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Distant Lights: Trio for Flute, Cello, & Piano seeks to depict a near-future apocalyptic event that threatens humanity's survival on Earth. Stories of science fiction, specifically those in film, inspire my approach to creating new musical works with narrative elements. Films like *Interstellar* and, separately, various Pixar movies, as they appear on a larger timeline known as the "Pixar Theory," are directly comparable to *Distant Lights* in terms of storytelling as they share similar elements which I will discuss throughout chapter two.

I draw inspiration from Olivier Messiaen's *Quatuor pour la fin du temps (Quartet for the End of Time)*, George Crumb's *Vox Balaenae (Voice of the Whale)*, Ian Clarke's *The Great Train Race*, and Béla Bartók's *String Quartet No. 6*. As Messiaen provides models for creating a large-form work written for a relatively small number of players and a model for writing for the piano, Crumb's *Vox Balaenae* provides a structural model for the music of the first movement and additional guidance in writing for the specific instruments used in *Distant Lights*. Bartók's 6th String Quartet and Ian Clarke's *The Great Train Race* offer approaches to writing for the cello and flute respectively.

The performance of the work is enhanced by visual details, inspired by the use of lights and shadows in George Crumb's *Vox Balaenae*. Images drawn from the James Webb Space Telescope add deeper layers of reality to the musical narration. Visual aspects of the work draw focus to both the story and the performers, providing a more immersive experience.

The resulting work seeks to musically depict a story the encompasses warning signs, chaos, anxiety, a departure from Earth, desperation, and hope for the future. In future endeavors, I plan to explore similar science fiction ideas that have their origins in potential real-world events. The score of the composition itself is the primary component of this thesis and is presented in its entirety in Appendix D. The paper provides context and explains how these disparate source inspirations were brought together to create a cohesive muti-movement work.

DISTANT LIGHTS: TRIO FOR FLUTE, CELLO, & PIANO

by

CHARLES DEAN NORRIS

A Thesis Submitted to the Faculty of The Graduate School at The University of North Carolina at Greensboro in Partial Fulfillment of the Requirements for the Degree Master of Music

Greensboro

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Approved by

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CHAPTER I: INTRODUCTION

Distant Lights is a twenty-minute trio for flute, cello, and piano that draws from science fiction narratives of apocalyptic events. These stories vary from the extinction to the creation of life, and apocalyptic landscapes haunted by the ruins of the past. One tradition of sci-fi storytelling that fascinates me is that of events that lead to a cataclysm, which is found in films like *Interstellar*, directed by Christopher Nolan. Others include the Disney and Pixar movies that form the basis of the "Pixar Theory,"¹ the unconfirmed theory of an interconnected universe that ties these films together initially developed by Jon Negroni.² In Chapter 2, I provide a brief background into these fascinating films and their relationship to *Distant Lights*.

In Chapter 3, I explore the musical background for *Distant Lights*. My sources of inspiration come from Olivier Messiaen's *Quatuor pour la fin du temps (Quartet for the end of time)* and George Crumb's *Vox Balaenae (The Voice of the Whale)*, Bela Bartók's *String Quartet No. VI*, and Ian Clarke's *The Great Train Race*. Messiaen and Crumb provide background not only in the presentation of multiple movements for a relatively small ensemble but also in thematic context for apocalyptic events. *Vox Balaenae* also inspires visual elements of the performance. Bartók provides the groundwork for my cello scoring, and Clarke's music influences my writing for the flute.

With regards to the visual elements incorporated in the piece, in July of 2022, the James Webb Space Telescope captured its first images of deep space and data from distant stars and galaxies. Specifically, those of dying stars and the Carina Nebula caught my attention. These

¹ Jon Negroni. "The Pixar Theory - Every Pixar Movie Is Connected." *Jon Negroni*, 12 June 2019, https://jonnegroni.com/2013/07/11/the-pixar-theory/.

 $^{^2}$ See Appendix A for additional information on the "Pixar Theory" and the timeline breakdown.

images give the fictional story a sense of reality, as they inspired the setting of *Distant Lights* and looking for new worlds with hospitable conditions. The alluring images of the James Webb Telescope pose inspiration for this work and are projected during the performance to provide the audience a visually captivating way to grasp the story. I will discuss this more in Chapter 4.

CHAPTER II: DISTANT LIGHTS AND CORRELATING SCIENCE FICTION ELEMENTS IN FILM

Distant Lights ' narrative shares storytelling elements and rhetorical similarities to that of stories in the science fiction genre. Fashioning the work along a similar structural framework allowed my piece to become a cohesive multimovement musical tale. Throughout this chapter, I will discuss the narrative of *Distant Lights: Trio for Flute, Cello, & Piano* and its relationship with the "Pixar Theory" and *Interstellar*, respectively.

