AN ANALYSIS AND PERFORMANCE GUIDE FOR ANNA
THORVALDSÓTTIR’S AURA FOR THREE OR FOUR PERCUSSIONISTS

by

Matthew E. Rush

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AN ANALYSIS AND PERFORMANCE GUIDE FOR ANNA THORVALDSDÓTTIR’S AURA FOR THREE OR FOUR PERCUSSIONISTS

Matthew Edward Rush, D.M.A

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Advisor: David P. Hall

This doctoral document and accompanying lecture recital seek to illuminate and bring clarity to aura (2011) for three percussionists and AURA (2015) for four percussionists by Icelandic composer Anna Thorvaldsdóttir. This composition is examined through a thorough musical and formal analysis to show that there is a guiding force to be found behind the sustained drones and complex bell themes of the piece. A performance guide to reduce the composition’s logistical and musical challenges is included in the hopes that it will shorten the learning curve for a new ensemble as they learn the piece. It is this author’s aim that this resource will make this composition accessible to a wider range of ensembles and thereby bring more exposure to the music of Anna Thorvaldsdóttir.

In addition, biographical information and a survey of the composer’s compositional process and style is included to increase the limited amount of scholarly research that currently exists on Dr. Thorvaldsdóttir and her works.
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DEDICATION

In loving memory of my father, Edward W. Rush.
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CHAPTER 1
INTRODUCTION

The music of Icelandic composer Anna Thorvaldsdóttir (b. 1977) ranges from powerful and visceral to austere and contemplative.¹ Though her music is full of innovative textures and timbres that can come across as otherworldly or even electronic, all sounds are born from acoustic instruments and natural inspiration.² Thorvaldsdóttir enjoys working with large sonic structures, as seen in her works for symphony orchestra such as *Aeriality* (2011) and *Metacosmos* (2017), which was premiered by the New York Philharmonic in spring of 2018. Her chamber music also similarly speaks in profound and creative ways,³ witnessed through *In the Light of Air* (2013/14) composed for the International Contemporary Ensemble, and her trio for percussion, *aura* (2011), composed for the NorthArc Percussion Group. *aura* (2011) was revised to become *AURA* in 2015 to include a fourth player for the acclaimed Los Angeles Percussion Quartet with members Matt Cook, Justin DeHart, Cory Hills, and Nick Terry. Both the trio and quartet versions are outstanding works for the chamber percussion ensemble genre.

*AURA* (2015) and *aura* (2011) create incomparable sonic environments that invite a more intense experience for the audience by using a darkened performing space, lighting attached to the instruments and the performers, and a host of standard and

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³ Anna Thorvaldsdóttir, “About - Bio,” Anna Thorvaldsdóttir – Composer, accessed March 27, 2018, http://www.annathorvalds.com/bio/. Also, I would like to acknowledge the Icelandic custom of referring to a person by their first name after their full name has been used, however in the case of this DMA document I have made the decision to err on the side of formality at the advisement of my supervisory committee.
extended techniques on the percussion instruments.⁴ Over the course of the piece, the players are called upon to act as three or four sides on one musical being: they exchange lines not only in the traditional, musical sense, but they also physically rotate from one of three stations to the next. As will be seen to be common in Thorvaldsdóttir’s music, the sounds created in this piece consist of various sustained sounds and drones, which are delineated by the more rhythmic sound of three “bell themes.” These are marked “with tranquility” by the composer and played on chosen “bell” instruments such as microtonal tuned steel pipes or hand bells. These themes coalesce and drift through the darkened atmosphere created before fading back into the droning textures.

