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The Trumpet Music of Eric Nathan

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The purpose of this thesis is to explore the trumpet works of composer Eric Nathan in terms of their technical and notational elements. This analysis develops an understanding of the musical vocabulary and techniques that will provide insight into the structure, style, and performance of this repertoire and in doing so to discover a historical perspective of the trumpet’s role within solo and chamber music genres in the 21st century. Through this analysis, I suggest that Nathan’s music pushed the technical, and therefore expressive boundaries of the instrument. While not exhaustive, the analysis of Cantus, Four Sculptures, and Toying will provide a good representative sample of Nathan's compositional approach towards music for trumpet. Developments in new music notation through the twentieth century will be examined along with a survey of how these developments are reflected in literature for the trumpet. Ultimately, this thesis considers how the convergence of notation and literature was key for the trumpet to secure a position as a solo instrument within the scope of western music practices. Nathan's music is the lens to undertake this exploration.
The Trumpet Music of Eric Nathan

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APPROVAL PAGE

Doctor of Musical Arts Dissertation

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The Trumpet Music of Eric Nathan

Preface

I was first exposed to the trumpet music of Eric Nathan when I heard a live performance of *Four Sculptures* (2007). Shortly after I listened to Nathan’s *Cantus* (2008) played on a DMA trumpet recital, and attended Hugo Moreno’s premiere of the unaccompanied solo *Toying* (2012), as I was performing on the same program with Le Train Bleu, the ensemble that commissioned the work. The creativity of these pieces fascinated me as a performer which is why I have pursued this area of study.

Eric Nathan is a rising force among America’s contemporary composers. He currently serves as the David S. Josephson Assistant Professor of Music in composition and theory at Brown University’s Department of Music. He was a winner of the prestigious Rome Prize and his output includes recent performances of his works by the New York Philharmonic, Boston Symphony, National Symphony Orchestra, and American Brass Quintet. I examined Nathan’s music intensely throughout my doctoral studies and I believe his works have greatly influenced solo trumpet repertoire. The purpose of this thesis is to explore the works of composer Eric Nathan in terms of their technical (i.e., instrumental technique) and notational elements. While not exhaustive, the analysis of specific pieces will provide a good representative sample of Nathan's compositional approach towards music for solo trumpet, which can be found in other works for this instrument by him. Through this analysis, I suggest that Nathan's music pushed the technical, and therefore expressive boundaries of the instrument. The thesis
will also consider how this activity expanded the usage of notational symbols and practices. Although some of the symbols and even techniques used by Nathan in his trumpet works had been explored before, the breadth of his compositional output not only gave them steady consistency in trumpet repertoire but made them standard practice through the development and establishment of a music literature for this instrument. Ultimately, this thesis considers how the convergence of notation and literature was key for the trumpet to secure a position as a solo instrument within the scope of western music practices. Nathan’s music is the lens to undertake this exploration.

In order to do this, the research that follows will examine innovations in notational practices in the music of the mid-twentieth century to the present, and how these innovations are reflected in trumpet literature. Western art music progressed in the twentieth century as composers sought to add new sounds to their works. The use of modern notation in the twentieth century has much to do with the addition of symbols, many of which have become common today. By the 1960s composers had been creating their own rules for notating extended techniques and other various musical devices that they wanted to incorporate into their pieces. It was important to update notation because there are many sounds an instrument can produce that had never been used or notated. This dissertation will detail the notational devices in Nathan’s music and compare them to other significant works in the repertoire. I will present musical examples that will demonstrate the innovations of these composers, and focus specifically on the notation that impacted trumpet music.
The standardization of new music notation cannot be discussed without first unpacking the issues that inspired change. To answer the question “what was happening in music in the middle of the twentieth century that instigated changes in notation?” I will present an overview of musical trends, spanning American Jazz and the serial music developed by Arnold Schoenberg. Nathan’s *Four Sculptures*, *Toying* and *Cantus* are indeed a reflection of these influences. For instance, *Toying* demonstrates the influence of Jazz, *Four Sculptures* presents an example of a tone row, and the trumpet part of *Cantus* is actually a transcription of Nathan himself improvising on the trumpet while playing and reacting to the electronic accompaniment he had created. Elements of Jazz in these works will be discussed but first, consider serialism.

Today’s theorists consider serialism as a game-changer in post-tonal music practices, especially in light of the precision that serial music writing entails. German composer Erhard Karkoschka, one of the first to classify and categorize modern notation in his book *Notation in New Music* (1966), writes: “serial methods, which on the whole place musical structures above numerical arrangements, lead finally to such complicated notation that it is increasingly difficult to interpret this music. For these reasons, composers turned to less determined or indeterminate areas at the end of the 1950s.”¹ Indeterminate areas in music include choices between alternatives, spontaneity, action, chance, anti-music and a whole slew of other discoveries.

As composers blazed their own paths during the 1960s, the lack of standardization in notational practices created challenges for both composers and the

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interpreting performer. For this reason, a plan to establish an Index of New Music Notation was devised in 1970. Kurt Stone led the efforts, and presented his findings in 1974 at the International Conference of New Music Notation. Eighty composers, musicians, musicologists, and editors came together and voted on the nearly 400 notational symbols and signs that were popping up in modern practice without any consistency from one composer to the next. The publication Music Notation in the Twentieth Century (1980) is the result of these studies.²

In order to learn how these efforts intersected with an interest to expand a narrative of western music history, this thesis will look at the notational changes that were standardized in the twentieth century and how they codified compositional practices. Ultimately, this description will be a backdrop to consider how the trumpet repertoire participated in this narrative. The following three chapters will unpack the thesis crafted around this issue thus: The first chapter will examine innovations in notation through a survey of composers and their works. It will also present examples of how these innovations offered new opportunities in the repertoire for the trumpet. As the trumpet tried to find its place in the canon of western literature as a solo instrument the standardization of notation was an important factor in consolidating solo music literature for the instrument. In the second chapter, the following three works will be analyzed: Toying (2012) for solo trumpet, Cantus (2008) for trumpet and electronics, and Four Sculptures (2007) for two trumpets. These three pieces showcase the trumpet as a solo

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instrument in different ways. The discussion of this music will be based on a study of the style and structure of the individual pieces.

The third chapter of this paper will look into the performance considerations of Nathan’s trumpet pieces and the influence of notational practices through the twenty-first century. As a trumpet player himself, Eric Nathan advantageously employs methods which are idiomatic for the performer to interpret. For that reason, these pieces are important to highlight the notational practices that have become standardized. Finally, there will be an overview of performance considerations including guidance in the preparation of this repertoire.
Chapter 1

Introduction

Sounds have no meaning until people use them in intentionally emotional ways. For composers of new music, it was necessary to create their own notational symbols so that performers could express the new sounds they had in mind. The Grove Music dictionary defines notation as “a visual analogue of musical sound, either as a record of sound heard or imagined or as a set of visual instructions for performers. Written notation indeed comes out of the tradition of oral notation.” It is notation that allows composers to convey their thought process while introducing aspects of human experience, evoking emotion and meaning. Furthermore, by tracing a line from the beginning of the twentieth century through the avant-garde and to the trumpet music of Eric Nathan, this chapter will give insight into his music style and the way in which it interacted with notational changes.

Classical Music in America

Before the first and Second World War, the United States was a melting pot of immigrants, and for them European music was a birthright. During The Great Depression, President Roosevelt wanted to create an ideal middle class. Part of his strategy was to put classical music in the center of American culture. Classical music was a means of legitimizing the full throttle of capitalism while still being able to produce

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a well-rounded citizen. Americans could be educated without trying to be sophisticated in the noble European way because capitalism was not about nobility at all. For that reason, they started to promote classical music and orchestras that can make affordable and accessible music to the American public. “The democratic Masses were evidently taking hold of an art that had long been the property of the elite.” The United States adopted classical music for a specific social mission. Considering the notion of how history was being written, it was partly how the US put itself in the stage of global politics after WWII.

America came out of the war with the strongest economy and with Roosevelt's model Americans could show that they were not just the roughnecks Europeans thought they were. America was now at the forefront of culture because the masses were claiming art that had previously been reserved for the elite. While Roosevelt's ‘New Deal’ was credited for these improvements, it was his wife Eleanor who had been the arts' true champion; she was likely the reason for its federal funding. Congress sadly put an end to the Federal Theater Project in 1939, “allowing other art projects to continue but only under State and local funding.” Steve Reich comments on the arts in America post WWII saying, “American arts, and not just music, became really world class… Jackson Pollock was not just a great American artist, he’s a great world artist, (for the) first time. That generation, the abstract expressionists, became the center of the artistic world. And my generation had that, which was a unique moment in history.”

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4 Alex Ross, The Rest is Noise, 261.
5 Ross, The Rest is Noise, 288.
6 In the Ocean, directed by Scheffer Frank. (2000).
Directions in Western Music

In the twentieth century, things were in a state of change, and as Hitler was rising to power the United States also steadily assumed a higher position of musical influence. An astounding number of composers settled in the U.S. during this period: Schoenberg, Stravinsky, Hindemith, Krenek, Bartok, Milhaud, Wolpe, Weill, and Rachmaninoff influenced a younger generation of American composers. By the 1940s, Europe had been devastated and its cultural life was in disarray. As the war had a profound effect on world culture, the Nazis spoiled ideas about the west and European tradition. The fine arts and classical music were used in their propaganda. They took what was considered to be the highest point in western music such as symphonism (through Beethoven) and the operatic tradition of Wagner, and tried to promote a new interpretation of history. With the discovery of the death camps in 1945 and the weight of atomic warfare, people realized that their civilizations, and their histories, were in shambles. Musicians then looked to create new paths of composition with a fresh perspective on Western Art Music.⁷

Composers at that time did not want to look back to the past. One way to do that was to stay away from anything that had to do with the notion of western tradition. As art music took a completely new direction, European tradition and its stylings had to be done away with. Composers started to experiment with other ways of making music and other ways of organizing musical events. This led to a domino effect of new musical theories and revolutions; the vernacular of modern music was often adjusted or all

together reinvented. Trends in composition went from 12-tone to serialism, chance, experimentation with electronics and so on.\textsuperscript{8}

**New Approaches**

Composers in America were looking away from Europe historically and institutionally after the anxiety of the war. Instead of working with elements of pitch organization and style, they decided to work with noise: sounds of the city, sounds of modernity, and the urban landscape. Composing music after the war was liberating because there was no way of notating those sounds. In the words of Julia Wolfe, “We don’t really have a lot of tradition… we’re a tradition of non-tradition, and that’s both terrible and liberating at the same time.”\textsuperscript{9}

The population and economy in post-war America were booming. Coinciding with the construction of arts centers and educational facilities on a national scale, there were also some notable technological advancements as a result of the war. Firstly, the affordable long playing record brought music to the masses spurring a revival of old music and giving critical exposure to the music of contemporary composers. Professionally produced recordings, not unlike notation, legitimized the ‘work’ by preserving it in a concrete form. Also, the mass production of wire recorders, and later tape recorders, made it possible to easily record rehearsals and performances. With these recordings immediately available to students and composers, awareness of contemporary music had heightened.\textsuperscript{10} Composers also began working with tape as a

\textsuperscript{8} Ross, *The Rest is Noise*, 355.

\textsuperscript{9} In the Ocean, Directed by Scheffer Frank. 2000.

way of organizing the experience itself and the recording of it. Graphic notation arose as a means of notating the experience of sound, which would become an important part of a new literary tradition of contemporary music notation.

The creation of the synthesizer soon followed, which allowed for the production and modification of electronic music. Professors at Columbia University were the first to use live-recorded sound with tape techniques in 1952. Seven years later the Columbia-Princeton Music Center was formed with the help of Milton Babbitt and the R.C.A. synthesizer. Another composer associated with the Columbia-Princeton Music Center was Bulent Arel, who later founded the electronic music studio at Yale where Eric Nathan would attend.¹¹

American composers such as Charles Ives, Henry Cowell, Lou Harrison, and Carl Ruggles were experimenting with sound early on in the twentieth century. Ives in particular who utilized polytonality, quotation, and spatial arrangement, was brought to the fore after WWII.¹² Ives was an innovator early in the twentieth century but was little known until recording technology caught up. He then proved to be a major influence. Ives was a kind of musical transcendentalist; he set out to create an art that was a musical equivalent to the work of Whitman, Emerson, and Thoreau.¹³ Interestingly Emerson’s poem *The Sphinx* contains the line "Thou art the unanswered question" and Eric Nathan pays tribute to Ives chamber work *The Unanswered Question* in his trumpet work *Four Sculptures*.