The musical framework of *Distant Lights* is structured around a story of an apocalypse on a fictional, near-future Earth that drives the inhabitants to leave. Each movement of the work evokes a specific aspect of the narrative. The opening movement of the work, "*Signs*," represents of the warnings given to humanity by the Earth. Issues such as global warming, overpopulation, and pollution over time become too much for the Earth to handle, leading to a total ecological collapse. The film *Interstellar* is similar to this aspect of the story by showcasing environmental disasters that lead to the extinction of certain crops.³ In several movies within the "Pixar Theory" universe, such as *Finding Dory*,⁴ *Ratatouille*,⁵ and *Toy Story*,⁶ the accumulation of trash and pollution go seemingly unnoticed. The connections between *Distant Lights*,

³ Nolan, Christopher. *Interstellar*. October 26, 2014; Los Angeles, California; Legendary Pictures. Time code 00:01:14

⁴ Stanton, Andrew. *Finding Dory*. June 8, 2016. Emeryville, California. Walt Disney Pictures, Pixar Animation Studios. Time code 00:17:03 – 00:21:27

⁵ Bird, Brad. *Ratatouille*. June 22, 2007. Emeryville, California. Walt Disney Pictures, Pixar Animation Studios. Time code 00:57:22 – 01:00:50

⁶ Lasseter, John. *Toy Story*. November 19, 1995. Emeryville, California. Walt Disney Pictures, Pixar Animation Studios. Time code 00:35:55

Interstellar, and the Pixar universe illustrate humanity's ignorance of the growing problems around them, creating an inhospitable environment that threatens survival.

In a world plagued by pollution caused by humans, irreparable damage has been done to the Earth. In movement two of *Distant Lights*, humanity becomes aware of the dying world and widespread panic dominates the globe, with rioting, looting, and heinous acts erupting as the frightened population goes into shock. The second movement, *"Everything Must Go,"* creates a sense of physical discomfort, using fast-changing time signatures and disjunct rhythms to evoke the terror of leaving behind everything that is familiar. Similarly, *Interstellar* uses rapidly changing frames and near-quiet dialogue to cause physical discomfort in the audience.⁷ In the Pixar universe, the aftermath of this chaos is shown with images of a destroyed world piled miles high with garbage, such as in the movie *Wall-E.* Busted-out windows of stores and destroyed cars are seen everywhere throughout the film, showing the mess that was left behind and the inferred violence that occurred during this period.⁸ These stories, *Distant Lights* and the "Pixar Theory," correspond with the idea that human nature, when faced with devastation, is to cause mayhem and disorder.

Each movement in *Distant Lights* has distinct objectives; while movement two evokes physical distress, movements three and five aim to create the sense of emotional anxiety. The latter is achieved through the use of solo instruments, which replicate a sense of loneliness and despair. Movement 3, "*Disquietude*," moves away from the physical chaos and instead explores the inner turmoil and sorrow when faced with leaving the Earth. The range of emotions experienced by humanity when faced with this reality is vast, but unease is the most dominant.

⁷ Nolan. *Interstellar*, Time code 02:07:40 – 02:11:15

⁸ Stanton, Andrew. *Wall-E.* June 23, 2008. Emeryville, California. Walt Disney Pictures, Pixar Animation Studios. Time code 00:03:25 – 00:06:00

Leaving behind the world that has housed all human history and ancestry is a profound and sweeping discontent. A comparable scene of this nature comes from *Interstellar*, as the central character must abandon his family and planet to venture off to find a new world for the survival of humanity.⁹ Later, in the fifth movement of *Distant Lights, "Inquietude*" portrays a restless species of anxiety that invokes hope rather than fear. As the earthlings embark on their journey into the cosmos, with the Earth fading into the distance of space, a new chapter of hope is born.

The narrative of *Distant Lights*, which tells the story of a human exodus from Earth, would be incomplete without the depiction of a physical departure from the planet. Movement four, "*Departure*," captures the grand migration from the ground to the sky and beyond. The movement's rhythmic and exciting motifs imitate the expulsive engines of a rocket through note clusters in the piano. The moderate-fast tempo emulates the force required to break free of Earth's atmosphere. In *Wall-E*, the excitement of a rocket launch is portrayed in a scene where a spacecraft is sent to retrieve a drone from Earth. The audience observes the launch from the outside of the rocket, offering a glimpse through the Earth's atmosphere and a scary, yet exhilarating, view of the ground shrinking from sight.¹⁰ The takeoff is witnessed through the eyes of the sentient robot Wall-E, who is experiencing these sights for the first time, much like the humans aboard the rockets in *Distant Lights*. Therefore, movement four represents the final instance of humanity physically connecting with the Earth before it fades from view forever.

Following the anxiety of movement five, the final movement and the namesake of the work, "*Distant Lights*," appears, summoning a song of hope and renewal for future generations in the story. As humanity ventures into the void, they are reminded of their former lives. A

⁹ Nolan, *Interstellar*, Time code 00:37:30 – 00:42:17

¹⁰ Stanton, *Wall-E*, Time code 00:33:00 – 00:34:22

familiar theme from the first movement is heard under a driving motif, linking the beginning and the end of the work in memorial of the world they left behind. In the finale of *Interstellar*, the central character once again leaves his child, who now has a family of her own, to embark into space to find the last surviving scientist on a distant world.¹¹ The film ends with a hopeful tone for the future of humanity as they live aboard a rocket, providing a livable artificial world, sailing through space. Similarly, *Distant Lights* concludes on a tone of hope and adventure, ready for whatever unknown future lies ahead.

