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One Hundred Forty-Six is a music and dance theater production portraying an artistic memorial to the victims, tragedy, and progress of the historical Triangle Shirtwaist Factory Fire of March 25, 1911. The music, composed by Elizabeth L. Kowalski, was scored for string quartet with added electronics. Images and sounds of textile factory work and the events of the fire and memorial are communicated throughout the music. The score is accompanied here by a written document explaining the work. *One Hundred Forty-Six* has an approximate duration of 45 minutes. The premiere was held in the UNCG Dance Theater on March 30, 2012, shortly after the 101st anniversary of the fire

*ONE HUNDRED FORTY-SIX: THE SCORE FOR A MUSIC AND
MODERN DANCE THEATER PRODUCTION ABOUT THE
TRIANGLE SHIRTWAIST FACTORY FIRE OF 1911*

by

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APPROVAL PAGE

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CHAPTER I
INTRODUCTION

One Hundred Forty-Six is a music and dance theater production that was created as a thesis project in collaboration with Denise Murphy, a student choreographer also at the University of North Carolina at Greensboro. The entire work is a memorial to the victims of the Triangle Shirtwaist Factory Fire of March 25, 1911, in New York City.

Until September 11, 2001, the fire in the Triangle Waist Company garment factory held the record for the worst work-place fire in New York City.¹ Located in lower Manhattan, the factory occupied the eighth, ninth, and tenth floors of its building.

It is believed that the fire started from someone throwing a cigarette butt or match into one of the waste bins that were used to hold the thin cotton materials and paper patterns.² Due to the material, the fire spread very quickly and the factory personnel were slow to report the fire at first. The firemen were only notified when a pedestrian used the fire callbox and in all, it took them approximately thirty minutes by the time they arrived via horse and buggy and

¹ John M. Hoenig, "The Triangle fire of 1911," *History Magazine*, April/May 2005, 20.

² David Von Drehle, *Triangle: The Fire that Changed America* (New York: Atlantic Monthly Press, 2003), 119.

extinguished the blaze. During that half hour, however, 146 people died – most of whom were young Jewish and Italian immigrant women between the ages of sixteen to twenty-three.³ Some people, including the owners (Max Blanck and Isaac Harris), made it to the roof of the building safely. The rest of the workers trapped inside did not survive because of a broken fire escape (which was supposed to have been fixed long before), a narrow blocked staircase, non-functioning sprinklers, and a locked exit door to prevent theft. Victims died from incineration, smoke inhalation, or falling or leaping from the 8th, 9th, and 10th floors. Had there been better regulations and care to use safety precautions, the unnecessary loss of life could have been easily avoided.

Despite the horrifying event that transpired that day, it was a pivotal moment in the history the U.S. Labor Movement and American workers' rights.⁴ Union membership grew from 30,000 in 1909 to 250,000 in 1913.⁵ Many laws and regulations began to come into place to improve the standards of working conditions.⁶ Over a hundred years later, safety protocol and regulations continue to help workers to make a living in safe working environments with fair pay.⁷

³ "The 1911 Triangle Factory Fire." Cornell University, accessed January 24, 2012, <http://www.ilr.cornell.edu/trianglefire/>.

⁴ John M. Hoenig, "The Triangle fire of 1911," 22-23.

⁵ David Von Drehle, *Triangle: The Fire that Changed America*, 172.

⁶ David Von Drehle, "The Triangle Shirtwaist Factory Fire: A Lasting Legacy, 100 Years Later," *Time Magazine*, March 26, 2011, accessed January 24, 2012, <http://www.time.com/time/magazine/article/0,9171,2061228-1,00.html>.

⁷ David Von Drehle, *Triangle: The Fire that Changed America*, 172.

Unfortunately, a large number of factories and companies worldwide, even in America, still take advantage of workers by paying them below minimum wages to even sometimes nothing for their work through indentured servitude or slavery – maximizing profits and minimizing costs.⁸ In other parts of the world where they do not have laws and regulations, or where the laws and regulations are not followed, workers are constantly being put in harm's way and their hazardous working conditions have become the norm.⁹ In repeats and variations of the 1911 fire at the Triangle Shirtwaist Factory, thousands of people struggling to make a living have lost their lives in recent years.¹⁰ Change, however, has either been avoided or extremely slow.

Deciding to take on this project, I knew that the work and immersion that I would need to do for this piece would help me better understand the event and its positive and negative consequences. It was not only an enlightening experience that allowed me to create art to speak to people's emotions by telling a story, but it was also a chance for me to offer my work as more than just an artistic statement. First,

⁸ "Cashing In – Giant Retailers, Purchasing Practices, and Working Conditions in the Garment Industry," last modified February 1, 2009, <http://www.cleanclothes.org/resources/ccc/working-conditions/cashing-in>.

⁹ "International Action Day for Workers Health & Safety in Bangladesh," last modified April 1, 2006, <http://www.cleanclothes.org/news/international-action-day-bangladesh>.

¹⁰ Shackle, Samira. "Karachi's Factory Fire Exposes Pakistan's Lax Health and Safety Regime: Under pressure from wealthy industrialists putting profits over worker safety, labour inspections are on the slide in Pakistan." *The Guardian*, September 14, 2012. Accessed September 25, 2012. <http://www.guardian.co.uk/commentisfree/2012/sep/14/karachi-factory-fire-pakistan-health-safety>

it is a remembrance and display of honor to those who died in the fire. Second, the work recognizes and shows appreciation to the people who have fought tirelessly and sacrificed so much for the sake of workers' safety and social justice through protest and social movements. Third, it is an effort to raise awareness of the same type of events that are happening currently. Fourth, the work serves to also raise awareness of inequality in gender and the value of women's work. Since most of the victims were females, the experience was even more personalized through an all-female dance cast, myself as the composer, and Denise Murphy as the choreographer. My ultimate hope is that through my music and the collaboration of our artistic efforts, we can raise awareness and in turn inspire change.