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Up until the 1950s, therefore, there was a lot of changes in music composition and performance. As more composers engaged with these changes they also realized the need for new ways of symbolizing the experiences they wanted to communicate in written form, and thus, of new signifying tools needed to produce repertoire.

Notation Development, Standardization, and the Trumpet

John Cage, Karlheinz Stockhausen, Sylvano Bussotti, Olivier Messiaen and Enrique Raxach are a few composers who played a crucial role in disseminating their individual forms of music since the mid-twentieth century. Part One will discuss these composers and their works to illustrate how they brought new ideas into western music and how notation was important to their historical concerns. It will also examine why and how the development of new notation was necessary where the standard notation was ineffective. Elements such as graphics, quarter-tones, tape, and electronics will be examined. Those elements were not only instrumental in developing new paths for notation but they also became important in positioning the trumpet in a new landscape of literature of western music in the United States.

Part Two will look at the standardization of new notation, which codified the literary traditions by which living composers like Eric Nathan would be influenced. While new music evolved, the trumpet was trying to find its place in the canon. As a solo instrument with the potential to a wide spectrum of extended techniques, the trumpet was participating in all of these changes. Through a survey of significant trumpet works,
Part 3 of this chapter will discuss how these developments are reflected in literature for the trumpet.

**Part One: Development of New Notation**

By following the trends in notation development we will discover some of the key players and how their musical ideas made a way for new trumpet literature as well. The examples that follow show how composers created and used new notational elements. They were selected because of their relevance and similarity to what is seen in Nathan's trumpet works.

The notation of music contributes to literary production by developing a practice to signify and study music. Notation as a way of symbolizing sound is important in order to leave precedent and to establish something tangible. Thus, the production of physical documents establishes a sense of continuity through the construction of *literature*. New notational approaches allow composers to come up with creative ways of connecting selectively and strategically to parts of the past. Music notation is important to that very endeavor because the documents produced created a canon of work that can be studied on an academic level in addition to being performed. Establishing the notion of a text was important because the subjectivity of the composer is on the documents themselves and once the literature was produced then they could establish a notion of the western tradition in music literacy and literary production.

In studying new music notation it is necessary to introduce the development and standardization of notation in the twentieth century. One of the early attempts to classify
and categorize modern notation is the book *Notation in New Music* published in 1966 by Erhard Karkoschka. In this publication, Karkoschka writes about how to approach twentieth-century music, and also catalogs symbols that are new in music and documents their sources of origin with nearly 100 musical examples. As Karkoschka says in the introduction, “The technical possibilities of a notation system also influence the act of composing - the entire way of thinking of all musicians - so that the aural image of a musical work in every epoch is characteristically related to its visual configuration.” What is all important is the sound of the note when it is produced and not how it is written in the score. The notation, therefore, needs not only to appropriately suit the music it represents but even more important to do this efficiently. Karkoschka then states, “we must also resign ourselves to the fact that notation as the visual translation of auditive and motoric phenomena will always have certain weaknesses, which can only be evaluated when the entire problem is faced.” He suggests that from his experience perhaps it is better to build on notation that has already been established rather than trying to reform the art entirely.

**Extreme Notation**

Music notation developments grew out of more than just an attraction to the avant-garde. Ethnic music outside of the western canon unquestionably had an effect on the musical compositions of the twentieth century as well. It also presented a number of problems. For example, notating the complex mathematics of Indian music, and

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14 Karkoschka, *Notation in New Music*, 1.
15 Karkoschka, *Notation in New Music*, 1.
16 Karkoschka, *Notation in New Music*, 1.
replicating Japanese instruments with orchestral instruments. Traditional Indian music makes use of a separate tuning system that includes the use of quarter-tones. Composers wanted to express more moods with their music so it became important to be able to notate quarter-tones. There have been a number of possibilities for notating quarter-tones over the years such as a backward flat sign representing a quarter-tone low and a sharp sign with only one vertical bar representing a quarter-tone below a traditional sharp. However, the standardized convention for this technique according to The Index of New Music Notation is a sharp or flat sign with an arrow up or down. This and other microtone notations such as one-third tone and one-sixth tone are described in detail in the index.\footnote{Karkoschka, Notation in New Music, 25.} Examples of microtones being used on the trumpet are present in all three of Eric Nathan’s solo trumpet pieces. Nathan’s notation for microtones and the techniques used for producing microtones on the trumpet will be addressed in the following chapters.

A more extreme example of quarter-tones can be seen in the music of Sylvano Bussotti. He was once tutored by Stockhausen and was also heavily influenced by the music of John Cage. His music seems to reflect the other disciplines he studied, such as painting and graphic art. Bussotti composed \textit{Siciliano} in 1967 for twelve male voices. He makes ample use of quarter-tones, indicated in Example 1-1. The quarter-tones here are indicated by a vertical line with a slanted horizontal line through it and three-quarter-tones are indicated by three vertical lines with a slanted horizontal line...
through it. This striking score which looks like musical art uses slanting of the staves themselves to indicate accelerating and decelerating tempi.\textsuperscript{18}

Example 1-1. Bussotti, \textit{Siciliano}.\textsuperscript{19}

\begin{center}
\begin{figure}
\includegraphics[width=\textwidth]{example.png}
\end{figure}
\end{center}

\textbf{Technology and Tape}

Technological developments in the twentieth century introduced some devices that many composers did not overlook. The use of tape machines and electronics in music is one innovation that composers including Nathan continue to employ today. The

\textsuperscript{18} Karkoschka, \textit{Notation in New Music}, 25.
\textsuperscript{19} Karkoschka, \textit{Notation in New Music}, 25.
tape has been replaced by other media such as CD and mp3. At one time punched tape was used to play electronic music. Punched tape is not to be mistaken for reel-to-reel tape, it was a tape made of paper and used for data storage. A punched tape machine would read the holes punched in the tape as it was fed through similar to the wheel of a music box.

Olivier Messiaen was one of the most influential composers and champions of new music in his time. He was a prisoner of war during WWII and his most well-known work *Quatuor pour la fin du temps* (1940) was composed during that time.\textsuperscript{20} *Timbres Durées* is the piece that follows in example 1-2. It is the first notated example of a piece solely composed of tape. Messiaen provides a key for how to read the music that is inscribed on the tape.

\textsuperscript{20} Stone, *Music Notation in the Twentieth Century*, xiii.
Stockhausen too was one of the frontrunners to experiment with tape recordings and live performance. In this example from pg. 1 of *Kantakte* (1960), there is a notated illustration of the tape part above the percussion and piano part. It is interesting to see how his drawings, or graphics, represent his interpretation of the taped sounds and events. Notice the precise time in seconds given at the top.

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21 Karkoschka, *Notation in New Music*, 164.
Example 1-3, Stockhausen, *Kantakte*.22

![Example 1-3, Stockhausen, *Kantakte*.](image)

**New Symbols in Notation**

The addition of symbols is probably the most noticeable thing when examining the development of new notation. Symbols can be used to simply indicate a note that is produced without playing in the traditional sense, such as plucking a string, tapping the instrument, key slaps, covering the bell, and glissandi to name a few. As a courtesy, the composer will often include a written instruction for at least the first appearance of a symbol in the part. When not using exact pitches such as those used in the techniques above the note head should occur as an x-shape, diamond, arrow or triangle.

Enrique Raxach is a Dutch composer of Spanish descent whose primary influences were Jolivet and Messiaen. As Huib Ramaer states in his Grove article,

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22 Karkoschka, *Notation in New Music*, 165.
“Raxach seeks to provoke by asking for a conscious reliance on the listener’s imagination.” Raxach’s *Estrofas* for six instruments (1962) is an example of a composition littered with symbols for the players to interpret. Notes with short vertical lines are played very short. The framed clarinet parts in the middle part of the excerpt are played irregularly and with free rhythm. If there are notes between two arrows joined by a crossbar they should be played as fast as possible, see the violin part in the first section. The squiggly lines in the last section indicate the action of scraping your feet across the floor. The clarinet simultaneously expels air (not through his instrument) while saying ‘FU’.\(^{23}\) Like the example below, Nathan’s music employs a variety of non-traditional notes and sounds, as well as expelling air and notating passages to be played as fast as possible.

Example 1-4 Raxach, *Estrofas*.\(^{24}\)

\(^{23}\) Karkoschka, *Notation in New Music*, 142.

\(^{24}\) Karkoschka, *Notation in New Music*, 142.
When writing rhythmic durations in traditional notation the only symbols at a composer’s disposal represent notes divisible by two. The division into 5 or 7 can be problematic because performers will unconsciously or instinctively subdivide a quintuplet into 2+3. “Non-specific notation” on the other hand, such as tone clusters or blocks of ink that notate general pitch, dynamic, and duration, was widely adopted as far back as the early twentieth century, an example being Edgard Varèse's Ionization (1931). On approximate note values: the contradiction with approximating note values is that the performer is likely to feel freer if they have mastered the meter. According to Karkoschka, “the composer’s experience also has a bearing on the problems of interpretation: freedom does not come from doing what one likes, but from mastering the rules. Doing what one likes is too close to indifference.”\textsuperscript{25} Some composers have been known to disregard the performance of their works, even going so far as to write unplayable music. “I am delighted to add another unplayable work to the repertoire,” Schoenberg once announced. “I want the concerto to be difficult and I want the little finger to become longer. I can’t wait.”\textsuperscript{26}

Written instructions in music or instructions that serve as the score itself must be considered a method of notation too, this was especially true for minimalist composers like John Cage. Many premieres of Cage’s music were performed with only verbal instruction given to the performers, which is perhaps the simplest way to convey a musical concept. Specific actions are often required in music where the desired effect can only be produced through the instruction of an action notation. However, if the

\textsuperscript{25} Karkoschka, Notation in New Music, 3.
action can be written with traditional notation and still achieve the same effect than an
action notation is pointless. Therefore, an action can be notated with a symbol
accompanied by instructions in the score. Similarly, musical graphics are symbols from
outside of the conventions of traditional notation. The meaning of the graphics
determines the musical action where standard notation would be ineffective.\(^{27}\)

The innovations in music notation described in Part One demonstrate only a
fraction of the level of experimentation that led to the development of a new literary
tradition within the canon of Western Art Music. The standardization of notation is the
next key issue.

**Part Two: Standardization**

With the development of notation, musical instructions became more and more
specific for performers. This occurred not only as a result of changing styles but
because as the concept of a musical ‘work’ took hold, the composers were able to
express their ideas more clearly in the score itself. Aural instructions are the most direct
way to communicate but in many ways notation as it exists today allows for more
expressivity. With more detail in the score, the performer does not have to assume
articulations, phrasing, and style, because of the clarity of the notation itself. The
interpretation of early music for instance, which has a lack of markings, was all but
forgotten until the practice of period performance became widespread.

\(^{27}\) Karkoschka, *Notation in New Music*, 6.
What constitutes as a musical ‘work’ anyhow? Musicians from an earlier time would adapt, decorate, and even improvise over a composition. Composers later came to expect their work to be performed exactly as notated because the score is the concrete preservation and representation of their ideas. Works became their own commodities and developments in notation were key to defining that distinction.28 Throughout the narrative of western music tradition, the concept of a “musical work” developed; an artistic product of “complete and discrete, original and fixed, personally owned units.”29 Because notation of music follows closely on the heels of script and written word, it represents the development of music literacy in western musical thought. A work’s notation codifies musical ideas because the act of notating defines them graphically as part of a text. Musical literacy has been important in giving longevity to this historical narrative as the interpretation of a text hinges on the interpretation by its reader, the performer.