The narrative of *Distant Lights* allows the audience to immerse themselves into this imaginative science-fictional future. Existing stories like *Interstellar* and the films of the "Pixar Theory" create a framework of existing narratives that facilitate the creation of new works in this genre. By combining the influence of historic music with these existing stories, the musical odyssey that is *Distant Lights: Trio for Flute, Cello, & Piano* came to life. I will discuss this further in the next chapter.

¹¹ Nolan, *Interstellar*, Time code 02:40:30

CHAPTER III: MUSICAL INSPIRATIONS AND PRECEDENTS

Distant Lights incorporates several elements and inspirations from musical works of temporal and thematic importance.¹² These include score layout and instrumentation, the number of individual movements that contribute to the length of the piece, and part writing for each instrument. Olivier Messiaen's *Quatuor pour la fin du temps (Quartet for the End of Time)*, George Crumb's *Vox Balaenae (Voice of the Whale)*, Ian Clarke's *The Great Train Race*, and Béla Bartók's *String Quartet No. 6* were integral influences in the creation, instrumentation, and music of *Distant Lights: Trio for Flute, Cello, & Piano*. This chapter is divided into three sections: structure, clusters and clouds, and part writing. Each subchapter details the influence of these major works and their impact on *Distant Lights*.

STRUCTURE

The structure of *Distant Lights* draws upon several historically significant works, with each element working together to create the entirety of the work. These elements include thematic materials and narrative, score layout, and overall length of the work. The greatest influences on the structure of *Distant Lights* are derived from Messiaen's *Quatuor pour la fin du temps (Quartet for the End of Time)*, and George Crumb's *Vox Balaenae (Voice of the Whale)*.

The narrative of *Distant Lights* revolves around an apocalyptic future resulting from human recklessness, with each movement summoning various aspects of an end-of-the-world scenario. Similarly, Messiaen's *Quatuor pour la fin du temps* also centers around the impending apocalypse as described in the Book of Revelations. The *Quartet for the End of Time* evokes the spiritual struggle of humanity in the last days of Earth. As this relates to *Distant Lights*, both

¹² Messiaen, Olivier. *Quatuor pour la Fin du Temps*. Editions Durand & Cie, Paris. France, United Music Publishers, Ltd., 1942. 7-11

work relate to apocalyptic events threaten to end all of humanity as they depict the grappling between Earth and its inhabitants. Within the story *Distant Lights*, humans make the choice to leave the Earth while Messiaen's quartet depicts people being forced to leave during the Book of Revelation's final ascension into the Kingdom of Heaven.

Each movement of Messiaen's quartet represents various depictions of the Book of Revelations, with the work broken down into eight separate movements.¹³ Similarly, *Distant Lights* depicts an apocalyptic narrative over the span of six movements. However, *Distant Lights* ' movements are not meant to be separate. Each movement of my work is to be played as attacca, meaning without pause between them, to accentuate the urgency of the impending doom of the narrative. Some of the movements of *Distant Lights* even overlap, creating a blur in when movements start and end.

Three of the movements of *Distant Lights* are dedicated in near entirety to solo instruments: piano in movement one, cello in movement three, and flute in movement five. This structure invokes the interludes of *Quatuor pour la fin du temps*, during which solo instruments have a movement dedicated only to them.

In the end, Messiaen's work spans 45 minutes, a relatively long work for a chamber ensemble. At 22 minutes, the totality of *Distant Lights* is much shorter than the *Quartet for the End of Time* but still represents a substantial duration for a relatively small ensemble.

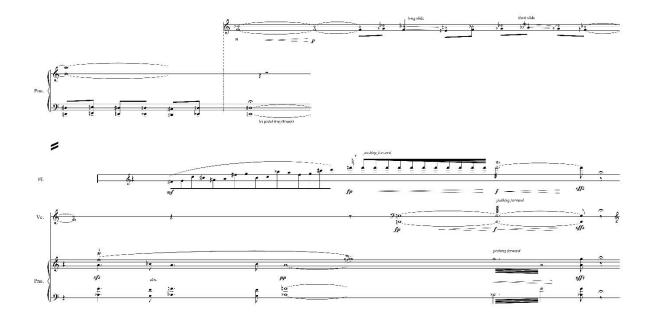
George Crumb's music has always grasped my attention, and his unique work *Vox Balaenae* has been an inspiration for me as a composer and musician because of its distinctive style of composition. The instrumentation of *Vox Balaenae* - electric flute, electric cello, and

¹³ See Appendix B for *Quatuor pour la Fin du temps* movement list in the original French and English translation.

electric piano - was always a fascinating choice to me. Crumb's trio of flute, cello, and piano was of great interest to my compositional style as it represents a microcosm of an orchestra. The trio utilizes vast pitch range and versatility of the cello to work as an entire string section, though without the fullness of an entire section. The timbral and technical flexibility of the flute can be used to evoke the broad palette of the entire wind section. The piano fills out the harmony and rhythm for the rest of the orchestra and adds a sense of depth to the composition. Furthermore, each instrument also has various techniques that can create percussive sounds, which mimic the percussion section. Given the combination of these three instruments, it was the clear choice for me to utilize them in designing *Distant Lights*.

