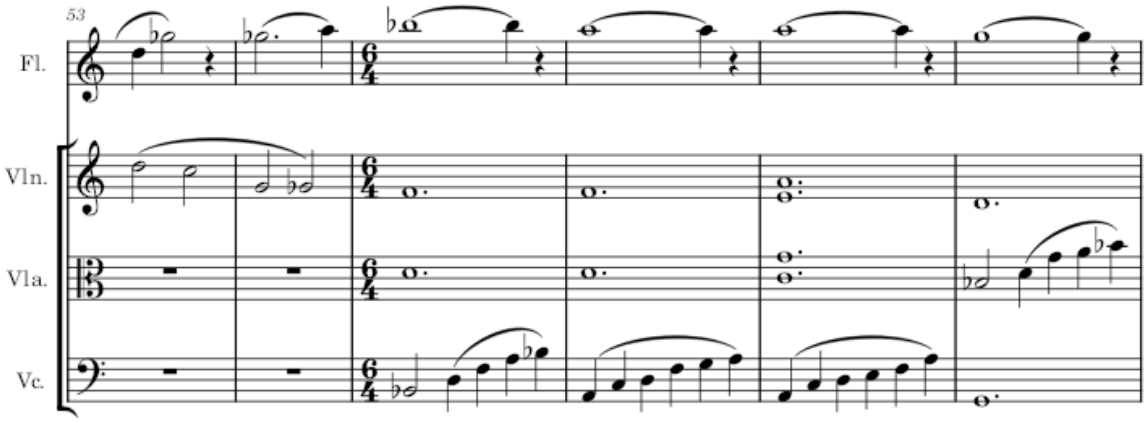
Material from the Rising Heights motif returns in the viola solo, which is restructured with a formal design similar to that of the Zenith motif. This new Rising Heights/Zenith mixture is further combined with a toned-down version of the Nadir motif during the duet between the flute and violin in measures 48-55. In this duet, the violin acts as a smaller, less pronounced pedal tone for the melodic line that was picked up by the flute.



[38]

[38] Figure 12: Viola Solo. Crist, Noah, *Children of Time Mvt. 4 Collision/Diaspora*, 2022

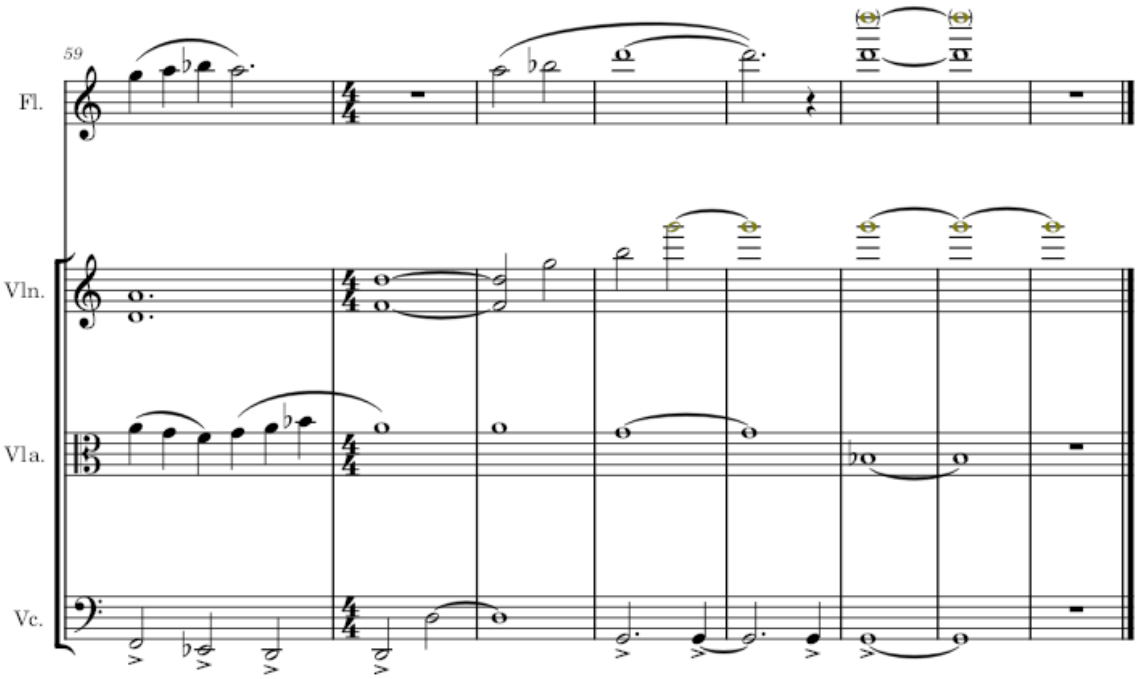
The Nadir motif returns once again to transition to the end of the piece, starting with a beautiful Bb chord led into by a chromatic descending line in the violin. The Nadir motif is accompanied by an arpeggiated bassline which guides the motif through F major and A major until the arpeggiated line is passed off to the viola.



[39]

The viola then picks up the line, taking the motif further down G minor, followed by D minor and transitioning into a large, drawn out, incredibly dramatic G minor in a beautiful cadence worthy of the source material it is adapting.

[39] Figure 13: Return of Nadir motif Prepping the Ending. Crist, Noah, *Children of Time Mvt. 4 Collision/Diaspora*, 2022



[40]

Conclusion

Throughout the month of March 2023, I was given the opportunity to work with musicians from the Roanoke Valley to do a recording of my music. I was provided with money from Roanoke College to pay these musicians, and I set about planning rehearsals. The process of finding and working with these esteemed musicians was incredibly eye-opening. To be able to be in charge of the process first-hand, planning, writing music, and running rehearsals on said music, was a satisfying conclusion to both this project and my time at Roanoke College as a music major. I would like to give a special thanks to those who have helped me along the way, especially to Rick Dolan, Hannah Cox, Rebecca Hall, and Sarah Pfister, the musicians who agreed to work with me on this project. This has been an invaluable experience and has only secured my passion for composition.

[40] Figure 14: Ending. Crist, Noah, *Children of Time Mvt. 4 Collision/Diaspora*, 2022

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