The notation of musical instructions and extended techniques such as the ones described in the first part of this chapter made new pathways for composers to explore the previously unused sounds that instruments were capable of making. The standardization of new music notation and its effect on music literacy in the twenty-first century paved the way for instruments and led to an outpouring of new repertoire for the trumpet. These notational symbols and those in Nathan’s music become important not only because they define a repertoire for the trumpet but because it is through this symbology that is pertinent to the development of notation in the twentieth century. It is

also with this symbology that the trumpet became a prominent instrument in the solo repertoire in western music.

Developing new music notation was necessary to renew western practices. In comparing a work of literature to a musical work, James Grier explains, “The work of music… participates in a very different relationship with its physical manifestations whether in sound or in writing, a relationship that fundamentally affects the textual condition of the work of music. That difference begins from the recognition that the text of a work, its score, is not self-sufficient, that text and work, therefore, are not synonymous.”30 The development of new notation was not only important because it became the text of new musical works, but because it legitimized these new works by standardizing new notational practices. The standardization of notation made it possible for performers to efficiently interpret new musical ideas. People use sounds before they talk about them, but once a given instrumental technique starts showing up in more and more works, the notation of that technique becomes part of the performers' musical vocabulary.

“In the Western tradition, music notation may be used to help musicians read at sight and may also provide a guide for improvisation. When a composer is able to provide a permanent depiction of his/her ideas, they enable performers to recreate the work with no further communication.”31 Musical signs rely on these factors but they are not necessarily concrete because down the line they are liable to be interpreted by a new generation of performers whose conventions have since changed. The performer

31 Bent, "Notation."
must consider these factors in a historical aspect. The need for standard literacy, therefore, is apparent for the longevity of historical tradition.\(^{32}\)

“Only rarely has music fashioned its own sign systems. It has generally been content to take over systems in use for other purposes (such as the representation of arithmetical values, of speech inflection or of the sounds of natural language). In so doing it has often discarded part of the system and modified the shapes of the signs to suit its purpose.”\(^{33}\) Performers need to be able to interpret the composer's original ideas. James Grier addresses this issue in his publication *The Critical Editing of Music: History, Method, and Practice*. He says that the performer reacts to the music based not only on what notation they see in the score but also their “aesthetic taste” and whether or not they’ve already been exposed to the piece. It is assumed that some details of a musical work are left to the liberty of the performer. A performer interprets notational symbols in context and with relationship to all of the other information in the score. “The degree of detail in the notation defines the context within which those individual symbols derive their meaning.”\(^{34}\)

How is the style of a piece conveyed through its notation? The phrasing and emotion conveyed by a performer, which could be called style, is encoded in the work’s notational symbols. Style is also the collective category for works written in a certain way, and because style has a historical context it comes from the very social and cultural contexts to which it contributes. As Grier states, however, “not all particulars of a performance are fixed by the text, and so the performer must bear the responsibility of


\(^{33}\) Bent, "Notation."

deciding how to realize those particulars, according to the precepts of convention. The nexus of the composer’s instruction, as inscribed in the text of the work, and the performer’s interpretation of that instruction creates the work’s style.”

Even with evidence of all of these developments, there was still a meager number of new works for the trumpet well into the twentieth century. One of the early champions of new music for the trumpet was Thomas Stevens. His extensive output of recordings brought attention to the trumpet and they continue to inspire performers and students. In the first ever publication of the *International Trumpet Guild Journal*, Stevens wrote an article imploring trumpeters to embrace new music.

“We cannot overlook the fact that even though the trumpet has existed in its present form most of this century; two generations of trumpeters have somehow managed to avoid having major works written for them by the leading composers of the times. Barber, Bartok, Berg, Copland, Poulenc, Prokofiev, Schoenberg, Shostakovich, Stravinsky, Walton, Webern,... for example. All wrote well for the instrument, and they similarly wrote solo works for other instruments. Yet, for any number of reasons, the trumpet, as a solo instrument, was neglected. The result? Not only a needless extension of the void in our repertoire from the classical and Romantic Periods, but also a denial of the logical historical musical continuity which has led to present day musical developments.”

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How does this all apply to notation within trumpet repertoire specifically? The issue of standardization of techniques is important to position the trumpet as a solo instrument in Western music. The issue of notation is important to the process of standardizing extended techniques because notation gives a framework for the technique to be used in an expressive way. The convergence of notation and literature was key for the trumpet to secure a position as a solo instrument within the scope of western music practices. The standardization of new music notation consequently relies on the topic of musical literacy. The following section will look at significant examples of the way composers implemented experimental notation in the trumpet repertoire.

**Part Three: Notation in the Trumpet Repertoire**

Perhaps more than any other instrument, the trumpet and its repertoire has changed the most throughout history. This is due to the advent of the valve which gave the instrument the ability to play a chromatic scale. Well behind the curve of other orchestral instruments, the valved trumpet did not begin to fully replace natural trumpets until the Romantic period. Trumpet technique began to evolve considerably in the twentieth century firstly because the instruments were now manufactured with consistency and any musician could now find an affordable and playable instrument. Along with this came a selection of mutes and mouthpieces that were not previously available. Also, there was generally a better knowledge of different articulations, aspects of range, and the physical demand of playing the instrument. In many cases trumpet techniques often associated exclusively with 20th century Western Classical music were
born in other genres. Flutter tonguing, for example, was called for by Richard Strauss in his tone poem *Don Quixote* in 1897 with the indication FL, FLZ, or FR.... Growling, as a second example, has Jazz roots. Rather than rolling the *R* it is produced by the throat. Eric Nathan’s music for trumpet is also influenced by jazz, improvisation, and jazz trumpet techniques. He notates both flutter tongue and growling in his solo works as well as plunger mute indications and other jazz-like nuances.

The influence Jazz has had on expanding trumpet technique stems from the range, agility, and expressivity of great Jazz musicians such as Harry James and Louis Armstrong. Jazz music has also played a considerable role however unintentional in advancing modern notation. Not only is it an American art form based on improvisation but many of the instrumental techniques that were commonly used by the great Jazz artists had never been notated in Western Art Music. According to Attilio Tribuzi in his dissertation “Extended Trumpet Performance Techniques,” “Rips, pops, smears, growls, shakes, glissandi, lip slurs, and lip trill techniques were added to the trumpet player’s repertoire and have since become standard practice in many contemporary styles.”

**Luciano Berio**

One composer to embrace such idioms and artistic styles is Luciano Berio. His work shows the influence of contemporary linguistics studies. Berio merges linguistics with music similar to the way Messiaen merged music with nature, especially the sounds of birds. Berio brought his own unique language of music to the US. In fact,

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37 Gabriele Cassone, *The Trumpet Book* (Varese, Italy: Zecchini, 2009), 143-144.
during the summer of 1960 he was a faculty member of the Berkshire Music Festival and according to David Bubsey’s Grove article “Copland, who was also teaching there, commented in a letter to Bernstein that things were rather routine that summer except for Berio who was “stirring things up considerably.”

The example below, from Luciano Berio’s *Sequenza X* (1984), was written for Thomas Stevens. Interestingly *Sequenza X* contains a variety of tonguing techniques made popular by Jazz musicians. In the *Sequenza X* doodle tonguing is indicated by “DL,” flutter tongue as “FL,” and valve tremolo as “VT,” which is also a common Jazz embellishment. Doodle tonguing is produced by rapidly articulated notes with the tongue acting as though the player were saying “doodle-doodle-doodle.” Doodle tonguing is a softer or more legato variation on double tonguing. The valve tremolo is a trill to the same note using an alternate fingering that produces the same pitch. The composer must have knowledge of the physics of the instrument in order to know what tremolos are possible to notate. Double tonguing is not indicated because it is presumed that notes that are too fast to single tongue are performed by double tonguing. To articulate a passage using the double tongue technique the player pronounces the syllables “Tah” and “Kah” in succession, often seen as T-K-T-K in method books. Notice that in this excerpt the player must change rapidly from one technique to another, such as *DT* to *FT*, double tongue to *DT* and *VT* to *FT*.

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Example 1-5. Berio, *Sequenza X.*

Another technique from the Berio that resembles the *talking trumpet* technique heard in Jazz music is the use of the hand to cover the bell. With the *talking trumpet* technique, the players’ hand, or a household toilet plunger was used to change the timbre of the instrument. The plunger functions like a lower jaw and produces a ‘wah’ or a ‘how’ sound when covering and uncovering the bell. A similar effect is produced in the *Sequenza* by covering the bell with the hand, which is signified by the symbols + or o. It should be noted that covering the bell completely with raise the pitch of the instrument by a semitone and so the note should be transposed by the performer accordingly.

Another directly jazz influenced effect in the Berio is the use of the *shake*. The *shake* is a wild-sounding lip slur from one harmonic partial to another with the same fingering.

While performing all of these gestures the performer is also frequently instructed to turn around quickly, bend over, and play a note into the open piano producing a sympathetic

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harmony and reverberation. The pianist does not play any notes but operates the pedals and silently depresses the keys. This technique is indicated with an arrow pointing down.

Example 1-6. Berio Sequenza X.  

![Example 1-6. Berio Sequenza X.](image)

Giacinto Scelsi

Quarter-tones, as described in part 1, have also shown up in literature for the trumpet. Giacinto Scelsi demonstrates an example of this in his Quattro Pezzi pour trompette solo (1956). Scelsi was a well-traveled man. He was influenced by a wide variety of cultures, eastern instruments, the monastic life of Tibetan Buddhism and Mediterranean folk music. He composed his music either at the piano or on an Ondiola, which is an electronic instrument with a dial that could produce microtonal inflections. His use of quarter-tones in Quattro Pezzi is notated with an arrow pointing to the note and the instruction \( \frac{1}{4} \) di tono + for a quarter-tone sharp and \( \frac{1}{4} \) di tono - for a quarter-tone flat. As seen in the example, these are sometimes used in conjunction with glissandos. There are several ways to produce microtones on a trumpet. One way is to

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41 Luciano Berio, Sequenza X: per tromba in do. (Milano, Italy: Universal Editions, 1884).
force notes sharp or flat by lipping the note upward. This is by far the least accurate solution. Some trumpets are equipped with a pitch finder, which is a trigger mechanism that operates the instruments tuning slide. These are rarely seen. The most accurate solution for performing quarter-tones is to modify a four-valve instrument with a quarter-tone valve. A four-valve Bb trumpet or flugelhorn would be a perfect candidate for such a modification. The most practical solution however and the most widely used is by activating the first and third valve slides to lower notes by a quarter-tone. In the example of Quattro Pezzi the G \( \frac{1}{4} \text{ di tono} \) + would be played as a G# with the third valve slide extended, for example.

Example 1-7. Scelsi, *Quattro Pezzi pour trompette solo*.\(^{43}\)

Robert Erickson's composition *Kryl* (1977) comes with a set of instructions that accompany the music. Microtones appear with vertical arrows above or below notes, which indicated the direction of microtonal deviation but not the degree (i.e. $\frac{1}{4}$ $\frac{1}{3}$ $\frac{1}{6}$). For notating quarter-tones for the trumpet, Erickson took it upon himself to simplify the process for the performer by creating a system that indicates when to move the trumpet's slides. Quarter-tones are therefore not notated at all but rather symbolized by a box with an arrow and number, indicating which direction to move which slide. Additionally, there are parts of the piece where microtones occur as the result of removing the first valve slide. In this instance, the air/sound is directed out of the trumpet's tubing and toward the performer, creating a kind of detuned echo effect. *Kryl* also uses the pedal tones and double pedal tones, which are notated normally but are considered an extended technique on modern instruments. Pedal tones, in this case, are used in a passage where singing is also required. Various styles of singing are all notated differently: pitches sung in the normal voice are notated with 'x' note-heads to differentiate between the trumpets notes, “SCR” is an abbreviation for “scream,” the instruction *Glottal Fry Ingressive* indicates inward singing, and a vertical flattened note-head indicates a relatively pitched “loud-breath.”

Robert Erickson was one composer with a gift for achieving bizarre sounds out of the trumpet. He once said, "If you get right down to the bottom of what composers do, I think that what composers do now and have always done is to compose their environment in some sense. So I get a special little lift about working with environmental
sounds." He taught at the University of California San Diego alongside trumpet faculty Edwin Harkins. The two collaborated on many projects including *Kryl for solo trumpet in C*, a piece named after the famous bandleader and traveling cornet soloist Bohumir Kryl. Erickson’s last composition *Music for Trumpet, Strings, and Tympani* (1990) uses many of the same concepts as *Kryl* but is less frequently performed.