In *Vox Balaenae*, Crumb employs a specific layout for the score that grants the players greater temporal freedom than traditional notation.¹⁴ The technique, called a cut-away score, is utilized throughout the entirety of the work. By displaying each instrument only when it is played, the cut-away technique enables performers to clearly know when and where to play, and how they interact with the other instruments. In the first movement of *Distant Lights*, I adopt a cut-away style layout to endow performers with greater flexibility in how they choose to interpret the work, as illustrated in Example 1. The first movement features very few bar lines, only dividing sections, and the cut-away scoring combined. This configuration imparts a sense of freedom from the restrictions of tempo and meter that would otherwise constrain the work in a box. This freedom interlocks with the harmonies throughout the work which I will delve into more in the next section.

¹⁴ Crumb, George. Vox Balaenae. Edition Peters. New York, C.F. Peters Corp., 1971. Full Score.



Example 1. DISTANT LIGHTS MOVEMENT 1, CUT-AWAY SCORING

CLUSTERS AND CLOUDS

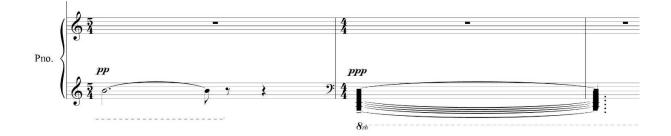
Throughout *Distant Lights*, a variety of harmonies and melodies are to establish a sense of flotation and space, two crucial elements of the work. One of the most significant harmonic procedures is what I refer to as "sound masses." These masses are created either instantly or over time using sustained tones. In *Vox Balaenae*, Crumb produces an atmospheric cloud of notes and overtones by leaving the sustain pedal on the piano completely depressed for many measures, even over chord changes.¹⁵ Throughout *Distant Lights*, a similar technique is used in various ways to generate these long sound masses. In the first movement, the pianist is instructed to keep the pedal down until very specific moments in the work, even using the pedal as a technique to vibrate the strings until they are completely muted. As the pianist progresses through the

¹⁵ Crumb, "Vox Balaenae," 2-3.

movement with the pedal continuously down, each new chromatic note contributes to the resulting cloud of sound, evoking the feeling of floating as each new note is suspended in the air. This same effect is created by the flute and cello in the fourth movement. As the piano leaves the sustain pedal depressed, the flute and cello enter on harmonic notes one half-step apart, adding to the sustained sound mass as the piano continues to play.

Other sound masses are created using note clusters, as depicted in Example 2. Each cluster throughout *Distant Lights* contains different pitches, producing subtle changes in the mass's quality. These clusters appear in nearly every movement of the piece, occupying either the higher or lower end of the note spectrum while leaving the middle open for melodic material. In movement four, these clusters are joined by all three instruments, the sole instance of this occurrence in the work. These sound masses possess a gravity of their own, more firmly grounded than the sustained clouds, as though they are attempting to pull the narrative back down to Earth. Conversely, the rhythmic force generated by the clusters propel the music forward, driving it to the end of movement four and movement six.

Example 2. DISTANT LIGHTS MOVEMENT 4, NOTE CLUSTERS



Each of these sound masses is essential in the writing of each individual instrument and how they interact with the trio, which I will discuss in the next section.

PART WRITING

The piano component of *Distant Lights* is influenced by Messiaen and the *Quartet for the End of Time* harmonies. In the first movement *Distant Lights*, a particular set of intervals are planed to produce a colorful texture and harmony. The principal interval in use throughout the first movement is a major seventh, which can sound dissonant when used on its own. The use of this interval allowed me to experiment with chord colors and timbres throughout the work. In the first movement, the planed chord adds a tritone up from the root, played down an octave, which moves with the harmony. Due to the nature of a major seventh interval, this tritone up also a perfect fourth interval with the higher note. Messiaen uses similar chord voicing in the *Quartet for the End of Time* to create an atmosphere of color and vibrance. The major seventh interval structure serves as harmonic connective tissue for nearly every movement of *Distant Lights*.

As a flutist, I have a strong understanding of the mechanics and techniques involved in creating and manipulating sound on the instrument. My approach to the flute in *Distant Lights* is heavily influenced by my experiences playing solo and chamber music. Works such as *The Great Train Race* by Ian Clarke¹⁶ and George Crumb's *Vox Balaenae* have been pivotal in my growth as a flutist and as a composer writing for the instrument. In movement two of *Distant Lights*, I use a "Cha" sound to create a percussive, semi-pitched effect similar to the opening of *The Great Train Race*, as shown in Example 3.¹⁷ This example shows how each work attains a similar sounding percussive effect by the use of extended technique. From there, in the fourth movement I use fast, repeated notes to convey a sense speed and persistence as the story of *Distant Lights* departs from Earth and breaks through the atmosphere. Clarke's work embodies

¹⁶ Clarke, Ian. *The Great Train Race*. Just Flutes Edition. London, IC Music, 1993. Full score.