One Hundred Forty-Six, was premiered in the UNCG Dance Theater on March 30, 2012. The premiere took place shortly after the 101st anniversary of the fire and during Women's History month. Later, in May, 2012, a mini twelve-minute version of the work, entitled *Vanishing Souls / Falling Embers*, was selected to be performed at the National College Dance Festival at the Kennedy Center for the Performing Arts. During the festival at the Kennedy Center, the piece was awarded the ACDFA/Dance Magazine Award (American College Dance Festival Association).¹¹ The entire duration of *One Hundred Forty-Six* is approximately forty-five minutes.

Recordings are available for listening at either www.themusicqueen.com, or at www.soundcloud.com/epianoqueen/sets/one-hundred-forty-six.

¹¹ American College Dance Festival Association, *Newsletter*, September 2012: 4, <http://www.acdfa.org/images/files/acdfafall2012newsletter.pdf> (accessed October 19, 2012).

CHAPTER II

EXPLANATION OF THE MUSIC

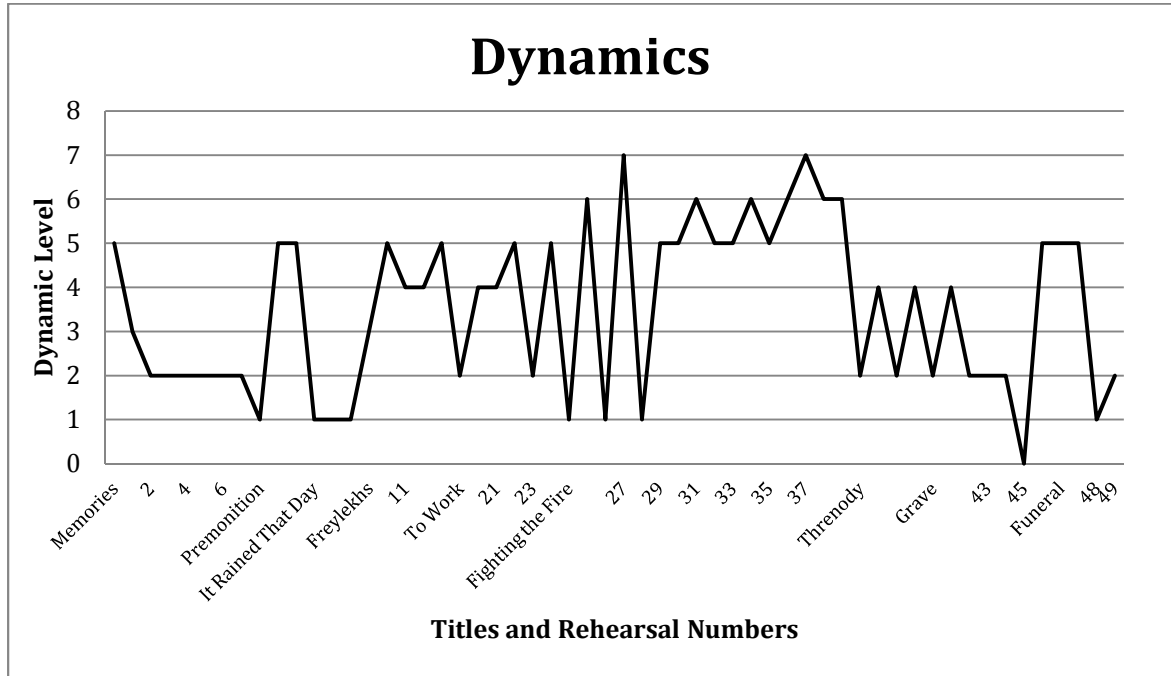
Through the music, I strived to represent the individual lives, community, and the cultures of the mostly Italian and Jewish female immigrant workers. I have also merged the sounds and atmosphere of their working environment, the fire, and the memorial service into the technicalities and emotion of my work.

Figures 1 and 2 can assist in understanding the overall layout and mapping of the entire work. The first figure outlines the overall groupings, sections, relationships, and durations (see fig. 1). The second figure serves as a map of dynamic levels, or intensity (see fig. 2). The number “0” refers to the lowest dynamic level in the entire work (*ppp*), while the number “7” refers to the highest dynamic level (*fff*). Data was collected for dynamic levels at the start of each piece, at each rehearsal number, and at a few other significant musical moments. Significant moments in the music were places that were not at the start or labeled with a rehearsal number. Rather, they were points for changes in expression or tempo. Most of the dynamic levels stay in the general ranges throughout any of the given pieces, but in the more chaotic “Fighting the Fire,” there are drastic sudden changes in dynamics and the two peaks to the highest dynamic markings in the entire work.

Figure 1. Sections, titles and durations.

Groupings	Title	Duration
I The people: a closer look at the individual lives, relationships, and culture of the workers. Also, moments of tribute to the victims.	1. Memories	4:42
	2. Premonition	2:25
	3. It Rained That Day	8:00
	4. Interlude*	1:18
	5. Freylekhs Dance	4:44
	6. Lullaby*	1:35
	7. Dead to Work*	1:30
II The workday and events on the day of the fire.	8. To Work	4:46
	9. Fighting the Fire	3:30
	10. No Escape	2:37
III Remembering those who died. Showing the grief followed by the persistence to make a change.	11. Threnody	10:30
	12. Grave	4:00
	13. Funeral	4:51

Figure 2. Flow of dynamics.



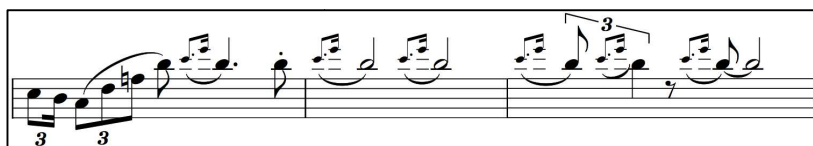
* These pieces were not used in the final cut of *One Hundred Forty-Six*.

The main workers' theme that is fully realized by the cello in measures 285-291 in *To Work* (see figure 3) can be referred to as the DNA of the entire work and is often played by the cello. Other technical themes consist of violin sustains in a piercingly high pitch to symbolize the screams of the victims, folk techniques such as guitar-like strums on the string instruments, slides, and even *kekhts* (a type of ornamentation; Yiddish for "sobs") to represent a mournful sound (see figure 4).¹² The folk characteristics woven throughout the piece aim to connect the images to the time and place while conveying the emotions of the people involved. Along with this, the frequent use of melody given to the violin is used to symbolize its cultural and historical prevalence of the era.