Example 1-8. Erickson, *Kryl*.44

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Heinz Karl Gruber

Heinz Karl Gruber, an Austrian composer, initially began writing serial music in the 1960s but soon turned to his own style of surreal tonality. A couple of his better-known works are *Frankenstein!! For Baritone reciter and Orchestra* (1976) and his solo for trumpet called *Exposed Throat* (2000). *Exposed Throat* is another composition that creates hocket and echo effects by specifying the removal of valve slides. The notation of multiphonics stands out in this composition. There are two staffs, one for singing and one for playing, and above the notated sung notes is an ‘x,’ which

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indicates the *resultant tone* that should occur from playing and singing the written interval. This in effect creates a chord. The concept of the *resultant tone* has been known for centuries, baroque trumpet players practice intonation by playing intervals that produce *resultant tones*. Fingerings are indicated throughout, suggesting alternate fingerings that avoid using whichever valve has had its slide removed. The abbreviation *ord.* stands for "ordinary" and is written when the performer should resume playing the normal fingerings.

Example 1-10. Gruber, *Exposed Throat.*

![Example 1-10](image)

Similar to the Berio *Sequenza* there is the technique of covering the bell with the hand (notated + and -) in *Exposed Throat*. Here, Gruber also adds the instruction *poco a poco h.o.b.* to the hand symbols, which is accompanied by a horizontal line indicating

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duration. The acronym h.o.b. stands for ‘hand on bell.’ The player must navigate some very technical passages while covering and uncovering the bell, little by little.

Example 1-11, Gruber, *Exposed Throat*.\(^{48}\)

![Musical notation](image)

**Hans Werner Henze**

Vibrato in contemporary music is usually more than just the conventional beautifying of a note. Various types of vibrato can actually be notated. The second movement of the Hans Werner Henze *Sonatina* (1974) has notated quarter-tone vibrato. This can be obtained with the performer’s hand, jaw, or both depending on the players’ preference. Trumpet soloist Gabriele Cassone suggests, “What is important is to assign a character to the oscillation - such as melancholy, sad, or hysterical; the player should not just play random vibrato, but make a conscious decision to lend an appropriate character to the piece.”\(^{49}\) The asterisk symbol ( * ) seen on the score between two

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hairpins is used to indicate removing the mute halfway from the bell at the climax of the crescendo and then reinserting it for the decrescendo.

Example 1-12. Henze, *Sonatina*.\(^{50}\)

Henze has touched on many compositional styles in his life, from his Third Symphony completed in 1950, which drew on serialism to his Fourth Symphony (1955), which can be considered 'Italianate' and lushly harmonic. His work for trumpet has become one of the staples of the repertoire.

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\(^{50}\) Henze, Hans Werner. *Sonatina*. (Mainz, Germany: Schott 1926).
Concluding Remarks

By recounting the most notable historical elements that produced a new breed of musicians and composers in the twentieth century, this chapter points to how the music written as a reaction to this activity expanded the usage of notational symbols and practices. Consequently, the development and standardization of these practices contributed to the inclusion and expansion of repertoire for the trumpet. Music notation produces documents which in themselves legitimize new musical ideas. This creates a literary tradition which generated a position for the trumpet, as a modern instrument, to participate in solo and chamber music genres in the twentieth century and today.

The repertoire for the trumpet has seen considerable change in notation and musical detail since the mid-twentieth century. The level of detail in the score places increased musical requirements on the performer as the examples above demonstrate. Performers have now become literate in this tradition and the canon of repertoire for the trumpet has a wider range of expression than ever before. Development of new music notation as seen through the trumpet's repertoire has bolstered the instruments rank as a solo instrument. Ultimately, this thesis considers how the convergence of notation and literature was key for the trumpet to secure a position as a solo instrument within the scope of western music practices.
Chapter 2

Introduction

The following chapter is an analysis of three pieces by Eric Nathan: *Cantus* (2008) for trumpet and electronics, *Four Sculptures* (2007) for two trumpets, and *Toying* (2012) for solo trumpet. Nathan’s use of extended techniques and notational approaches will be examined for each piece. How the techniques are used to create varying effects such as deconstructing the instrument, extended techniques, and compositional effects, will be discussed from one piece to another. Insight into the compositional process will be explored and musical examples will be included with a theoretical analysis of each work to aid in the discussion.

As this chapter will reveal, there is a consideration of form in Nathan’s trumpet works creating a long scale narrative trajectory of the musical line across a whole piece. In addition to form, Nathan composes with consideration to the rotation of musical material, bringing it back slightly deformed each time. According to Nathan, what creates meaning in form is when repeated material is either missing an element or has changed in some way.\(^{51}\)

All three trumpet works utilize compositional techniques that stem from Nathan’s expertise with the instrument. *Cantus* was inspired by jazz styles and improvisation. *Four Sculptures* was inspired by the artwork of Derek Parker and in this composition, Nathan explores the concept of distance using only two trumpets and a variety of

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\(^{51}\) Eric Nathan, personal interview, February 24, 2014.
mutes. *Toying* is inspired by actual toys and incorporates elements of both of Nathan’s earlier trumpet works. While Nathan’s trumpet pieces are non-tonal there are tonal elements to each. His compositions contain the expectation of “inner-logic, harmonic-logic, and rhythmic-logic,” as well as elements that remain from his upbringing in Western Classical music.\(^{52}\) Lastly, the position of these pieces in the trumpet repertoire will be examined as well as their relevance in positioning the trumpet as a solo instrument in Western music.

### Part 1: *Cantus* (2008) for trumpet and electronics

The meaning of the word *Cantus* references Latin chant or an early-music style of singing, such as a medieval chant that would be sung in church. Nathan’s use of the word “cantus” to title his solo for trumpet and electronics is also a clue to the performance practice of the work.

*Cantus* was composed for trumpeter John Adler. Adler commissioned the work in preparation to record a compact disc and he specifically requested a piece with a Jazz influence. In addition to the use of mutes and the inclusion of improvisation, the Jazz influence of the solo comes from the fact that Nathan also used improvisation in the process of writing the piece. There is another connection to early music in that the notation used in old music was used as a guide for embellishment, or extemporization, and Nathan’s notation throughout sections of *Cantus* act in the same way.\(^{53}\)

\(^{52}\) Nathan, interview.

\(^{53}\) Nathan, interview.
Cantus - Compositional Approaches

Technological advancements have changed the formats available to composers for taped or electronic accompaniments. *Cantus* for solo trumpet and electronics is performed with an mp3 as an electronic version of a tape. Nathan's use of graphic notation to depict the electronic accompaniment bear a striking resemblance to Stockhausen's *Kontakte* (see Example 1-3). Precise timings are notated in the score and the convenience of an mp3 recording allows the performer to plug in their mobile device, and go.

The approach to creating electronic music is different than composing acoustic music in that the composer already has an unlimited palette to use. With acoustic instruments, there are limitations in using only the sounds that the instrument can produce. In my interview, I learned that Nathan sourced material for the accompaniment to *Cantus* by recording himself and also using other existing recordings of his own music. Through the composing process, Nathan would compose parts of the electronic accompaniment, and then play trumpet over it to map out the general notes or contours. The actual rhythms, however, were all improvised live. He notated it afterward and assigned a metronome marking of half-note equals 60 to the work. As an improviser, he was able to respond musically and emotionally to what he was hearing on the tape, the same way a jazz musician performs. Nathan says, “you probably won’t be able to hear any Jazz in my music but I have been so inspired from improvising with another person...
and when you’re improvising in a Jazz setting you are spontaneously reacting to what the other person is saying in real time.”54

The parameters Nathan placed on this composition are restricted to a very limited amount of material in the electronics part. There is a sample of a trumpet playing a Bb in the opening, which Nathan recorded himself using a sequencing program. He then sampled it down to grain, or very short lengths. The grain can be made to alternate between different intervals and it can be played backward, which is what Nathan ultimately writes at the beginning of Cantus. Later in the piece, there are snarling sounds which come from the opening sample, transposed over wider intervals. Much of the accompaniment came from that one sample that was then manipulated with editing programs.

Another sound source in the opening of Cantus comes from a recording of the first movement of Nathan’s wind ensemble piece titled Falling Up. With the music sped up to the space of only a few seconds it could then be transposed into higher or lower pitch levels. The low rumbling sounds, represented in the score with graphic notation, are an example of the wind ensemble piece sped up very fast while bringing out the lower harmonics. At the end of the piece, you can hear it in its full length where the rapid accents are actually big crescendos that the wind ensemble played but again at a very fast rate. There are also some synthesizer sounds or synth patches that sound like sine tones in the background and the crackling sound which resembles breaking glass. The broken glass-detuned piano effect seen below are also notated graphically.

54 Nathan, interview.
Example 2-1. Eric Nathan, Cantus, mm 65-66.  


**Cantus - Deconstructing the Instrument**

The score calls for the soloist to deconstruct his or her instrument by removing the second valve slide, which allows air and sound to escape from the open tube on the side of the instrument. This creates a thinner, less present tone than that produced through the bell of the trumpet. Deconstructing the trumpet creates its own limitations and that’s where the harmonic language comes from. The effect of removing any of the three slides affects the pitch material because you can only play certain notes, some are omitted because of the missing tubing and a limited number of notes can be played through the open tube when the corresponding valve is compressed. Therefore it creates a pitch material for the composer using only those remaining notes. In the performance notes, Nathan instructs “the second valve slide should be removed from the trumpet for the first portion of the piece. When the second valve slide is removed,

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many of the fingerings in this movement will result in microtones. For each microtone, the closest sounding tempered pitch is notated." These are indicated with a diamond-shaped notehead as seen in example 2-3, and alternate fingerings are indicated throughout the score to produce ‘normal’ notes that avoid the second valve.

Example 2-3. Eric Nathan, Cantus, mm 72-76.

Cantus - Glissandi

A slide glissando is an extended technique that is rarely heard on the trumpet. Glissandi are used throughout Cantus and they are notated with a straight line between two noteheads and the indication to perform a \textit{gliss.} or \textit{slow gliss.} The performance notes also specify that “all glissandi in the movement are achieved by extending the third valve slide (unless otherwise notated.) All of the glissandi are marked with a fingering." The \textit{gliss} notation which is performed by extending either the first or third slides has similar limitations posed by having the slide removed, therefore the \textit{gliss} technique can only be used on the available pitches. Movements of \textit{Four Sculptures} and \textit{Toying} also utilize the deconstructed trumpet technique. The score to Cantus includes instructions above the glissando technique when the performer should begin

\footnotesize
\begin{footnotes}
\end{footnotes}
with the third valve slide extended. In the case of the bars 144-145, the glissando from Bb-A is performed with the first valve slide but must also be a performed with a lip bend because the slide is not long enough to lower the pitch by a full half step. In example 2-4, the score reads “lip gliss. w/1st slide.”

Example 2-4. Eric Nathan, Cantus, mm 143-145.\(^{59}\)

Cantus - More Effects

Other effects and extended techniques such as growling and flutter tongue are used. Nathan notates the techniques with the standard tremolo marking with text above indicating a flutter tongue or growl.

Example 2-5. Eric Nathan, Cantus, mm 89-92.