¹⁷ Clarke, "The Great Train Race," pg. 1

the perpetual motion of a train, which corresponds to the explosive acceleration of the rockets in *Distant Lights*.

Example 3. COMPARISON OF THE GREAT TRAIN RACE AND DISTANT LIGHTS



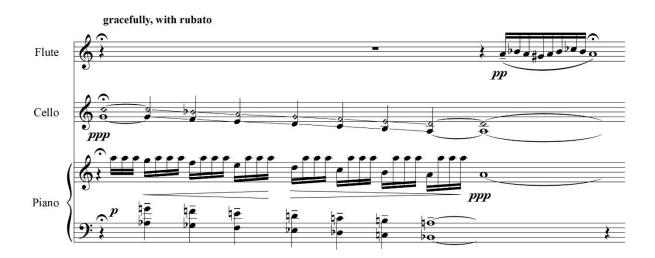
Another inspiration was the Burletta of Bartók's sixth string quartet. Here, he uses of syncopated double stops in the cello to create rhythmic dissonance, which influenced the cello parts in movements two and for of *Distant Lights*.¹⁸ In movement two, the cello also employs the syncopated double stops to create confusion and obscurity. It alternates between double stops on the A & D strings and the G & C strings, creating a high/low contrast that contributes to the syncopation. A comparison of the Burletta and *Distant Lights* can be seen in Example 4. Additionally, the cello uses artificial harmonics throughout the work. These figures are used gently to create a sense of flotation and space, often appearing several octaves above the piano and flute lines, as shown in Example **5**. The use of artificial harmonics is directly related to the use of cello harmonics in *Vox Balaenae*, which also creates a gentle and static atmosphere.

¹⁸ Bartók, Béla. *String Quartet No. 6 in D minor, Sz. 114, BB 119.* London, Boosey & Hawkes, 1941. pg. 32-33, measures 29-32.

Example 4. COMPARISON OF BARTÓK *STRING QUARTET NO. 6* AND *DISTANT LIGHTS*



Example 5. DISTANT LIGHTS MOVEMENT 1, CELLO HARMONICS



These musical procedures and more have influenced aspects *Distant Lights*, from the piano texture and harmony in movement one to the solo movements (3 & 5), and the creation of the atmosphere to the journey through space in the narrative's conclusion. Drawing from these inspirations, I developed a compelling musical narrative that combined the influence of significant works into a unified, multi-movement piece. The combination of music with the first

images from the James Webb Space Telescope establishes a tangible connection to the story that I will discuss in Chapter 4.

CHAPTER IV: VISUAL ELEMENTS AND PERFORMANCE PRACTICE

Although storytelling in film inspired the narrative element of *Distant Lights*, my interest in space travel was piqued after viewing the first images captured by the James Webb Space Telescope (JWST) in 2022.¹⁹ These images, which are beautiful and clear, provide humanity the opportunity to speculate even further about our place in the cosmos. Images of the Carina Nebula and the Pillars of Creation captured by the Hubble Telescope are familiar to many people, as they were usually images used in science and astronomy textbooks, new views of these colossal cosmic events captured by the JWST is even more captivating and inspiring. My aim was to create an immersive experience for the audience by placing them in an environment full of the magic and wonder of the cosmos. To achieve this, I created a video using the JWST images that the performers can project during the performance. Each image changes at two-minute intervals, showing roughly two images for each movement of *Distant Lights*. The projection of the Images from the James Webb Space Telescope during the performance serves as a visual guide, designed to bring real life into the fictional story.

Visual elements, such as lighting, play a crucial role in bringing focus to the performance and the story of *Distant Lights*. Drawing inspiration from *Vox Balaenae*, the trio should perform in the dark under a magenta-colored light the evokes the hue of galaxies and space. This visual effect captures the audience's attention and draws their focus toward the performers, as they are the only illuminated spots during the performance. Each performer receives a single spotlight placed on them, either from above or from the front, to illuminate their figure and creates gentle

¹⁹ All JWST images were retrieved from <u>https://webbtelescope.org/resource-gallery/images</u>, accessed on 25, Feb. 2023. See Appendix C.

shadows behind them. Additionally, a final light is placed under the piano to illuminate the ensemble from within and create a guiding light that leads towards the players.

Example 6. *DISTANT LIGHTS*, MAGENTA COLORED LIGHTING FOR PERFORMANCE.



Example 7. GEORGE CRUMB'S *VOX BALAENAE*, BLUE COLORED LIGHTING FOR PERFORMANCE.²⁰



²⁰ Still taken from "https://www.youtube.com/watch?v=fbgmtCeO6zM" Cleveland Institute of Music, "*Vox Balaenae*," Retrieved 10, Feb 2023.

CHAPTER V: CONCLUSION

Distant Lights portrays a new tale of hope and perseverance for humanity in a fictional future. It builds upon the foundations established by other works, such as *Interstellar*, the movies of the "Pixar Theory," *Quatuor pour la fin du temps*, and other musical works to create a multi-dimensional emotional experience. The images captured by the James Webb Space Telescope offer glimpses of our vast universe, providing a visual backdrop for an epic journey of incomprehensible proportions.