Figure 3. Main theme for the workers.



Figure 4. *Krekhts* ornamentation (Yiddish for "sobs").



¹² Jake Shulman-Ment, "Klezmer Fiddle "Krekhts" ornament with Jake Shulman-Ment," YouTube Web site, 2:52, <http://youtu.be/wDZHO3ip2ac> (accessed November 24, 2011).

The first piece of music comes in as the sounds of the memorial's church bells and horse drawn wagons come to a fade and the lights come up ever so slightly to create a dark dim setting. *Memories* begins with a lilting folk-like violin prelude in common time. The melody's direction is based off of the main worker's theme but is varied and augmented in rhythm. As the melody repeats, it is accompanied by pizzicati on the off beats.

Beginning along with the music, four dancers begin to execute ominously choreographed movements from the ground depicting the individuals that died. Their movements include reaching out towards the audience, pulling at their faces, and rolling. The emotion of the music ties in to the dance as the audience reflects on their past – memories of happiness, twisted by the memories of the tragedy that took them away.

At rehearsal number 2, the meter shifts to 6/8 with a slight allusion to the main work theme in the bass of the cello (see figure 5). The same folk melody that was in 4/4 picks up soon in the different 6/8 section with a similar, but heavier, lilt in the manner of a waltz. Instead of the pizzicato accompaniment, the Violin II and Viola play *arco* on either a soft syncopated sustained note or tremolo while the cello continues to allude to the main work theme in the bass.

Figure 5. Partial workers' theme at rehearsal number 2, measure 19, in the cello.



The first complete allusion to the main worker's theme is made by the cello in measure 31 with the last interval being a 2nd as an inversion of the original 7th (see figure 6). By the time we reach rehearsal number 4, the main melody's beginning motive gets passed around the string parts in either variation or retrograde. In the choreography, a girl emerges as a soloist. She is pointing to an image of the building on fire. As she is moving her arm in a slow, unpredictable, circular pattern, she slowly turns to point at the audience. At the end of *Memories*, there are high-sustained pitches in the violin to create a sense of fear, unpredictability, and allude to the screams coming from the fire.

Figure 6. First full reference to the workers' theme in the cello, measure 31.



Premonition, while apprehensive and chaotic, forewarns about the tragic event to come. The soloist dancer has moments of panic and trembling while in the dark background, dancers are sitting on benches each motioning one foot as if pressing the peddle on their sewing machine. This is reflected in *Premonition* by tremolos in the strings, uncommon syncopations, and a melody that is slightly frantic and unpredictable to give an uneasy feeling of worry. At rehearsal number 9, the violin plays grace note figures like the Klezmer krekhts. The violin and cello participate in an exchange from rehearsal number 9 (figure 4) to the end until the

staggered entrances on unison leaving the cello to play alone.

The next piece is an aleatoric piece based on the dreary rainy day of the mass funeral for the victims of the fire. *It Rained That Day* is meant to be played “Improvisatory; Like soft slow drops of rain,” and accompanied by a recording of rain. To give the effect of rain in the string quartet, I employed only short, light sounds. The piece is made up of three boxes of notes for the string quartet and each box was to be played for the prescribed amount of time. Pitches could be played either *col legno* or *pizzicato*, and if desired, they could be played in different octaves, or as a harmonic. Performers were instructed not to use *arco* except for when they play a very soft and short harmonic.

The solo dancer leads into a routine and others follow one by one to create a chorus of the same motions. Strings blend in with the rain by *pizzicati*, light *col legno* playing, and short light harmonic sounds. During the piece, the names of the victims from the fire were spoken. Once all of the dancers are in rows doing a chorus movement in unison, the former soloist begins slowly walking down a row and as she passes the other dancers, they follow her. Another contrast here between the music and dance is the orderliness in the choreography and the aleatoric, or random, qualities of the “rain music.”

Soon enough, all of the dancers are in lines walking past each other. This symbolizes the procession for the factory workers – the mundane routine of so many people almost everyday. Drawing the piece to a close, the rain fades out and

the dancers walk into a position to where they eventually come together to create a “family portrait” and a light flashes as if a picture was taken. This then leads into the next section called the *Freylekhs Dance*.

Figure 7. The Ahava Rabba mode (or the altered Phrygian scale) starting on C-sharp.



Based on the actual Klezmer dance genre and musical style called “freylekhs” (Yiddish for “joyful” or “festive”), this is a major part of Eastern European Jewish celebrations in weddings and bar mitzvahs. The *Freylekhs Dance*, a lively dance piece, features many common folk characteristics such as guitar-like strums on all of the instruments of the string quartet, slides, snaps, fast movements, trills, and also krekhts. The piece is traditionally played in three repeated sections. Three types of scales are generally used in freylekhs pieces, but the specific one that I chose, the Ahava Rabbah melodic mode¹³, is also known as an altered Phrygian scale because of the raised $\hat{3}$ (see figure 7). This scale is common to numerous eastern European folk tunes and does sound similar to the characteristically Spanish Phrygian mode.

Emphasizing family, friends, and relationships, the dance uses duos and trios dancing together, playing games, spinning, jumping, and supporting each other with carrying and lifts. Larger groups break out and offer a counterpoint with a circle

¹³ Philip V. Bolhman, “Jewish Music in Europe,” *Garland Encyclopedia of World Music Volume 8: Europe*, ed. Timothy Rice, James Porter, and Chris Goertzen (New York: Routledge: 2000), 8:253.

dance reminiscent of the traditional freylekhs dance. Some of the movements used are motives from the work and fire scenes, but are done in an upbeat and spirited way. With a duo dancing during the energetic coda, they form the family picture a second time at the close of the typical and descending VIII-V-I cadence.

Neither *Interlude*, *Lullaby*, nor *Dead to Work* were used as a part of the dance production, but they were extra musical pieces created for possible scenes.

Interlude is a melancholic folk melody in a “tearful” 3/4 based off of the main work theme. The melody is passed around the quartet in an exchange, but mostly is featured in the Violin I part, which also displays the Klezmer influence of krekhts and trills.