Cantus - Improvisation

There are two aspects of improvisation in this piece, the first is Nathan’s part as the composer and the way his own improvisation became the notated trumpet solo. Secondly, there is this improvised section for the soloist in the middle of the piece. This passage increasingly uses improvisation giving the performer more and more freedom as the climax of the piece approaches. Seen in example 2-6, at bar 101 the part reads “ad lib. random intervals” and the next three bars have strings of erratic 16th notes with x-shaped noteheads. The pitches here are up to the performer to improvise but the rhythms are notated. After that, the performer is instructed to “improvise musical gestures on the trumpet according to the contours given below (spastic, violent outbursts).” Here the notation resembles squiggly graphics with rests notated in between. Keeping in mind that the solo part is a transcription of Nathan improvising to the accompaniment, these outbursts represent him reacting to the electronic part when he first performed them. Specific dynamics and hairpins are indicated. By measure 117, the music is completely improvised and Nathan specifies to continue with “wild outbursts of varying length and increasing urgency.” The crescendo to fortissimo in mm. 124 is in synchronization with the electronic accompaniment followed by a suddenly slower and a meditative passage ending the piece.
Example 2-6. Eric Nathan, Cantus, mm 99-124.\textsuperscript{60}

Cantus - Form

The form of Cantus is a traditional ABA, or ternary form in that the material from the beginning comes back at the end, however, it is transformed like a coda. The musical lines, especially at the beginning of the piece, are very lyrical and vocal in nature. Harmonically, the trumpet melody begins with a minor second and wedges outward. This compositional idea appears in movements of Nathan’s other pieces. Two overarching themes in Cantus are the slow slide glissandi and the microtone statement which is a 16th note - dotted 8th note rhythm in which the 16th note is a normal note and the dotted 8th note is coming from the exposed second valve slide. See example 2-7.

\textsuperscript{60} Eric Nathan, Cantus (Victoria, BC: qPress, 2010).
Towards the middle, the work’s texture becomes more dense with intense and urgent material. “When everything falls apart you’re left picking up the pieces at the end.” Measure 69 is more urgent and foreshadows the “Agitated” section beginning at 87 with the 16th note - dotted 8th note idea. This faster section has a quarter note pulse that is aggressive and driving. The microtone statement is now much more forward sounding because the trumpet is reconstructed. The microtones here are produced with false fingerings that are indicated in the score instead of the deconstructed trumpet as before. (Example 2-8)

Example 2-7. Eric Nathan, Cantus, mm 64-76.

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61 Nathan, interview.
62 Eric Nathan, Cantus (Victoria, BC: qPress, 2010).
Example 2-8. Eric Nathan, Cantus, mm 87-90.

Cantus - Accompaniment

At the end of the piece when there is an echo, the echo on the accompaniment is a recording of Nathan playing the main line electronically but transposed up two octaves. This idea is ingenious because it mimics the effect of a performer playing with live electronics.

The score to Cantus includes the trumpet solo along with a graphically notated electronics part. The electronics part in the score includes just enough information for the performer to follow along with the mp3. As seen in the examples above, important pitches are notated as well as trills, graphics for broken glass/de-tuned piano sounds, low rumbling sounds, and ques for the electronic trumpet echo. From measure 88-125 the electronic part is not notated but the score says the “electronic part gains intensity and urgency, expanding in range until the climax at mm. 125.”

Cantus - Conclusion

Cantus is unique among Nathan’s trumpet works in that it includes the use of an electronic accompaniment and improvisation. Through the use of deconstructing the

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63 Eric Nathan, Cantus (Victoria, BC: qPress, 2010).
instrument and a variety of other extended techniques the piece demonstrates an array of characters as well as the trumpet’s lyrical ability to imitate the voice. These techniques created notational challenges to communicate musical ideas, which led to the introduction and standardization of new symbols and markings in the trumpet’s repertoire. Nathan’s use of symbols shows a musically reinventive approach towards the instrument.

The two overarching motives, slide glissandi and the microtone statement of a 16th note - dotted 8th rhythm originates in a different composition of Nathan’s, *Four Sculptures*. The same microtone motif is used in another way in the second movement of *Four Sculptures*, which will be discussed in Part Two of this chapter.

**Part Two: *Four Sculptures* (2007) for two trumpets**

*Four Sculptures* for two trumpets is a piece inspired by four different works of art created by Derek Parker. Because the movements have a narrative behind them it gives them a storytelling quality, and imaginative trumpet writing. The names of the sculptures are: *Fifteen Feet Closer to the Sky*, *Submarine Egg*, *In Memoriam*, and *Going Up the Down Side*. One unifying aspect of this composition is the idea of distance and how each movement has a different way of conveying distance to the listener. For each movement of this piece, I will discuss the compositional themes such as: distance, tone painting, and microtones.
Four Sculptures - Compositional Approaches

Nathan composed this piece while still studying with Claude Baker at Indiana University. During this period almost all the pieces he wrote there were inspired by visual art such as painting and kinetic sculpture which are linked to the abstract nature of those compositions. Nathan was using visual artwork as a way of finding new ideas and new concepts that he could translate into music. Their artworks were a springboard for his music and while he doesn’t necessarily write about the artwork itself, he does take things that are appealing from the art that would enhance his music. Like Nathan’s other trumpet works, the effect this piece has is especially satisfying because Nathan is intimately familiar with the capabilities of the instrument. Rather than composing at the keyboard, he is able to work out each line with the trumpet.

Movement I. Fifteen Feet Closer to the Sky

This sculpture is of two metal wires that wrap around each other, and they are about fifteen feet tall. It’s called Fifteen Feet Closer to the Sky and at the ends of the wires are metallic representations of paper airplanes. The two trumpets here are represented by the paper airplanes beginning at the base of the sculpture and then intertwining with each other all the way to the top. As the planes reach the top, the music builds momentum, until the planes “Gradually [disappear] into the sky,” appearing as if they will shoot off in different directions.

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Four Sculptures Movement I - Distance

The trumpets sound like they are far away in this movement because of the use of practice mutes. This is the first way in which Nathan engages with the idea of distance. It begins very soft with practices mutes which draws in the listener. In this movement, the harmonic structure begins on a minor second and gradually moves outward and upward.

Four Sculptures Movement I - Tone Painting 1

The movement is loaded with an array of virtuosic and sometimes long strings of grace notes throughout. The grace notes have a fluttering type of sound like a bird or insect, implying flight. The two melodic lines intertwine and continually correspond to each other as they ascend, as in the sculpture. In measure 10, the trumpets take turns, one comes through the fore as a melodic voice, which is the main melody of this movement. The other part meanwhile continues to meander.
As the melody takes flight in bar 10, trumpet 1 is marked *forte* which comes through with a brassy and metallic sound as a result of the practice mute. At 27, they

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become more like one instrument as the fluttering grace notes become alternating runs of sixteenth notes.

Example 2-10. Eric Nathan, Four Sculptures Mvt. 1, mm 27-28.66

Four Sculptures Movement I - Tone Painting 2

In the end, as they rise to the sky the rhythmic values get longer and longer as they fly away. Beginning at measure 44 to the end there is an altered statement of the main theme. As seen in the example below, the F’s at the end are getting farther apart in distance and time. This type of sound-image synchronization is also used to begin the second movement, “Submarine Egg.”

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Movement II. Submarine Egg

This sculpture, the *Submarine Egg*, is a sculpture of an egg-shaped submarine in a bird’s nest. It represents how the United States Navy became Derek Parker’s home away from home. In this movement, there are sounds of sonar pings which can be heard throughout, as well as fragments of the “Star Spangled Banner.” In contrast to the soft first movement, the second movement begins with very loud accents like a gunshot. The contrast in distance conveyed in “Submarine Egg” is startling and up-close: a valve slide is removed, creating an instrument that is both near and far as if the trumpet is antiphonal. Harmonically, the piece starts on C and moves down chromatically, a sound-image synchronization of a submarine as seen in example 2-12. As the

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submarine dives these descending chromatic pitches will also come to represent the
sonar pings of a submarine.

**Four Sculptures Movement II - Tone Painting**

In my interview with Nathan, he explains how the opening of this piece was
inspired by the experience of firing a gun: “I remember that was the first time I had really
heard a gunshot… the memory of the gunshot’s sound, and how long it decayed was
indelible. I had started writing this piece soon after that, and the opening was inspired
by that whole experience… There may even be 21 shots because I was thinking of the
beginning like a 21 Gun Salute.”68 See example 2-12.

**Four Sculptures Movement II - Microtones**

In this movement, the first trumpet has the second valve slide removed and the
second trumpet has the first valve slide removed. The gunshot effects are produced by
a loud accented 16th note followed by a dotted 8th of the closest microtonal pitch
coming from the exposed first and second valve slides respectively. This extended
technique which occurs in Nathan’s other trumpet works is used here in a different
manner. With this technique, there is an antiphonal aspect where the directionality of the
bell and the sound coming out of the back or to the side of the trumpet with a totally
different timbre creates what sounds like two instruments in one.

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68 Nathan, interview.
Nathan’s intimate knowledge of the trumpet enabled him to re-finger the whole movement. In the performance notes, the performers are instructed “the use of many of the fingerings in this movement will result in microtones… these pitches do not sound according to conventional fingerings. The fingerings required to produce these notes are indicated throughout the movement.” In some instances, however, the score is marked with an asterisk indicating the performer should use the traditional fingerings. In those passages, the sounding microtonal pitches are notated above the staff. As in the Cantus trumpet part, the microtones are notated with diamond-shaped noteheads. Slide glissandi are also used throughout the movement. Notation for this technique is also consistent with how he used glissandi in Cantus.

**Four Sculptures Movement II - Star Spangled Banner**

In measure 37, the gunshot effect from the opening returns and in this last section the Star Spangled Banner motives become audible. The line “and the rockets

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red glare, the bombs bursting in air” is primarily where all the melodic material comes from after measure 28. The clearest statements, however, occur from measure 54 to the end. See example 2-13 where the full iteration of the theme is in the first trumpet part at measure 54, and then the second trumpet between 55 and 56 and again the E-F#-G in mm. 57-58. Finally, the first trumpet plays the phrase “and the home of the brave” at bar 61. “At the end, after the “Home and the Brave”...[there is] the remembrance of the sonar ping, or gunshot, in a kind of coy way.”\textsuperscript{71} In the last sonar pings, the second trumpet is playing through the 1st valve slide only while the first trumpet is also holding out a microtone pitch notated as a C. The piece concludes as a sustained C and B diminuendo to \textit{pp}, the same pitches heard in the beginning.

\textsuperscript{71} Nathan, interview.
Example 2-13. Eric Nathan, Four Sculptures Mvt. 2, mm 51-70.\textsuperscript{72}

Four Sculptures Movement II - Deconstructed Trumpet

Of the three pieces examined in this chapter Four Sculptures was composed first. While all three pieces utilize the deconstructed trumpet, Nathan explored that effect here first. Nathan described his early compositional process for Sculptures as “I went home and practiced. I took out each of the valve slides and made charts of all the pitches you can get through the valve slides, and the pitches you can get by doing glissandi with the slides. That became my pitch language, and I used these charts to know what pitches I could use for each trumpet and for whichever slide was taken out.”

Movement III. In Memoriam

Four Sculptures Movement III - Distance

The third movement, “In Memoriam,” is inspired by a sculpture of minimalist design that was initially named To the Edge, and then retitled Precipice. The sculpture is of a chair nailed to the end of a wooden plank. Nathan felt it as a very meditative space where you could sit on the chair alone in a room and think. For its premiere, he asked the onstage trumpet player to sit down on a chair in the center of the stage. The performer is symbolically sitting on the chair that would be in this sculpture and communing with the afterlife. The first trumpet part is played off-stage for the entirety of the movement. In explore the ways in which two trumpets can interact with each other

73 Nathan, interview.
and the idea of distance, Nathan writes the third movement with one of the performers physically in another room.

### Four Sculptures Movement III - Harmonic Theme

In the opening of the piece there is an intoning note and then someone from afar interacts with the first player. The on-stage trumpet player is using a cup mute which has a warm and covered sound while the offstage trumpet is open, allowing it to be heard easily from a distance. After the second intoning on Ab, the on-stage trumpet plays a melody with intervals that expand outward from the Ab. Harmonically, the intervals are relating to each other and it all starts out from the single Ab, in a wedge. This compositional technique is similar to the first movement but here, at a slower tempo, it is even more noticeable.


![Musical notation]

### Four Sculptures III - Influence

The call and response between the two parts become argumentative until measure 24 when the offstage trumpet breaks away. This offstage gesture is the high
point in the movement, ascending to an Ab one octave above the starting pitch. This part also mimics or pays homage to “The Unanswered Question” by Charles Ives, a chamber piece in which the trumpet repeatedly plays a non-tonal phrase representing “The Perennial Question of Existence.” In Nathan’s words, “There is a question that’s being posed and it becomes intense and then the person recedes from your grasp and you lose them.”