In my future endeavors, I aspire to build upon the techniques and inspirations that have shaped the creation of *Distant Lights: Trio for Flute, Cello, & Piano.* The relationship between stories and music continues to captivate me, as I am drawn to works that evoke vivid imagery in the minds of the audience. I would also like to further explore the interaction of music and film, translating that dynamic into my original compositions. I am also excited for the opportunity to create new works that elevate the listener's experience through visualization and introspective storytelling.

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APPENDIX A: TIMELINE OF THE "PIXAR THEORY"

The "Pixar Theory" was first hypothesized by the writer and pop-culture theorist Jon Negroni in 2013 suggesting that the movies created by the Disney and Pixar collaboration make up a single universe on a vast timeline. As of this writing, though unconfirmed by Pixar, the theory forms connections between 26 different films that create a large adaptive tale. From beginning to end, the following is the timeline of film as defined by Negroni:²¹

Prehistory	The Good Dinosaur	
The 10th Century	Brave	
1950s-1960s	The Incredibles	
	Incredibles 2	
	Luca	
1990s	Lightyear	
	Toy Story	
	Toy Story 2	
2000s	Turning Red	
	Finding Nemo	
	Finding Dory	
	Ratatouille	

²¹ Negroni. "The Pixar Theory - Every Pixar Movie Is Connected." *Jon Negroni*, 14 May 2019, https://www.youtube.com/watch?v=fbgmtCeO6zM.

2010s	Toy Story 3
	Toy Story 4
	Inside Out
	Coco
	Up
2020s	Soul
2100-2200	Cars
	Cars 2
	Cars 3
2805	Wall-E
Mid 2800	Onward
2898	A Bug's Life
3100-5201	Monster's Inc
	Monster's University
5201-?	Brave (again)

APPENDIX B: LIST OF MOVEMENTS FROM QUATUOR POUR LA FIN DU TEMPS²²

	French	English
I.	Liturgie de cristal	Liturgy of crystal
II.	Vocalise, pour l'ange qui	Vocalise, for the angel who announces
	annonce la fin du Temps	the end of Time
III.	Abîme des oiseaux	Abyss of birds
IV.	Intermède	Interlude
V.	Louange à l'éternité de	Praise to the eternity of Jesus
	Jésus	
VI.	Danse de la fureur, pour	Dance of the furor, for the seven
	les sept trompettes	trumpets
VII.	Fouillis d'arcs-en-ciel,	Litters of rainbows, for the angel who
	pour l'ange qui annonce	announces the end of Time
	la fin du Temps	
VIII.	Louange à l'immortalité	Praise to the immortality of Jesus
	de Jésus	

²² Messiaen, Olivier. *Quatuor pour la Fin du Temps*, Preface pg. i-ii

APPENDIX C: IMAGES FROM THE JAME WEBB SPACE TELESCOPE

Illustration 1. CARINA NEBULA



Illustration 2. *L1527* AND *PROTOSTAR*



Illustration 3. NEPTUNE



Illustration 4. NGC 346



Illustration 5. NGC 7496



Illustration 6. PILLARS OF CREATION



Illustration 7. SMACS 0723

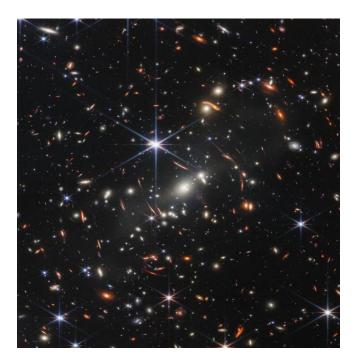


Illustration 8. SOUTHERN RING NEBULA

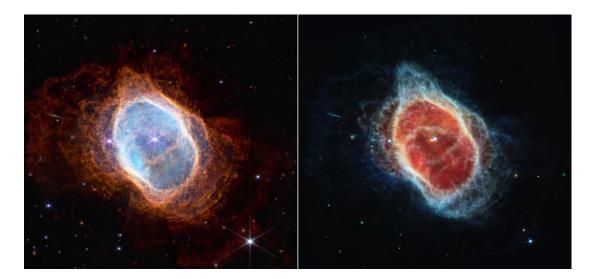


Illustration 9. STEPHAN'S QUINTET

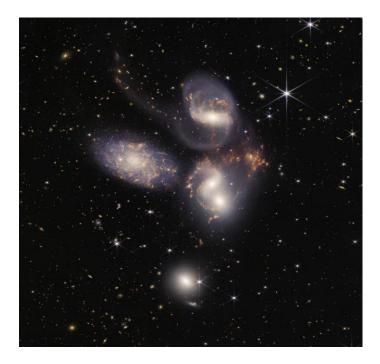


Illustration 10. TARANTULA NEBULA



APPENDIX D: SCORE FOR DISTANT LIGHTS: TRIO FOR FLUTE, CELLO, & PIANO.