In the sweetly haunting tune of *Lullaby*, I really wanted to communicate the twisted emotions in this piece right after the cheerful *Freylekhs Dance*. I composed this piece envisioning the women workers tired and exhausted – after working full days in the sewing factory followed by the time they spent with their friends and family in the cheerful *Freylekhs Dance*. Not only did they often work with their family members, but also they slept in the same tight quarters.

Lullaby moves along very delicately with *pizzicati*, again using a varied workers’ theme in the melody. At times, a lowered $\hat{2}$ is nostalgic of *Freylekhs Dance* and its altered Phrygian scale. The swift tempo even breaks down with fatigue at times, slowing in three different phrases in the short piece. In the *Molto Adagio* section at the end, the Violin I, Viola, and Cello play a broken G-Major chord in

pizzicato, followed by a long, drawn out slide in the Violin II to where the quartet comes to rest on a warm E-minor 7 chord with a 2nd instead of the 3rd.

In the dance theater production, the last piece to be heard before *To Work* is the *Freylekhs Dance*. The light-hearted vitality of the dance and music serves to lift the mood and create a sense of ease going into the next piece, *To Work*. After all, none of the women expected anything to go horribly wrong as it did and they were probably approaching the workday with a simplistic expectedness of the mundane workday. Over the next two movements – *To Work* and *Fighting the Fire* – the music and dance will build up to the main climax of the entire work which is towards the end of *Fighting the Fire* through *No Escape*.

To Work starts out with a tape of what I call “sewing machine music” – sewing machine and factory sounds in rhythm. Sounds from the factory include mechanical sounds, scissor snaps, dings, clicks, cloth tears, cloth waving, cloth in motion. Sound samples of the sewing machine and factory noises were placed in several different beat patterns on a drum machine in the computer program called Reason. The factory sounds are used to accent the constant sewing machine beat, give cues to the dancers, and coincide with their movements. The music is coupled with choreography that is meant to depict the workers as both machines and humans. Rolling and jumping movements continue to foreshadow the fire to come.

The quartet score for *To Work* begins at the same time as the “sewing machine music” with the cello and viola meddling with the beginning of the main

theme. The first true appearance of the main theme is heard four measures into the cello solo. During the cello solo, which stays in *pizzicato* until the second restatement of the theme, the choreography makes use of benches as props for the dancers to sit as they “work.” Different formations are made as sewing movements come together and alternate by the dancers sitting upright and bending down.

Figure 8. Double stop theme in the violins at rehearsal number 22, measure 369.

The image shows a musical score for rehearsal number 22, measure 369. It consists of four staves. The top two staves are for the Violins I and II, and the bottom two are for the Viola and Cello. The key signature has one flat (B-flat), and the time signature is 4/4. The score is divided into two measures. In the first measure, the violins play a double stop of a half note G4 and a half note B4, marked with a piano (*p*) dynamic. The viola and cello play a rhythmic pattern of eighth notes, marked with a mezzo-forte (*mp*) dynamic. In the second measure, the violins play a double stop of a half note A4 and a half note C5, also marked with a piano (*p*) dynamic. The viola and cello continue their rhythmic pattern, with the cello marked with a mezzo-forte (*mf*) dynamic.

In the second half of *To Work*, the two violins enter with high staccato notes played lightly over the cello solo. The full quartet is employed all together near the end at rehearsal number 22. At this point, another theme enters where the two violins play double stops during the short eighth-note rests of the cello and viola (see figure 8). This will be expanded on later during *Fighting the Fire*. By rehearsal number 23, material from the theme begins to show up layered in retrograde and inversions. As energy is picking up in the dance, the tension is met with a grating and metallic *sul ponticello* transition followed by the fire alarm bell ringing in the

accompanying tape.

To Work leads right into *Fighting the Fire* without pause and the quartet is still accompanied by the tape that is now playing sounds of fire and electronically manipulated sounds from the strings to give off chilling effects all the way through the end of the following piece, *No Escape*. Transitioning into *Fighting the Fire*, the string quartet shifts the meter to a suspenseful and panicked 5/4 with a buildup to the *fortissimo* at rehearsal number 25. The offbeat theme in the violins from rehearsal number 22 appears here again (see figure 9).

Figure 9. Fighting the Fire, measures 393-403.

The image displays a musical score for measures 393-403 of the piece "Fighting the Fire". The score is arranged in two systems, each with four staves: Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), and Violoncello (Vc.).

System 1 (Measures 393-403):

- Measure 393:** Vln. I and Vln. II are silent. Vla. and Vc. play a rhythmic pattern of eighth notes with accents. Dynamics are *mp*.
- Measure 394:** Vln. I and Vln. II enter with a half note chord, marked *ff*. Vla. and Vc. continue their pattern.
- Measure 395:** Vln. I and Vln. II play a half note chord, marked *ff*. Vla. and Vc. continue their pattern.
- Measure 396:** Vln. I and Vln. II play a half note chord, marked *ff*. Vla. and Vc. continue their pattern.
- Measure 397:** Vln. I and Vln. II play a half note chord, marked *ff*. Vla. and Vc. continue their pattern.
- Measure 398:** Vln. I and Vln. II play a half note chord, marked *ff*. Vla. and Vc. continue their pattern.
- Measure 399:** Vln. I and Vln. II play a half note chord, marked *ff*. Vla. and Vc. continue their pattern.
- Measure 400:** Vln. I and Vln. II play a half note chord, marked *ff*. Vla. and Vc. continue their pattern.
- Measure 401:** Vln. I and Vln. II play a half note chord, marked *ff*. Vla. and Vc. continue their pattern.
- Measure 402:** Vln. I and Vln. II play a half note chord, marked *ff*. Vla. and Vc. continue their pattern.
- Measure 403:** Vln. I and Vln. II play a half note chord, marked *ff*. Vla. and Vc. continue their pattern.

System 2 (Measures 398-403):

- Measure 398:** Vln. I and Vln. II play a half note chord, marked *ff*. Vla. and Vc. continue their pattern.
- Measure 399:** Vln. I and Vln. II play a half note chord, marked *ff*. Vla. and Vc. continue their pattern.
- Measure 400:** Vln. I and Vln. II play a half note chord, marked *ff*. Vla. and Vc. continue their pattern.
- Measure 401:** Vln. I and Vln. II play a half note chord, marked *ff*. Vla. and Vc. continue their pattern.
- Measure 402:** Vln. I and Vln. II play a half note chord, marked *ff*. Vla. and Vc. continue their pattern.
- Measure 403:** Vln. I and Vln. II play a half note chord, marked *ff*. Vla. and Vc. continue their pattern.