Currently the only extant dissertation on Thorvaldsdóttir’s music is her own Ph.D. dissertation, “Aeriality: Music for Orchestra,” from her work at University of California – San Diego, where she received her Master of Arts and Ph.D.⁵ While academic journal articles on Anna are also scarce, one notable writing is Stephen Long’s “Drones, Transformation, and Polarity in Anna Thorvaldsdóttir’s Orchestral Music,” printed in Tempo (2015). Though these documents were beneficial for preliminary research of her compositional style, neither addresses in detail Thorvaldsdóttir’s chamber works nor her use of percussion instruments. There are also numerous audio, video, and print interviews with Thorvaldsdóttir that have been useful in giving insight into her background, compositional process, and style. One such interview surveys the members of the Los Angeles Percussion Quartet and addresses AURA directly, but it is mostly a brief

⁴ For the sake of clarity throughout this document I will use AURA (all capitals) to refer to the quartet version and aura (all lowercase letters) refers to the trio. If the context refers to the piece in general, or applies to both versions, I will be using Aura to refer to the work on the whole.

overview of the piece and does not examine the piece or its performance practices in-depth.⁶

This document seeks to fill a gap in the field of academic study on Anna Thorvaldsdóttir and her works, and it will provide a thorough analysis of Aura’s most salient aspects and performance practice issues as well as a broad view of her other chamber works and use of percussion therein. It is the author’s hope that this document will minimize the difficulties faced by any percussion ensemble undertaking these rewarding works.

CHAPTER 2

ANNA THORVALDSDÓTTIR

Anna Thorvaldsdóttir (b. 1977) is an award-winning Icelandic composer whose music invites the listener into a world of flowing and droning sounds inspired by her aptitude for listening to the natural world.\(^7\) Groups such as the International Contemporary Ensemble (ICE), the New York and Los Angeles Philharmonic Orchestras, the Iceland Symphony Orchestra, Bang on a Can All-Stars, and the Los Angeles Percussion Quartet have performed Anna’s music.\(^8\) She is a recipient of Lincoln Center’s 2018 Emerging Artist Award and 2018 Martin E. Segal Award, and in January of 2018 Anna was named composer-in-residence with the Iceland Symphony Orchestra. She was named the New York Philharmonic’s second Kravis Emerging Composer in 2015. This award includes a cash prize and commission, and subsequently her work *Metacosmos* was premiered by the orchestra under that baton of Esa-Pekka Salonen in April of 2018.\(^9\)

Her first album, 2011’s *Rhízōma*, includes her orchestral work, *Dreaming*, for which she was awarded the Nordic Council Music Prize in 2012. Her following album, 2014’s *Aerial*, appeared on the popular year-end lists published by the *New Yorker*, the *Boston Globe*, and *iTunes Classical*. Most recently, *In the Light of Air* was recorded by the International Contemporary Ensemble and released on the Sono Luminus label in

\(^8\) Ibid.
Thorvaldsdóttir’s music also appears on releases by prominent ensembles such as the Iceland Symphony Orchestra and the Los Angeles Percussion Quartet.\textsuperscript{11}

Thorvaldsdóttir was born to a musical family in the small coastal village of Borgarnes, outside of Reykjavík, Iceland.\textsuperscript{12} While most people in Iceland live in the capital city of Reykjavík, Thorvaldsdóttir believes that her rural upbringing, being surrounded by the ocean and mountains and subjected to constant wind and changing weather, did a great deal to shape her view of the world and her music.\textsuperscript{13} The inland region of Iceland is more hostile—featuring glaciers, lava fields, and volcanoes—and she says that living “on the outskirts of something so powerful, you feel how small you are.”\textsuperscript{14}

Thorvaldsdóttir’s grandmother was musical, and her mother and aunt were both music teachers. Although television and other forms of electronic entertainment were becoming commonplace, Thorvaldsdóttir recalls how each week her mother’s family would come together and sing Icelandic songs that had been passed down from generation to generation.\textsuperscript{15} Despite being raised in such a musical family, Thorvaldsdóttir was not forced to follow suit. She recalls her mother taking her to an opera when she was five years old and though the specific details of the opera are lost to her, she remembers


\textsuperscript{11} See Bibliography for full citations of the various recordings consulted.


\textsuperscript{13} Lanzilotti, Music and Literature.


\textsuperscript{15} Ibid.
the impression of it quite well. As a young girl Thorvaldsdóttir learned to play a number of instruments, and though she aspired to play cello, there was no teacher available in her town. At age 12, Thorvaldsdóttir began taking cello lessons from a violin teacher, and she knew right away that it was exactly what she wanted. Early musical interests included everything from the Chopin and Liszt her mother would play to popular music such as rock, metal, and drum-n-bass, to Icelandic staples such as The Sugarcubes, Björk, and composer Jón Leifs.