Score

Distant Lights

Trio for Flute, Cello, and Piano

i: Signs

ii: Everything Must Go

iii: Disquietude

ív: Departure

v: Inquíetude

vi: Distant Lights

2022

Charles D. Norris

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Program Notes

Distant Lights follows the story of the exodus of a planet that is no longer habitable. Inspired by apocalyptic science fiction, *Distant Lights* takes place in a possible not-so-distant future of humanity, plagued by pollution and climate change so intense that Earth is no longer suitable to sustain life as we know it. Inspired by apocalyptic science fiction, *Distant Lights* takes place in a possible not-so-distant future of humanity

The first two movements, *Signs & Everything Must Go*, invoke the warning signs of a world out of control. In the midst of these revelations, chaos ensues and the existential feeling of dread overwhelms the population. *Disquietude* characterizes the state of the world as the realization settles that humanity must leave the Earth to survive, which creates a sense of unease and anxiety. In an attempt to escape the inevitable fate of the dying world, humanity departs from Earth to embark on a journey into the stars.

Inquietude attempts to portray the restlessness felt among the people for their new life in the unknown as they peer into the seeming emptiness of the vast ocean of space, not knowing where or when they will find a new home.

The final movement, *Distant Lights*, is a hopeful song of prayer and peace as humanity ventures off into the void, with distant lights guiding their way.

Performance notes

Movement I:

1. There is no set tempo or time, note durations are arbitrary and are meant to keep a flow not to specify specific spaces between notes.

Pianists should keep the pedal on full sustain unless both hands have simultaneous rests. This is to create an atmospheric sound that grows with the added sustain of the piano.

2. Slides/Glissandi in the cello should be as noticeable as possible.

Movement II:

1. Eighth notes should stay consistent throughout the movement. There should be no variation in the tempo.

2. Starting m. 12, the flute has "Cha cha" sounds: These should be noticeable but not overbearing. flute and cello should match volume.

3. Cello has short grinding sounds starting m. 12: These should be separated and short, matching the style of the flute's "Cha cha."

4. "flz" in the flute means to flutter the tongue. If the player cannot flutter tongue, growling will also suffice.

5. In the piano (starting m. 123 and throughout the rest of the work), there are blocks of hand clusters. Each cluster should be slightly different in pitch and register content. Though some may look the same, they should vary slightly between them.

Movement III:

1. There is no set tempo or time, note durations are arbitrary and are meant to keep a flow not to specify specific spaces between notes.

2. Slides/Glissandi should be long and noticeable. Take time to spread out these falls.

Performance notes (Cont'd)

Movement IV:

1. The flute, starting m. 84-95, has fast chromatic figures: these figures are mainly for effect. Though precise notes and evenness are preferred, the effect outweighs accuracy.

2. The flute in m. 96 has harmonic trills, these trills should be dirty and imprecise. The effect should sound alien in nature.

Movement V:

1. The cello should continue its harmonic from the previous movement without breaking. Even if the flutist should need to readjust pages or whatnot, the harmonic sound should not stop.

2. In the flute, the "JW" stands for "Jet whistle:" an extended technique where the player's mouth covers the entire lip plate and the player forces as much air as possible through the instrument. The resulting sound should be loud and jet-like.

Movement VI:

1. The piano and cello should begin at the tail end of the flute's flutter tongue in the end of movement 5.

2. Forte-pianos should be over-dramatized at the attack and explosive at the release.

All movements should be played attacca if possible

As we looked up in silence to those distant lights, we were reminded that it was a rare imagination which first taught that the stars are worlds, and had conferred a great benefit on mankind.

-- Henry David Thoreau

Score

Distant Lights

Trio for Flute, Cello, & Piano

Charles D. Norris



Distant Lights - Score







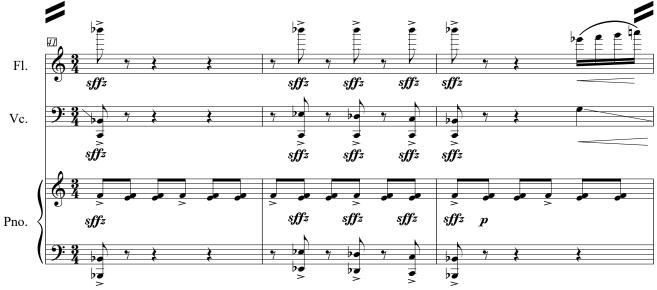






































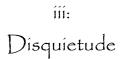
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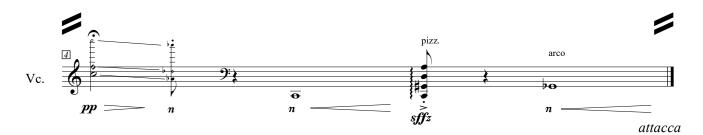
Freely, like a wondering soul