The score includes various performance instructions such as *mp*, *ff*, *pizz.*, *arco*, and *ricochet*. A box containing the number "25" is located above the first system.

Meter shifts, interspersed throughout *Fighting the Fire*, create a mood of distress and chaos. Interrupting the chaos on two occasions is a brief section with a manner of playing described as “Crystalline.” Here, the calmness of the hollow sustained harmonics contrasts with the surrounding chaos and represents those that were frozen in shock and doubting the reality of the unfolding tragedy.

During the chaotic fire scene, the main workers’ theme weaves in and out of the frenzied trills and harsh sustains. Meanwhile, the dancers are rolling, jumping, and running. Two dancers act as friends displaying parts of their *Freylekhs Dance*

in a panicked manner. Some dancers are reaching for each other or helping each other by pulling other dancers up or carrying them.

After a series of time signature shifts from 3/4 to 4/4, we arrive at a halting solo trill in the Violin II at rehearsal number 36. The solo trill is soon met with *ad lib glissandi* using harmonics in the Viola and Cello parts with a sustained screaming high pitch in the Violin I part.

Without pause, *No Escape* starts with a strong and dramatic C-minor harmony. While the dancers are frozen in a huddle, the attention focused on another dancer on the balcony above the stage who was in character as a ghost foretelling the deaths to come. The solo cello is accompanied by the quartet playing longer *tremolo* notes. The quartet joins the cello in octaves at rehearsal number 39 and after three *fortepiano* chords, the solo cello part resumes. The ending is a gloomy violin recap on the beginning cello melody in this piece. During the recap, attention is returned to the main dancers below where half of them pose as a wall of fire pushing the others back as they struggle to break free from the flames. At the end of the victims' struggles, they are carried to the center of the stage.

Threnody is an improvisatory cello solo based off of *To Work*. The cello is combined with electronics that echo and alter the sound for a haunting effect. Upon the beginning of *Threnody*, two dancers stand on a bench to fall to the ground, get back up, and repeat this numerous times. They represent the many workers that jumped to their deaths from the 8th-10th floors of the building. Once they are done

falling, the fallen workers do a sort of “dead dance” to portray the individuals that died. With tattered costumes and hair down, the other dancers rush to their aid to fix their dresses and fixing their hair. This symbolizes how their families, friends, and coworkers upheld their images and remembered them with dignity. They try to keep their memories alive and are determined to not have let them die in vain. *Threnody* is completed by the cello sustaining a low C on the open C-string and varying between *sul ponticello* and *normal* bowing positions.

Grave and *Funeral* serve the purpose of communicating hope and a determination to continue, move on, and change. In *Grave*, solo sections within the quartet resemble the main theme and are reminiscent of the solo sections of *Premonition*, with a sense of sadness and insecurity. On the contrary, *Funeral* offers a sense of finality with slow and stately harmonic movements in the string quartet. The Violin I melody uses high sustained pitches. This is mirrored in the movements of the first dancing soloist as she hauntingly points towards the audience again as in the beginning of the dance. Her movements here are to portray the onlookers and their pointing; saying to look at what is happening, or what has happened. The conclusion is a hauntingly final sense driven by the high sustains in the string quartet, and the dancers come one by one into spotlights starting the same “dead” dance but proceeding at different speeds. The final crescendo in the string quartet gives way to a church bell tolling as it did the day of the mass funeral, and just as the dancers came into the spotlights one at a time, the spotlights faded out one by one.

CHAPTER III

THE SCORE

Full Score

Elizabeth Kowalski

One Hundred Forty-Six

*Dedicated to the victims of the
Triangle Shirtwaist Factory Fire*

Memories

Elizabeth Kowalski (b. 1986)

Richly ♩ = 68
Violin Prelude

Violin I *f*

5

9 **1**

Vln. I *f*

Vln. II *pizz.*
p

Vla. *pizz.*
p

Vc. -

13

Vln. I

Vln. II

Vla.

Vc. *pizz.*
p

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2

♩ = 124

17

Vln. I

Vln. II

Vla.

Vc.

arco

p

3

23

Vln. I

Vln. II

Vla.

Vc.

pp

f

p

ppp

ppp

p

29

Vln. I

Vln. II

Vla.

Vc.

p

p

♩ = 124

34 **rall.** **A Tempo**

4

Vln. I

Vln. II

Vla.

Vc.

p

40

5

Vln. I

Vln. II

Vla.

Vc.

p

pp

46

6

1.

Vln. I

Vln. II

Vla.

Vc.

pp

mp

51 2. 7

Vln. I *p*

Vln. II

Vla.

Vc.

57 *esp.*

Vln. I *esp.*

Vln. II

Vla.

Vc.

63 *rall.*

Vln. I *p* *ppp*

Vln. II *pp* *ppp*

Vla. *pp* *pp*

Vc. *pp*

Premonition

71 **Mysteriously Expressive** $\text{♩} = 54$

Vln. I *pp* *mf* *fp* *f*

Vln. II *pp* *fp*

Vla. *pp* *fp*

Vc. *pp* *fp*

77 *freely, rubato* **8**

Vln. I *f*

Vln. II *f*

Vla. *f*

Vc. *f*

81 **II**

Vln. I *f*

Vln. II *f*

Vla. *f*

Vc. *f*

85

9

Vln. I

Vln. II

Vla.

Vc.

ppp

ppp

ppp

89

Vln. I

Vln. II

Vla.

Vc.

freely, rubato

mf

93

Vln. I

Vln. II

Vla.

Vc.

pizz.

f

pizz.

f

97

Vln. I

Vln. II

Vla.