Example 2-16. Charles Ives, The Unanswered Question, mm 16-17.

After this Ivesian question, the offstage trumpet goes away and there is a second intoning, this time on C. The offstage trumpet responds but the answer is also a Bb. As tension builds the question returns and both voices reach a climax in measure 43 with accented, but out of sync, high Ab’s. In the end a Db is intoned by the offstage trumpet,

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75 Nathan, interview.
and then fades away. Because the movement begins on Ab and ends on Db it functions like a drawn-out V-I progression. Additionally, the intoning of Ab-Bb, C-Bb, and C-Db, establishes an overarching harmonic progression throughout the movement.

**Movement IV. Going Up the Down Side**

*Four Sculptures Movement IV - Distance*

The last movement, “Going up the Down Side,” is inspired by a sculpture of a metal slide with a tiny metal boat valiantly trying to get up the imposing metal slide. There is a humorous narrative in this final movement. In this movement, you have two trumpets back in the same space but the one representing the little boat is playing through a Harmon mute and is therefore much softer than the other part. The idea of distance in the first movement has both players very soft with practice mutes, in the second movement, they begin incredibly loud and in the fore. The third movement has one player offstage, and this movement has a contrast between one muted trumpet and an open trumpet.

*Four Sculptures Movement IV - Compositional Approaches*

The harmonic nature of this movement is largely about half-steps. For example, at the beginning of the piece, Bb in the first trumpet and B natural in the second trumpet. Except for “In Memoriam,” all of the movements begin with the trumpets initial entrances ½ step off from each other. There is also a 12-tone procedure involved. The trumpet 1 in the opening (the boat) plays a 12-tone row but not strictly, as there are
some repeated notes. “I was thinking about twelve-tone music at that time...the thing is, a lot of times I’ll have a process and then I muddy it up one or two places so it makes it difficult to follow the tracks.” The second phrase is very similar and it begins in measure 13, some notes are an octave higher than before, perhaps representing the boats progress against the ramp. While the little boat plays its theme, the second trumpet part is a word painting of the slide’s rising gesture.

Example 2-17. Eric Nathan, Four Sculptures Mvt. 4, mm 1-12.\textsuperscript{78}

\textsuperscript{78} Eric Nathan, \textit{Four Sculptures} (Larchmont, NY: Nathan Arts, 2007).
The climax of this movement in bar 31 foreshadows the ending, where the two trumpets have a meeting point and they are at a stalemate. As a result, they slide down again. At the Tempo Primo, in measure 48, the opening theme returns and the climb starts all over. But in the end, they come to an A and Bb, and the final two measures are repeated blows of dissonance on the A-Bb minor second. Both parties agree that they are never going to succeed.

Example 2-18. Eric Nathan, Four Sculptures Mvt. 4, mm.60-66.\textsuperscript{79}

Four Sculptures - Conclusion

The lyrical gestures in each movement of Four Sculptures are fairly similar. In the first movement, an augmented Bb-D-F\# occurs when the main theme enters in bar 11. Then In Memoriam, that same idea occurs in measure 39, and in the last movement

\textsuperscript{79} Eric Nathan, \textit{Four Sculptures} (Larchmont, NY: Nathan Arts, 2007).
similar augmented intervals can be found. Formally, each of the movements of *Four Sculptures* has a forward moving trajectory that is manifest in Nathan’s music. The second and fourth movements have an A-B-A form and the first and third movements are more through-composed, even though they are tied together with familiar gestures.

The experimental writing in the second movement of *Four Sculptures* is where Nathan began to push the expressive boundaries of the trumpet. Not only is this the first solo trumpet work written by Nathan exploring the removal of slides from the trumpet, but it incorporates the other musical stylings that set a precedent for not only his trumpet music but other brass instruments as well. The techniques that are developed throughout Nathan’s trumpet works can be observed in his later works for the trombone and brass quintet.

**Part 3: *Toying (2012)* for solo trumpet**

*Toying* For Solo Trumpet was commissioned by the New York-based contemporary music collective *Le Train Bleu* and dedicated to member and trumpet player Hugo Moreno. The piece was premiered at a concert where the entire program contained music with a “toy” theme. Le Train Bleu initially wanted *Toying* to be a piece for trumpet and electronics but in the end, Nathan wrote this piece, a duet, for trumpet and its own mechanics.

For inspiration, Nathan visited the famous F.A.O. Schwartz toy store in New York City. In the program notes Nathan explains, “in composing the piece, I approached the concept of “toys” by taking to heart both a sense of playfulness but also the vivid worlds
toys inspire in the minds of those who play with them.” The composition is both a duet between the trumpet and its own mechanics and between puppet master/performer and the instrument. This multi-movement work demonstrates Nathan’s ability to draw three distinct characters from the instrument. Robert Kirzinger describes the virtuosity of this piece, “all three movements require a transcendent grasp, by both performer and composer, of the trumpet’s idiom.”

Movement I. Wind-Up

Toying Movement I - Trumpet Mechanics and Mechanical Toys

In the first movement, “Wind-Up,” the performer is instructed to partially unscrew the top of the first valve cap which will create a percussive ‘click’ each time that valve is compressed and then released to its resting position. Musically those 1st valve clicks represent a toy being wound up through this simple yet effective extended technique, which can be seen in the example below. “The sonic imagery depicts someone winding up the toy, setting it on the floor and watching it gleefully totter around on its own until it runs into a wall. The person then winds up the toy again and sets it off on its own. The toy has its own adventures around the room, occasionally bumping into other walls, yet finally unwinding itself.”

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81 Nathan, interview.
Toying Movement I - Duet

The score is written as a duet. The bottom staff has the rhythms notated for all of the notes of the valve-clicks and this staff serves as a reference to the performer as they are reading the notation on the top. In the score’s performance notes, “the performance should create the illusion of a dialogue between the sounding trumpet part and valve-clicks.” In a sense, the whole piece starts very much like you are literally winding up a toy. The notation indicates the first valve clicking rhythms but no air is being blown through the instrument. In this movement, x-shaped noteheads are used for notes that are fingered for that purpose along with the text instructions “Finger notes (no air).” Nathan also uses X-shaped noteheads to represent more extended techniques in the final movement, “Ventriloquizing.”

In the opening passages, the toy is wound up in a *senza misura* tempo and then released for a march-like and mechanical *Presto*. These playful phrases return each time in new registers, meters, growing longer, and becoming increasingly more chromatic. Throughout the movement the form is punctuated by the “winding up” refrain and the clicks begin to take on a new polyrhythm of their own as well. Quarter note clicks in the first phrase become dotted quarters the next time, and so on. In example 2-20, as the phrase becomes more extended it compresses into $\frac{5}{8}$ time. It evolves from just being the toy, to being the trumpet player taking over with virtuosity; shaping that idea into something musical. Throughout the movement Nathan worked out false fingerings, which are indicated above the notes, enabling the rhythmic pattern to persist so that the melody does not interfere with the clicking rhythm. Nathan notated those patterns precisely considering that the sound happens as the first valve is lifted. Alternate fingerings are used where needed to keep the rhythm going.

Also notice in this excerpt the written instruction to begin playing with ordinary fingerings. Here Nathan uses the abbreviation *(fing. ord.)* which is a departure from the earlier publication *Four Sculptures*, where normal fingerings were indicated with an asterisk (*). The notation may have evolved in this way because it is easier to react to written instruction i.e. *(ad. lib.)* or *(fing. ord.)*, than to remember another symbol.
Toying Movement I - Sound Effects

Another extended technique in this piece is a variation on the valve-clicks where the player is instructed to finger notated pitches while blowing air loudly through the instrument and allowing air to also escape from the performer’s lips around the mouthpiece. This produces a noisy and whistling wind over the clicking first valve cap and it is notated with a triangle-shaped notehead as seen in example 2-21. In this piece, silence is the third contrapuntal element in that the rests have an element of tension that then gives humor to the piece.84

84 Nathan, interview.
There are accents marked beginning in measure 52 which are performed with the air because they are within a slur. The polyrhythms here are going against each other and the top notes in the line don’t correspond with the clicks. So, the trumpet part actually has a trajectory too, beyond just making the clicks happen.

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Example 2-22. Eric Nathan, Toying Mvt. 1, mm 52-60.  

Throughout the movement, the trumpet sound and clicking sound are holding a dialogue but at the end they become unconnected. First, we hear the trumpet sound alone and then the clicks on their own. The toy scurries about until finally unwinding at

the end. The effect of blowing air through the horn loudly at the end of the movement is like punching a hole in a tire and hearing it deflate.

**Movement II. Elegy for a Toy Soldier**

In the second movement, a toy soldier has fallen and a toy trumpet salutes him in what the program notes describe as a memorial ode. “I remember when I was young I played with these toy soldiers that I really loved. I would send them into battle and they would die, so this is kind of an eulogy for a toy soldier.”

**Toying Movement II - Compositional Approaches**

In the second movement of *Toying*, there is obviously no harmony since it is with an unaccompanied trumpet. Yet, with no counterpoint and harmony, there is a sense of linear harmony. It begins with a series of five-bar phrases and that’s how the melodic line is structured. All of the notes in the first phrase are pianissimo microtones like a solemn and distant bugle.

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87 Nathan, interview.
Example 2-23. Eric Nathan, Toying Mvt. 2, mm 1-12.  

Toying Movement II - Taps

Clearly, Nathan was thinking of taps when composing this piece. The taps-like refrain comes back throughout the whole movement and then turns into upward gestures. Overall the refrain and the non-refrain music are made out of the same material. The refrain, however, has a very identifiable sound because it uses the same notes almost every time. It gradually gains in intensity and climaxes at mm. 19 before coming back down again. In measure 26, it regroups and returns for an even higher statement the last time. In the end, the trumpet is playing the “taps” motive, but some

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notes are with the “small trumpet” with the valve slide removed. In Nathan’s words, “It’s like a musical pun... some of the words are different but they have the same meaning.”


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Toying Movement II - Deconstructed Trumpet

In this movement, Nathan was thinking of creating a trumpet where some of the valves don’t work properly. Removing the first valve slide is in a sense making a toy trumpet out of the two timbres now coming out of the instrument. The notation results in alternating this gesture with both sides of the trumpet which makes it feel like this is an

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88 Nathan, interview.
instrument that has a toylike sound quality. As with *Cantus* and *Four Sculptures*, diamond-shaped noteheads are used to indicate microtonal pitches. “Elegy for a Toy Soldier comments on the bravery and misfortune of the fallen toy, shifting between the trumpets full tone and the ghostly timbre of the deconstructed trumpet.”

**Movement III. Ventriloquizing**

The final movement “Ventriloquizing” was something Nathan wanted to do from the very beginning. He wanted the performer to be a ventriloquist treating the trumpet as a puppet. In that sense this movement is a duet between the trumpet and the performer. When improvising Jazz, using the plunger mute is Nathan’s preferred method, largely because of the vocal effects a plunger mute offers. Like a puppet show, the trumpet demonstrates different characters, from dramatic to humorous. This movement contains a broad array of extended techniques and notational approaches that build on Nathan’s other compositions. With a full page of performance notes on this movement alone, the performer has to become familiar with the sound effects and extended techniques necessary to perform this music.

The movement starts in common time, however it is notated with five quarter notes per measure as seen in example 2-25. This gives a restless and breathless feeling to the music. The use of a plunger mute is a key element to the style and programmatic animation of this piece. Also, the second valve slide is removed for the duration of the movement giving the sound palate a wider range of expression. 

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combination of a deconstructed trumpet with the use of a plunger mute expands the sound possibilities greatly. For instance, the trumpet’s sound can come from the second valve slide or the open bell, and the plunger can cover the bell to varying degrees from open to tightly closed. Opening and closing the plunger while playing creates a ‘wah’ or a ‘how’ effect, functioning very much like a lower jaw. Plunger indications for open and closed are notated with ‘o’ and ‘+’ and “wa” which are standard jazz markings.