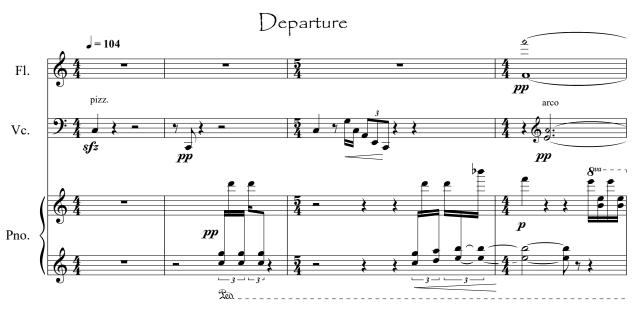






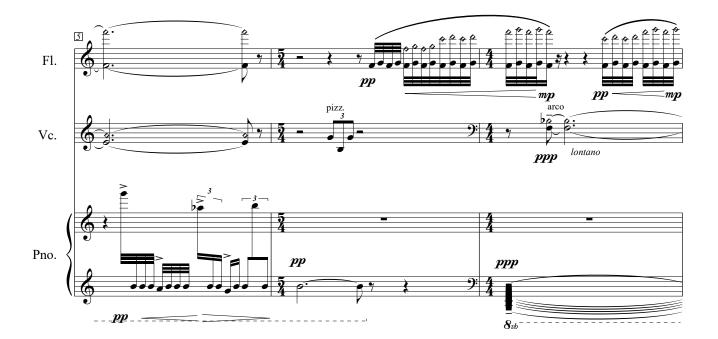




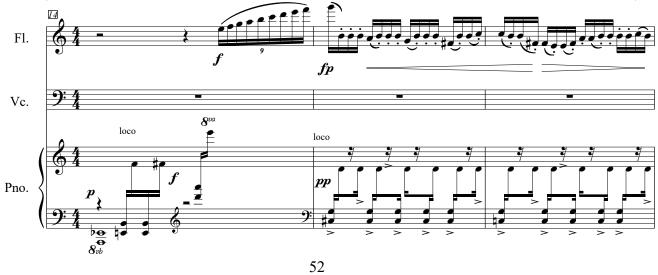


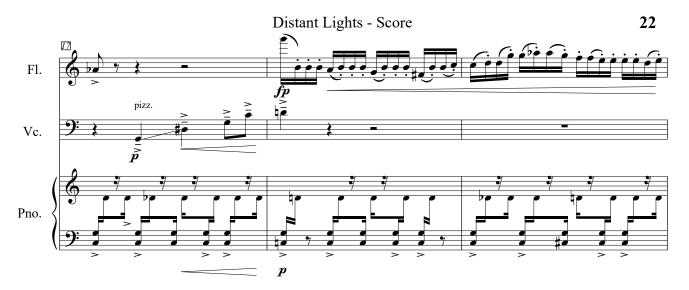






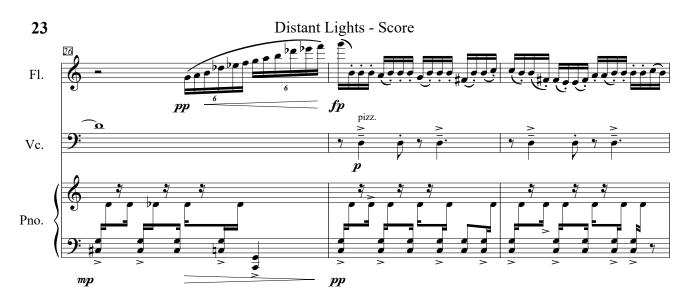




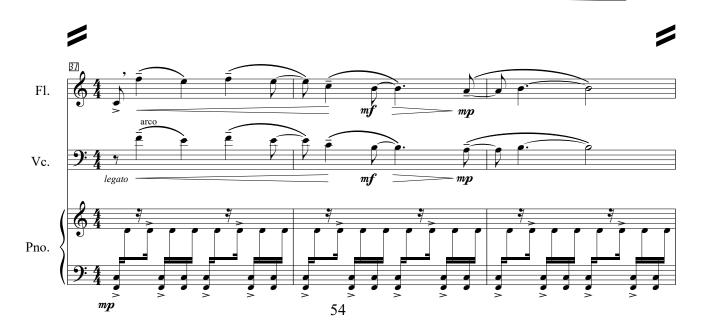


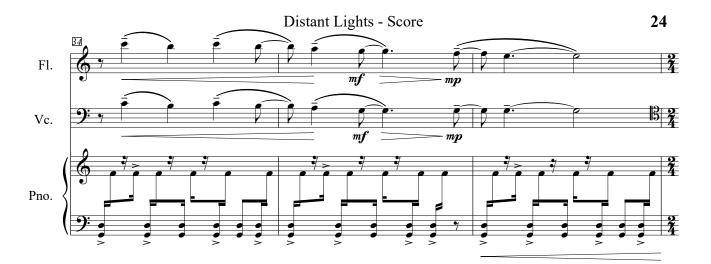




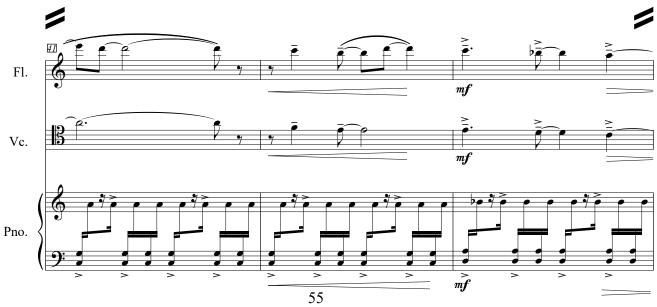




























Inquietude