Vc.

arco

p *ppp*

arco

p *ppp*

p *ppp*

6

6

3

3/4

3/4

3/4

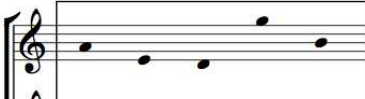

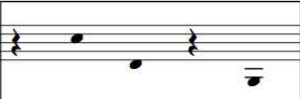








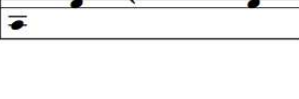
3/4

It Rained That Day

Improvisatory; Like soft slow drops of rain

In the order they are shown, play notes sporadically and arhythmically.
Vary the rhythms and repeat notes at will.
If desired, change octaves or play harmonics.
Use: *Col Legno* or *Pizzicato*
(Do not use arco except on very soft and short harmonics)

(5:00-6:00, very gradually get slower and become less and less)

	0:00 - 2:00	2:01 - 4:00	4:01 - 6:00
Vln. I			
Vln. II			
Vla.			
Vc.			

Interlude

102 Tearfully ♩ = 81

Vln. I *p*

Vln. II *pp*

Vla. *pp*

Vc.

Detailed description: This system contains measures 102 through 108. The music is in 3/4 time with a key signature of two flats (B-flat and E-flat). The tempo is marked 'Tearfully' with a quarter note equal to 81 beats per minute. The first violin part (Vln. I) begins with a piano (*p*) dynamic and features a melodic line with two slurs, each marked with a '2' indicating a second ending. The second violin (Vln. II) and viola (Vla.) parts enter in measure 103 with a pianissimo (*pp*) dynamic. The viola part consists of a steady eighth-note accompaniment. The violin I part has a melodic line with some grace notes. The cello (Vc.) part is mostly silent, with some notes in measure 103.

109

Vln. I

Vln. II *pp*

Vla. *p*

Vc. *pp*

Detailed description: This system contains measures 109 through 114. The first violin (Vln. I) has a melodic line with a slur. The second violin (Vln. II) and cello (Vc.) parts have a pianissimo (*pp*) dynamic. The viola (Vla.) part has a piano (*p*) dynamic. The music continues with similar textures and dynamics.

115

10

Vln. I *pp*

Vln. II *pp*

Vla.

Vc. *p*

Detailed description: This system contains measures 115 through 120. A box containing the number '10' is positioned above measure 116. The first violin (Vln. I) and second violin (Vln. II) parts have a pianissimo (*pp*) dynamic. The cello (Vc.) part has a piano (*p*) dynamic. The viola (Vla.) part continues with its accompaniment. The music concludes with sustained notes in the string parts.

120

Vln. I
Vln. II
Vla.
Vc.

p

Detailed description: This system of music covers measures 120 to 124. It features four staves: Violin I, Violin II, Viola, and Violoncello. The key signature is three flats (B-flat major or D-flat minor). The time signature is 4/4. In measure 120, the Violin I part has a whole rest, while Violin II and Cello play quarter notes. In measure 121, all parts have whole rests. In measure 122, Violin I and Cello play half notes, while Violin II and Viola play dotted half notes. In measure 123, Violin I and Cello play half notes, while Violin II and Viola play dotted half notes. In measure 124, Violin I and Cello play half notes, while Violin II and Viola play dotted half notes. A dynamic marking of *p* (piano) is present in measures 122 and 123.

125

Vln. I
Vln. II
Vla.
Vc.

p

Detailed description: This system of music covers measures 125 to 129. It features four staves: Violin I, Violin II, Viola, and Violoncello. The key signature is three flats. The time signature is 4/4. In measure 125, Violin I and Cello play quarter notes, while Violin II and Viola play dotted quarter notes. In measure 126, Violin I and Cello play quarter notes, while Violin II and Viola play dotted quarter notes. In measure 127, Violin I and Cello play quarter notes, while Violin II and Viola play dotted quarter notes. In measure 128, Violin I and Cello play quarter notes, while Violin II and Viola play dotted quarter notes. In measure 129, Violin I plays a triplet of eighth notes, while Violin II and Cello play quarter notes, and Viola has a whole rest. A dynamic marking of *p* (piano) is present in measure 125.

130

Vln. I
Vln. II
Vla.
Vc.

Detailed description: This system of music covers measures 130 to 133. It features four staves: Violin I, Violin II, Viola, and Violoncello. The key signature is three flats. The time signature is 4/4. In measure 130, Violin I plays a quarter note, while Violin II and Cello play dotted quarter notes, and Viola has a whole rest. In measure 131, Violin I plays a quarter note, while Violin II and Cello play dotted quarter notes, and Viola has a whole rest. In measure 132, Violin I plays a quarter note, while Violin II and Cello play dotted quarter notes, and Viola has a whole rest. In measure 133, Violin I plays a quarter note, while Violin II and Cello play dotted quarter notes, and Viola has a whole rest. The system concludes with a double bar line and a key signature change to two flats.

Freylekh Dance

134 **Improvisatory** ♩ = 76
rubato

Vln. I

Vln. II

Vla.

rubato
arco

arco

141 **Improvisatory folk melody**
Solo

Vla.

146

Vla.

150

Vla.

153

Vla.

156 **Festive** ♩ = 116
snap pizz.

Vln. I

Vln. II

Vla.

Vc.

f

arco

f
pizz. strum

arco

f

arco

160

Vln. I *f* *pizz. strum*

Vln. II

Vla. *arco*

Vc. *pizz. strum* *arco*

164

Vln. I

Vln. II

Vla. *arco*

Vc. *f*

11 *arco*

mp

mp

168

Vln. I

Vln. II

Vla. *snap pizz.*

Vc. *pizz. strum*

172

Vln. I

Vln. II

Vla.

Vc.

pizz. strum

arco

3

176

12

Vln. I

Vln. II

Vla.

Vc.

3

arco

mp

arco

f

arco

snap pizz.

fp

180

Vln. I

Vln. II

Vla.

Vc.

mp

f

mp

snap pizz.

ff

snap pizz.

pizz.

arco

fp

f

mp

184

Vln. I *p* *f* 3

Vln. II arco *f* 3 *f* 3

Vla. *f*

Vc. *f*

188

D.S. al Coda

CODA accel.

Vln. I

Vln. II

Vla.

Vc.

f *fp* *f*

192

Vln. I

Vln. II

Vla.

Vc.

pizz. strum

195

Vln. I

Vln. II

Vla.