Toying Movement III - Sound Effects

The form of “Ventriloquizing” begins with the tempo/expressive marking ‘Fervently’. The quintuplet gestures are performed in conjunction with virtuosic plunger mute techniques. In the opening and throughout the movement, 32nd notes with missing noteheads are accompanied by an instruction to double tongue as fast as possible. This notation simultaneously corresponds to the plunger mute opening and closing. This complicated technique is an especially authentic visualization of the performer as puppet master and trumpet as a puppet. Flutter tonguing and growling are also used in this movement as more Jazz trumpet procedures.
Example 2-25. Eric Nathan, Toying Mvt. 3, mm 1-8.\textsuperscript{92}

X-shaped noteheads in “Ventriloquizing” represent approximate pitches as part of two extended techniques that Nathan describes as “Hrmpf”; a hiccup sounding gesture performed with a plunger mute, and an imitation of laughing. However, unlike the hiccup the laughing notation has x-shaped noteheads, indicating approximate pitches, which the performer obtains by partially pressing down all three valves.

\textsuperscript{92} Eric Nathan, \textit{Toying} (Larchmont, NY: Nathan Arts, 2012).
Example 2-26. Eric Nathan, Toying Mvt. 3, mm 79-85.93

A new extended technique Nathan calls a “tremble” appears first at mm. 27. In the program notes, he suggests shaking the trumpet while playing to produce a quivering sound. Unlike a jazz “shake” which oscillates between two pitches, a “tremble” produces a fast and wide vibrato type tremble without changing notes. The flippant grace notes in the “tremble” phrases recall a jazz technique known as a “plop” which is “a rapid gliss falling to the beginning of a note; the gliss precedes the beat.”94

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Example 2-27. Eric Nathan, Toying Mvt. 3, mm 31-32.95

The “tremble” measures are immediately followed by a popping effect. Square noteheads “indicate to tap the mouthpiece with a cupped palm to create a resonant “popping” sound while fingering the pitch indicated.” The popping, which resembles the sound of a Klave, has specific pitches notated which will result from changing the length of the trumpet’s tubing. In measure 50, the opening returns in a recapitulation which is almost the same except for the retransition outwards from 63-69.


Concluding Remarks

The trumpet reaches past its traditional functions in Nathan’s works. By means of extended trumpet techniques and notational symbols, he has created three inventive and idiomatic works. Nathan’s inclusion of jazz elements, specific markings such as

alternate fingerings, and the ability to develop new techniques, all stem from his own experience as a classically trained trumpet player.

As was stated in the previous chapter, the convergence of notation and literature was key for the trumpet to secure a position as a solo instrument within the scope of western music practices. The standardization of new music notation consequently relies on the topic of musical literacy. Eric Nathan’s trumpet works are in the canon because they are being recorded and performed. The issue of literacy makes the canon.

Through the analysis of Cantus, Four Sculptures, and Toying, this chapter presents a representative sample of Nathan's compositional approach towards music for solo trumpet. To the benefit of the performer, these works present the trumpet in a variety of settings; these include music for two trumpets, music for solo trumpet, and music for trumpet and electronics. As demonstrated above, these works pushed the technical, and therefore expressive boundaries of the trumpet expanding the usage of notational symbols and practices for the instrument. These pieces by Nathan produce a literature in the trumpet repertoire that bolsters the instrument’s position as a solo instrument in Western music.
Chapter 3

Introduction

“The “golden ages” of trumpet might be defined as the Baroque and today.”⁹⁶ By this assertion, made by trumpet soloist Edward Carroll, the repertoire that has gradually developed since the mid-twentieth century has given the trumpet a second golden age. To a great extent, such rebirth is due to the standardization of new performance techniques and their notation, aspects that positioned the trumpet as a solo instrument in western music. Notation has been central not only because it produced new literature for the instrument to find a niche in the western canon, but also because this literature ultimately added to the tradition. Nathan’s music was central in this process, as it pushed the technical, and therefore expressive boundaries of the instrument, further expanding the usage of notational symbols and practices. This chapter will discuss the influence of notational approaches and the performance practice aspects of Eric Nathan’s music.

Part 1: Influence of Notational Approaches

Examining Nathan’s style and its origins may prove useful to a performer seeking to become familiar with notational approaches in his trumpet works. As an undergraduate trumpet student, Copland and Mahler were among Nathan’s favorite composers. Especially in writing for brass, their long melodies and dramatic intensity

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captured Nathan’s imagination. “The sense of line from Mahler, the veiled tonality of Charles Ives, dense textures from Ligeti, and harmonic language from Oliver Knussen” combine to influence Nathan’s lineage. Other post Ravelian composers like Colin Mathews and Thomas Ades, and Aaron J. Kernis are notable influences as well.

Claude Baker was one of Nathan’s most influential teachers at Indiana University. His teachings focused on the specifics of a piece and instilling real attention to detail in the notation of the work. Perfecting notation is a key element to Baker’s pedagogy and as a result, Nathan is as attentive to the notation as to the music he writes. Nathan believes this attention to detail has made his music more expressive because Baker’s method makes a composer have more consideration for how they want everything to sound in performance. As evident in his trumpet works, Nathan also pays close attention to organizing pitch in ways that create consonances. This creates a grounding that the piece can stick to even though the pitch language may not be tonal.

Another of Nathan’s influences is Steven Stucky, with whom Nathan studied composition at Cornell. Stucky’s use of pitch and color of orchestration has carried into Nathan’s compositional approaches. In Nathan’s words, these approaches are “based out of a more tonal framework but extended tonal harmony. In my orchestral music I think a lot about that. In the second movement of Toying though I was trying to play more with creating a single harmony. Since with unaccompanied trumpet I couldn’t have

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98 Nathan, interview.
99 Nathan, interview.
counterpoint and harmony. I was trying to make harmony linearly, to try to keep it within certain harmonic regions that would create harmony throughout the piece.”

There are a couple of ways in which an instrument can be utilized in Nathan's music. Nathan refers to these as streams and they include the experimental stream which reimagines the mechanics of an instrument and placing an instrument in duet with itself in different contexts. His trumpet pieces and other brass works such as the trombone solo *As Above so Below* are experimental but they also incorporate the long lyrical lines and a narrative trajectory. Both ideas are prevalent in Nathan's music. This is the trajectory that his music has, the concept of a musical line that is not necessarily telling a specific story but always has some sort of narrative loosely attached to it. This approach helps create an arc that is an emotional arc, which carries the listener through the piece. The lyrical line, the experimental concepts of timbre, the mechanics of an instrument, and the concept of line and narrative, i.e. teleology, are central to Nathan's compositions in general.

Keeping in mind that Nathan was a trumpet student primarily before moving into composition, it stands to reason that he would have studied the standard solo and orchestral repertoire. In exploring new terrain, Nathan’s music for trumpet has a more modernist and abstract language. In keeping a modernist underpinning but adding a lyrical line, these works for trumpet present the ideal attributes of both styles. The linear melodies are especially obvious in all four movements of *Four Sculptures*. In the

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100 Nathan, interview.
compositions \textit{Cantus} and \textit{Toying}, these concepts are present in both the form and trajectory of each movement.

\textbf{Cantus}

Nathan’s music is full of extended techniques, graphics, incorporation of improvisation, and other sound effects. But Nathan clarifies his notational approach throughout the music with text and performance notes. In \textit{Cantus}, the cues are indicated with graphic notation, and there are also timings that correspond to the electronic accompaniment.

\textbf{Four Sculptures}

\textit{Four Sculptures} for two unaccompanied trumpets is an unusual instrumentation, but being a trumpet player himself Nathan found ways to respond to these sculptures in unique ways. Influences on \textit{Four Sculptures} include composers such as Charles Ives, Anthony Plog, quotations from the bugle call \textit{Taps}, and a tragic event that took place during the time of this piece’s conception.

The passage from example 2-10 in chapter 2 resembles the second movement of a brass quintet by Anthony Plog called \textit{Four Sketches}. \textit{Four Sketches} is a piece Nathan had experienced performing as a student, and so he paid tribute to Plog and his work which is a staple of the brass quintet repertoire. This passage begins with an identical rhythm to the opening of the Plog. The main difference however is the melodic material. Nathan continues to use material similar to the flourishing gracenote idea.
These sixteenth notes passing between the two trumpets are slurred in *Sculptures*, while in Plog’s piece, there is double-tonguing throughout the movement.

Works of art affect their context, whether social, cultural, political or economic, and the context also affects the work. The work also has an effect on those contexts as James Grier explains in *The critical editing of music*. “Palestrina wrote music for the celebration of the Catholic liturgy, which required a certain amount of accommodation on the composer’s part; the style he created for this type of music then went on to dominate the composition of Catholic liturgical music for the next two centuries or more: context affects the music, and the music affects the context.”\(^{101}\) The musical ideas in a work, therefore, are conveyed through symbols, the semiotics of notation, and the cultural context in which the piece is written.\(^{102}\) In speaking with Nathan, he recalled that the tragic Virginia Tech massacre had happened while he was writing *Four Sculptures*. The movement “In Memoriam” is not a dedication and Nathan may have had a different idea about that movement but that happened nevertheless. Nathan had met John Adler at Virginia Tech just before the incident. In the interview with Nathan he recalled another influence on this work; “I remember John Adams on the *Transmigration of Souls*, which is the piece that won the Pulitzer and was a response piece to 9/11 that the New York Philharmonic did. There is a trumpet offstage call that is an homage to Charles Ives, so I think I was also going back to that and asking the unanswered question: Why, why did this have to happen?”\(^{103}\)

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\(^{103}\) Nathan, interview.
Toying

In creating the second movement of *Toying*, Nathan was inspired by Stravinsky’s *Petrouchka*, in which Stravinsky tried to recreate the sound of an accordion playing outside his window. When the flutes play the Waltz in *Petrouchka*, they are playing the same gesture, but in the left hand the top note is missing for one of the pitches. One of the keys was broken on the accordion that played outside of his window.\textsuperscript{104}

Having learned and played the standard trumpet repertoire such as the Kent Kennan *Sonata* and Halsey Stevens *Sonata*, I asked Eric whether he had learned any other repertoire more similar to the style of *Cantus* and his other works. He had studied with Allan Dean at Yale and learned to play the Ketting *Intrada* which is an unaccompanied trumpet piece written in 1958. Otto Ketting’s *Intrada*, however, does not contain any extended technique or the removing of slides.\textsuperscript{105}

Historically, the difficulty with the notation of new music was the varying meaning of similar symbols from score to score. For instance, two scores may have different symbols to represent the same musical effect. As Kurt Stone says in the preface of *Music Notation in the Twentieth Century*, this occurred because “experiments conducted simultaneously in different parts of the world often brought forth identical signs for different effects, and vice versa.”\textsuperscript{106} That seems to be the case for this technique of deconstructing the trumpet as Nathan was unaware of the of any other works when he composed his first piece for deconstructed trumpets, *Four Sculptures*. Removing slides is now a common technique in literature for the trumpet.

\textsuperscript{104} Nathan, interview.  
\textsuperscript{105} Nathan, interview.  
\textsuperscript{106} Stone, *Music Notation in the Twentieth Century*, xiii.
Microtones

Because Nathan uses the deconstructed trumpet effect in his solo trumpet music, it can be compared to earlier works such as *Solus* composed by Stanley Friedman. *Solus* is the first known work to explore this innovation. Another example with deconstructed trumpet is *Aerial* by Hanz Gruber. Gruber wrote this work for Hakan Hardenberger which takes out the first slide on the Bb trumpet. *Aerial* came before *Toying* and as Nathan says, “that actually inspired the second movement of my *Toying*. There is a really amazing high concert D that Hardenberger plays and so I added that and kind of wrote the whole piece around that note. I really liked that sound coming out of the slide on a high D.”

All of Nathan’s works include notation for microtones. Another trumpet work that contains microtones is *KRYL* by Robert Erickson. *KRYL* contains microtonal pitches throughout, and they are notated the same, whether they are a result of the trumpet being deconstructed or from extending the first and third valve slides. Erickson uses vertical arrows above or below the notes to show microtonal deviation. In this case the arrow “indicates the direction, but not degree, of microtonal deviation from the usual tuning system.” Similarly, Nathan’s notation does not tell the performer how sharp or flat the note belongs, i.e. ¼ tone. From this example and others, it would seem that the notation of microtones from a deconstructed trumpet still relies on the existence of a performance note, and therefore has not yet become standardized.