Vc.

fff

pizz. strum

arco

Lullaby

197 **Hauntingly** ♩ = 116

Vln. I
Vln. II
Vla.
Vc.

pizz.
ppp pizz.
pizz.
p
mf

204 **rit.** ♩ = 116

13

Vln. I
Vln. II
Vla.
Vc.

arco
p
arco
p
ppp

211

14

Vln. I
Vln. II
Vla.
Vc.

pizz.
p
ppp

218

rit. arco

15 = 116

pizz.

Vln. I

Vln. II

Vla.

Vc.

mf

pp

f

pp

f

pp

225

rit. arco

Vln. I

Vln. II

Vla.

Vc.

p

pizz.

arco

arco

arco

16

231

Molto Adagio

pizz.

arco

Vln. I

Vln. II

Vla.

Vc.

p

arco

pp

pizz.

p

arco

pp

pizz.

p

arco

pp

Dead to Work

235 Solemn $\text{♩} = 56$

Vln. I *fp* *fp* *f*

Vln. II *fp* *fp* *f*

Vla. *fp* *fp* *f* *fp*

Vc. *fp* slide *fp*

241

17

Vln. I *pp* *fp*

Vln. II *pp* *fp*

Vla. *pp* *fp*

Vc. slide *pp* *fp*

248

Vln. I

Vln. II

Vla.

Vc.

18

254

Vln. I

Vln. II

Vla.

Vc.

pp

ricochet

ricochet

257

Vln. I

Vln. II

Vla.

Vc.

mp

simile

simile

260

Vln. I

Vln. II

Vla.

Vc.

mf

mf

ricochet

ricochet

simile

simile

19

264

Vln. I

Vln. II

Vla.

Vc.

pizz.

pp

266

Vln. I

Vln. II

Vla.

Vc.

arco

To Work

269 **Con Moto** ♩ = 108

Vln. I

Vln. II

Vla. *jete*

Vc. *jete* *f*

274

Vln. I

Vln. II

Vla.

Vc. *f*

279

Vln. I

Vln. II

Vla.

Vc. *solo pizzicato* *p*

285

Vc. *mf*

289

Vc. *mf* *snap pizz.*

293
Vc. 

298
Vc. 

302
Vc. 

307
Vc. 

312
Vc. 

316
Vc. 

322
Vc. 

327
Vc. 

20

333

Vln. I *p*

Vln. II *p*

Vla.

Vc. *tutti*

338

Vln. I

Vln. II

Vla.

Vc. *p* *fp* *p* *fp*

343

Vln. I

Vln. II

Vla.

Vc. *mp*

348 21

Vln. I *pp*

Vln. II *p*

Vla. *mp* *mf*

Vc. *mf*

352

Vln. I

Vln. II

Vla. *mp* *mf* *vico*

Vc. *mf* *pizz.*

357

Vln. I

Vln. II

Vla.

Vc.

362

Vln. I

Vln. II

Vla.

Vc.

mf *f*

snap pizz.

367

Vln. I

Vln. II

Vla.

Vc.

mp *f*

p *p*

22

371

Vln. I

Vln. II

Vla.

Vc.

mp *mf* *mp* *mf*

mp *mf* *mp* *mf*

23

376

Vln. I

Vln. II

Vla.

Vc.

jete

p

crescendo

mp

24

380

Vln. I

Vln. II

Vla.

Vc.

f

p

f

384

Vln. I

Vln. II

Vla.

Vc.

Fighting the Fire

387 *sul ponticello* Suspenseful ♩ = 185

Vln. I

Vln. II

Vla.

Vc.

mp *pp*

SP → ESP

set the tempo *ricochet*

390

Vln. I

Vln. II

Vla.

Vc.

p

ricochet

393

25

Vln. I

Vln. II

Vla.

Vc.

mp *ff* *arco* *ff*

398

Vln. I

Vln. II

Vla. *pizz.*

Vc. *ricochet*
pp

404

Vln. I

Vln. II

Vla. *arco ricochet*
p

Vc. *p*

Crystalline

408

Vln. I

Vln. II

Vla.

Vc. *ricochet*
pp

26

27

421

Vln. I

Vln. II

Vla.

Vc.

425

Vln. I

Vln. II

Vla.

Vc.

II, III

f

f

p

28

429

Vln. I

Vln. II

Vla.

Vc.

p

p

p

pp

435

Vln. I

Vln. II

Vla.

Vc.

mf
snap pizz.

f

441

29

Vln. I

Vln. II

Vla.

Vc.

f *p* *f* *p*

f *p* *f* *p*

f *p* *f* *p*

arco

447

Vln. I

Vln. II

Vla.

Vc.

fp *f*

fp *f*

pizz.

pizz.

pizz.

452 **30**

Vln. I: pizz., arco, pizz., arco, pizz.

Vln. II: arco, pizz., pizz., pizz., pizz.

Vla.: pizz., pizz., pizz., pizz., pizz.

Vc.: arco, arco, arco, arco, arco

457

Vln. I: arco, *fp*, arco, arco, arco, arco

Vln. II: arco, arco, arco, arco, arco

Vla.: arco, arco, arco, arco, arco

Vc.: arco, arco, arco, arco, arco, *fp*

462 **31**

Vln. I: arco, *ff*, *p*, arco, arco, arco, arco, *f*

Vln. II: arco, *p*, arco, arco, arco, arco, *f*

Vla.: arco, *p*, arco, arco, arco, arco, *f*

Vc.: arco, arco, arco, arco, arco, arco, *f*

32

468

Vln. I

Vln. II

Vla.

Vc.

snap pizz. φ

arco

ricochet

474

Vln. I

Vln. II

Vla.

Vc.

33

480

Vln. I

Vln. II

Vla.

Vc.

ricochet

504 34

Vln. I *ff* *p* *ff* *ff* *p*

Vln. II *ff* *p* *ff* *p*

Vla. *ff* *p* *ff* *p*

Vc. *ff* *p* *ff* *p*

510 35

Vln. I *ff* *ff* *p* *ff* *ff*

Vln. II *f* *p* *f* *f* *f* *f*

Vla. *f* *f* *f* *f* *f* *f*

Vc. *f* *ff* *ff* *ff*

516

Vln. I *p* *f* *p* *f* *f* *ff*

Vln. II *p* *f* *p* *f* *f* *ff*

Vla. *f* *f* *f* *f* *f* *ff*

Vc. *ff* *p* *f* *f* *f* *ff*

36 **Devastatingly Chaotic**

524

Vln. I

Vln. II

Vla.

Vc.

fp *ff*

Continuously ascend and descend arhythmically and aggressively.

mf

ad lib & vary bow pressure

I, II III, IV

mf

527

Vln. I

Vln. II

Vla.

Vc.

bar on III, IV

fff

ad lib, aggressively ascend / descend varying bow pressure

I, II III, IV

fff

529

Vln. I

Vln. II

Vla.

Vc.

ad lib, aggressively ascend / descend
varying bow pressure

behind the bridge

behind the bridge

p

531

Vln. I

Vln. II

Vla.

Vc.

p

532 Vary between N and ESP

Vc.

mp *pp* *f* *fff* *f*

No Escape

37

540

Vln. I *fff*

Vln. II *fff*

Vla. *fff*

Vc. *fff* *f* *fp-ff*

38

547

Vln. I

Vln. II

Vla.

Vc. *ff*

553

Vln. I

Vln. II

Vla.

Vc. *fp* *solo*

560 39

Vln. I

Vln. II

Vla.

Vc.

f *3* *3* *tutti* *3* *3*

566

Vln. I

Vln. II

Vla.

Vc.

fp *fp* *fp* *fp* *f* *f* *3* *III* *II, I* *slowly* *3* *fff*

gruesome *3*

572

Vln. I

Vln. II

Vla.

Vc.

pp *pp* *pp* *pp*

pp

Threnody

Out of sight, but never out of mind.

Grievingly Expressive

580 solo slowly, improvisatorily

Vc.

588

Vc.

595

Vc.

601

Vc.

606

Vc.

612

Vc.

616

Vc.

ppp *p*

mf

mp

mf *mp*

(rain starts)

40

620

Vc.

mf *p* *f* *p* *f* *f*

626

Vc.

f *mf*

631

Vc.

f *mf*

635 pizz. arco

Vc.

mp *f* *p*

640

Vc.

f *ff* *mp* *f > p* *ff* *mp*

644

sul ponticello → ESP ← SP

Vc.

mp *pp* fade out

Grave

Grave ♩ = 44

Score for measures 40-43. The piece is in 4/4 time with a tempo of Grave (♩ = 44). The score includes parts for Violin I, Violin II, Viola, and Violoncello. Measures 40-42 are in common time (C), and measure 43 is in 4/4 time. Dynamics include *pp* and *p*. A triplet of eighth notes is marked in measure 43.

584

Score for measures 41-44. Measure 41 is marked with a box containing the number 41. The score includes parts for Violin I, Violin II, Viola, and Violoncello. Measure 41 is in 4/4 time. Dynamics include *ppp*, *f*, and *mf*. Performance instructions include *pizz.* and *arco*. A fermata is present over the final note of measure 41.

589

Score for measures 42-45. Measure 42 is marked with a box containing the number 42. The score includes parts for Violin I, Violin II, Viola, and Violoncello. Measure 42 is in 4/4 time. Dynamics include *pp* and *pp < p*. A fermata is present over the final note of measure 42.

594

Vln. I
Vln. II
Vla.
Vc.

Detailed description: This system contains measures 594 through 597. Vln. I has a melodic line with a quintuplet in measure 595. Vln. II has a similar melodic line. Vla. and Vc. provide harmonic support with eighth and quarter notes.

598

Vln. I
Vln. II
Vla.
Vc.

pizz. arco

Detailed description: This system contains measures 598 through 601. Vln. II and Vla. have 'pizz.' markings in measure 598 and 'arco' markings in measure 599. Vln. I has a melodic line with some rests. Vc. has a bass line with rests and notes.

43

602

Vln. I
Vln. II
Vla.
Vc.

pp

Detailed description: This system contains measures 602 through 605. A box with the number '43' is at the top left. Vln. I has a melodic line with a triplet in measure 605. Vln. II has a melodic line. Vla. and Vc. provide harmonic support. The system ends with a 'pp' dynamic marking.

607 **44**

Vln. I

Vln. II

Vla.

Vc.

p

ppp

pp

611

Vln. I

Vln. II

Vla.

Vc.

3

3

615 **45** *accel.*

Vln. I

Vln. II

Vla.

Vc.

ppp

618

Vln. I

Vln. II

Vla.

Vc.

rit.

Slowly

$\text{♩} = 44$

621

Vln. I

Vln. II

Vla.

Vc.

46

f

624

Vln. I

Vln. II

Vla.

Vc.

Funeral

After the smoke settles

627 **Expressive** ♩ = 54

Vln. I *fp* *fp*

Vln. II *fp* *fp*

Vla. *fp* *fp* *f* 3

Vc. *fp* slide

631 **47**

Vln. I *f*

Vln. II *f*

Vla. *fp*

Vc. *fp* slide

635 **48**

Vln. I *pp*

Vln. II *pp*

Vla. *f* *f* *pp*

Vc. *pp*

640

Vln. I
fp

Vln. II
fp

Vla.
fp

Vc.
fp

This system contains measures 640 through 643. It features four staves: Violin I, Violin II, Viola, and Violoncello. All parts begin with a forte-piano (*fp*) dynamic. The Violin I and II parts play sustained notes with some melodic movement. The Viola and Violoncello parts provide harmonic support with sustained notes and some rhythmic patterns.

644

49

Vln. I

Vln. II

Vla.

Vc.

This system contains measures 644 through 647. A box containing the number '49' is positioned above the second measure. The Violin I part has a double bar line at the end of measure 647. The Violin II, Viola, and Violoncello parts continue with their respective parts, showing some rhythmic changes in the later measures.

648

(Bells tolling)

Vln. I
fp *f*

Vln. II
fp *f*

Vla.
fp *f*

Vc.
fp *f*

This system contains measures 648 through 651. The text '(Bells tolling)' is written above the staff. The Violin I part has a double bar line at the end of measure 651. The Violin II, Viola, and Violoncello parts continue with their respective parts, showing some rhythmic changes in the later measures. Dynamics range from *fp* to *f*.

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