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107 Nathan, interview.
Jazz

As discussed in previous chapters there is also a Jazz influence in parts of Nathan’s music. This is especially true in *Cantus* and movement 3 of *Toying*. Flutter tonguing, growling, glissandi, plunger mute techniques, and improvising are all elements that carry into these works from the Jazz vernacular. In the case of glissandi, there are some parallels to draw between jazz notation and Nathan’s. The use of glissandi, or “a continuous slide without distinguishable pitches,” is prevalent for wind instruments in jazz music. The various techniques ranging from fall off, doit, flip, rip, plop, scoop, and others can all create nuance to the beginning, middle, and end of a note. The pitch of a note can be bent using the valves, slides, or embouchure, and Nathan notates techniques utilizing all of these. The approach to notating a glissando is more specific in Nathan’s writing than you would see in jazz notation. Nathan either indicates the exact pitch or an approximate pitch for the beginning and end of the glissando.

As an improviser himself, all of the techniques from the third movement of *Toying* are ones that Nathan uses. Nathan is inspired by the trumpet playing of Wynton Marsalis. In interviews with Nathan, he recalled a piece in particular called “Back to Basics” from the Pulitzer Prize winning album *Blood on the Fields* where Marsalis uses the stopped plunger effect in order to produce laughing and different kinds of growling effects.  

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109 Kernfeld, “Gliss(ando) (Jazz)”.
110 Nathan, interview.
Part 2: Preparation and Performance-practice

Generally, where performance practice is concerned the interpreter or performer aims to determine the amount of freedom a composer expected when the piece was written. Interpretation and expression are directly related to the level of specificity in a work’s notation or the lack thereof. The state of a piece is both interpreted and communicated through notation. The final part of this chapter concentrates on the performance-practice issues for performing Nathan’s music. I will detail the performance-practice issues that I dealt with in learning this music and also the technical aspects of performance.

Cantus

For the performer learning Nathan’s music, there are some resources to be aware of which will aid in the interpretation of this music. Of course, no two musicians will perform a work exactly the same, but in terms of interpretation with the piece Cantus, there is a live performance of Eric Nathan performing the piece on YouTube. Also, see John Adler’s compact disc titled “Confronting Inertia” because the work was commissioned by and for him.

When performing with electronics, there are performance considerations specific to the control and selection of electronic equipment. The performance notes in Cantus instruct; “Trumpeter should play into a microphone that is sent through a reverb patch with a reverberation time of at least three seconds. Microphone levels may be turned

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down when the Harmon mute is removed. The reverb may be added through a mixing board or any reverb generator on an amplifier." In spite of this instruction, it would be acceptable to perform without the reverb if the performance space has a natural delay such as a chapel. Balance with the mp3 is contingent on the performers' preferences and capacity to play very loud. Keep in mind however that while some sections of the accompaniment are quite soft, unwelcomely loud electronics will spoil a performance.

*Cantus* recalls an early music type of singing style. Play the slower sections chant-like and with more of a straight tone. The x-shaped noteheads beginning in measure 101 jump around but the exact pitches are up to the performer. The pitches here could by improvised tactfully or played at random. As seen in the example below, this type of guided improvisation continues until bar 104 and then moves to a graphic notation that looks like squiggly lines over note stems. The performer in this section is instructed to “improvise musical gestures on the trumpet according to the contours given below (spastic, violent outbursts.)” In terms of performance practice, one way to perform this is by rapidly and randomly pressing the valves while approximating the pitches depicted by the graphics.

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Pay particular attention to the passage beginning at measure 136. The performer plays a three-note motive a-b-f and holds a fermata while the accompaniment plays the echo as described previously. The timing here is important in order to obtain an accurate echo effect.
Example 3-2. Eric Nathan, Cantus, mm 125-146.

Four Sculptures

The first movement of Sculptures is composed for two trumpets using practice mutes. The practice mutes should match in timbre and loudness, there are many types of practice mutes including Best Brass, Sshhmute, Yamaha Silent Brass, Bach, Whisper Mute, and others. All of these mutes are designed to quiet the trumpet, however, they also have their own different timbres.

The third movement of Four Sculptures has one player off stage which can cause obvious ensemble issues in performance and recording. In producing a recording of this movement consider how a microphone would be placed for the offstage trumpet if it is used at all. Ideally, the recording should recreate the sense of being offstage as well.

For timing and ensemble in a recording session, a conductor may be used. In the final movement, “Going up the Down Side,” trumpet one begins and ends with a Harmon mute (stem in). Play the dynamics as marked although the open trumpet may
overpower the muted trumpet slightly by the end. This only helps to portray the humorous narrative that this movement portrays.

Toying

The level of virtuosity in this piece makes it a challenge for any trumpet player. Eric's attention to detail through notation with the addition of text and performance notes makes his vision for the piece very clear. From the program note, the valve click in Movement 1 should be as loud as possible. The performer can experiment with how far they unscrew the valve cap in order to find out how to achieve the loudest click on their specific instrument. Also, it is necessary to select a practice mute that will project without covering the sound of the valve click. Nathan originally wrote the piece giving the performer the option of using either a C or Bb trumpet. However, he prefers movements one and three to be played on C trumpet because he composes with a C trumpet and the microtones and false fingerings were notated to that instrument specifically. This should be taken into consideration although some trumpet players have a strong preference for one trumpet over another.¹¹⁴

At the premiere of this work the performer, Hugo Moreno, played with amplification. In Nathan’s opinion, Toying works best when it is amplified because a microphone allows the valve click’s and muted trumpet to be heard even in the back of the hall.

¹¹⁴ Nathan, interview.
In the first movement of *Toying*, keep in mind that the valve click is produced when the valve moves upward and but not when it is compressed. Throughout the movement, if a valve click is not notated at the end of a phrase, the first finger should be lifted silently. This way there are no unintentional clicks.


The music in movement two represents a toy trumpet that is not quite working correctly. It makes strange sounds and that is something that the trumpet player has to deal with. In the program notes to another work with the first slide removed, *KRYL*, Ed Harkins suggests, “a reflecting backdrop (probably a hard surface) of some kind is recommended to facilitate the balance of the two different trumpet outputs. The performer will have to experiment with his location to find the best distance from this reflector.”

In movement three, the performer may encounter issues with the plunger mute technique. One issue is what to do with the mute when it is not in use. For one thing, it would be very difficult to operate the 3rd valve slide with the left hand while holding the plunger. This music goes by frantically and there is little time to lay the mute down and

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retrieve it in time for the next muted passage. Hugo Moreno’s solution was to drill a hole in the mute and attach it to a string (as I observed at the premiere of the work). However, Nathan would also suggest tucking the mute under your right arm and with practice, this option is also very effective. The lightning-quick changes between these different sounds make this movement very virtuosic.

There are some technical things to consider when performing the “Hrmpf” and “laugh” techniques. In the case of “Hrmpf” the key is to rapidly close the bell tightly with the plunger after articulating the grace note. Then, tongue a higher partial before dropping to the next approximately notated pitch. The x-shaped noteheads indicate approximate pitches. The plunger needs to return to the open position by the time the trumpet has slid to the lowest note, arriving with an accent. The “laugh” on the other hand begins on the top note, and drops off. The plunger functions in the same way as the “Hrmpf”, but in order to imitate laughing, the register drops each time in conjunction with a diminuendo.
Example 3-4. Eric Nathan, Toying Mvt. 3, mm 79-85.\textsuperscript{116}

The “tremble” effect as described before is performed by shaking the horn and creating a wide vibrato. This technique is not a “shake,” perform the “tremble” like a horse whinny but without moving from the fundamental pitch. (Example 3-5)

Example 3-5. Eric Nathan, Toying Mvt. 3, mm 31-32.\textsuperscript{117}


\textsuperscript{117} Eric Nathan, \textit{Toying} (Larchmont, NY: Nathan Arts, 2012).
Considerations

A technical note: when performing pieces that use slide glissandi, the 3rd valve slide needs to be properly greased and working easily in order to perform the technique well. Another useful trick is to attach a hair tie on the third valve. This will help the slide to return and stay in the default position after the performer executes a slide glissando. This is a real benefit in the 3rd movement of *Toying* because at times the performer needs to play a glissando (with the left hand) and then go straight to covering the bell with the plunger. Any notes using the third valve may then go flat if the slide is not held in all the way.

Concluding Remarks

Nathan’s activity expanded the usage of notational symbols and practices. Although some of the symbols and even techniques used by Nathan in his trumpet works had been explored before, others such as the technique he refers to as “Hrmph” present a way of notating something new. The breadth of his compositional output not only gave them steady consistency in trumpet repertoire but made them standard practice through the development and establishment of a music literature for this instrument.

The position of these pieces in the trumpet repertoire, as well as their relevance in positioning the trumpet as a solo instrument in western art music, has come into focus. These pieces continue to add to the literary tradition established by Nathans’ predecessors.
Conclusion

Throughout this thesis, the technical and notational elements of Eric Nathan's trumpet works have revealed the ways in which he pushed the limits of the instrument. The influences affecting Nathan’s compositional style meant to be evident in his works for trumpet, which illustrates Nathan’s attention to detail throughout his compositions. The purpose of this thesis was to provide a representative – if brief – analysis of trumpet works by Eric Nathan in relation to their technical and notational demands. Specifically this study focused on *Four Sculptures* (2007), *Cantus* (2008), and *Toying* (2012), to highlight how the incorporation of idiomatic and notational elements benefit from Nathan’s own expertise on the instrument. Moreover, the analysis of these works aim for an understanding of the musical vocabulary and techniques that provide insight into the structure, style, and performance of this repertoire, which pushed expressive boundaries of the instrument. Nathan’s inclusion of techniques such as slide glissandi, the “talking trumpet” technique with a plunger mute, deconstructing the trumpet, and hitting the trumpet mouthpiece, call for new notational approaches (surveyed in chapter 1). Those methods together with newly developed techniques such as “hrmph” or “tremble” techniques, and unscrewing of the valve cap to produce clicks, all illustrate Nathan’s development of a graphic structure pertinent to the trumpet, which helped produce a body of literature for this instrument to thus carve a niche for it, in the western music solo repertoire.
It was also important to consider the influence and performance practice of Nathan’s works. I conducted an interview with Nathan to learn how his influences and mentors might have had an effect on his solo trumpet compositions. My hope is that this information will be useful to any other musicians who wish to become familiar with interpreting the performance techniques of these works. Performance practice is not only directly related to interpretation, but also directly relevant to the development of a notational language, and therefore, a repertoire. This was a key point in this thesis study.

This dissertation further related this process to developments in new music notation that happened throughout the twentieth century, and surveyed how these developments are reflected in literature for the trumpet. This examination shows how technique for the trumpet evolved considerably. Notational elements from early experimentation were part of this evolution as new music notation was applied to the trumpet. Popular music and other genres such as jazz also influenced notation further as composers meshed styles and expanded the tradition of the Western canon.

In the preface, the thesis stated that musical literacy (in terms of a set graphic symbology used to notate and communicate musical ideas) has been important to give longevity to a western narrative of music history by establishing a representative literature of such tradition. Furthermore, the development of new music notation has allowed performers to understand the practices associated with new works without communication with the composer. James Grier states that “performers actively
participate in shaping the work’s style.” This fact is also key to our understanding of the western musical tradition because the initial performance of new works set a new precedent in terms of style and interpretation. In turn, this has had an equal effect on notational practices and new emerging literature.

Sparking a new “Age” for the trumpet, the development of new notation is important because it produced new literature for the trumpet and added to the tradition of the western canon. Nathan’s music participated in this process, as it pushed the boundaries of the instrument, further expanding the usage of notational symbols and practices. It was the standardization of such practices that led me to realize that the positioning of the trumpet as a solo instrument not only relied on new notation but in its interrelation with performance technique. There are larger historical issues that I had not imagined before relevant to the western music tradition. The complication of literacy as a historical concept in relation to writing, and the way in which we tend to regard the writing as just the setting of graphic symbols on the page that "tell it all." There is a closer connection between the performative and the symbolic in the making of history and this thesis just scratches the surface of that idea.

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**Musical Scores**