Thorvaldsdóttir would go on to study cello at the Sigursveinn D. Kristinsson School of Music in the Iceland Academy of the Arts in Reykjavík, and as she became interested in making up new sounds and techniques in her studies, she eventually considered the idea of creating her own music. She decided to take a class in composition, and although she was terrified to share her music with others, her teacher, John Speight, was very encouraging of her efforts, and she gradually transitioned from cello performance to composition, finishing a bachelor’s degree in music in 2004. She describes this transition not as a conscious choice, but as a gradual change that led to her to find her deep passion for composing.

At this point Thorvaldsdóttir spent a few years focusing on composing before she and husband Hrafn Ásgeirsson recognized the benefits of leaving Iceland and moved to the United States to pursue their work. Ásgeirsson, who also took advantage of different surroundings, holds a PhD in philosophy and is also a musician with interests in avant

16 Armbrust, Music and Literature.
17 Sirota, Meet the Composer.
19 Armbrust, Music and Literature.
20 Sirota, Meet the Composer.
21 Ibid.
garde saxophone and photography. Thorvaldsdóttir enrolled at the University of California – San Diego, a program known for being open to contemporary and experimental music, and began her studies with Rand Steiger. Steiger describes Thorvaldsdóttir as somewhat shy, and it took a good amount of time for them to get to know one another. Her music, however, spoke to him “immediately and persuasively.”

Under Steiger’s tutelage, Thorvaldsdóttir found her own voice in ways she did not expect, saying of her time at UCSD:

I thought I knew what I was going to be doing, and what I would learn, and what path I was on. I’ve always been very determined in my music. But new people, a new environment, and new inspiration…they bring you something that you just can’t predict. There I learned all kinds of things I could have never imagined, both in life and music.

The openness and flexibility of the school allowed Thorvaldsdóttir to find her own voice rather than imposing a structure on her, and she sees her time at UCSD as “metamorphic” for her development as a composer and figure who would soon be in the public spotlight. While at UCSD Thorvaldsdóttir spent time as a teaching assistant and completed both a Master of Arts and Doctor of Philosophy in Music, with the bulk of her dissertation focusing on her expression through “sounds rather than prose,” in her massive orchestral composition *Aeriality*.

Thorvaldsdóttir’s compositional process starts internally, and she hears music very naturally, as she describes in an interview with Sarah Jeffery:

I am a rather introverted composer and allow myself to dream on the music from within before I start to write it out. It is very hard to identify where the ideas come from.

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23 Sirota, Meet the Composer.
24 Armbrust, Music and Literature.
25 Ibid.
from and it also depends and varies. At times they seem to come naturally and almost effortlessly, while at other times they seem to need to brew for a while before they show up. I don’t think about the music in a sense of wanting to “describe” or “portray” certain things or scenarios, but certain images, ideas, and concepts might be an inspiration for the music in the earliest stages of composing.  

Much of Thorvaldsdóttir’s musical inspiration comes indirectly from nature. When composing she is not necessarily trying to portray a certain scene or landscape musically; rather she is influenced by nature in a larger sense, especially in regard to proportion and flow/movement. Stephen Long cites a number of compositional polarities that show these influences, including “flow and stasis, stability and volatility, transparency and opacity, expansion and contraction, straightforward versus resonant embellishment of material, local and global perspectives of texture, and synchronous and asynchronous lines.”

The way in which Thorvaldsdóttir draws inspiration from nature and her environment parallels American composer John Luther Adams (b. 1953) in a number of ways. Adams grew up in the American South and Northeastern seaboard before a trip to Alaska to campaign for the Alaska National Interest Lands Conservations Act changed the course of his life. In 1978 Adams would relocate there to serve as the executive director of the Northern Alaska Environmental Center, however soon after he would begin composing, with the majority of his works being inspired by or paying tribute to his

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27 Jeffery, Primephonic.
adopted homeland. Similar in the way Thorvaldsdóttir speaks of her upbringing in rural Iceland, Adams speaks of how place can affect a composer.

The places we live resonate within us. The sounds around us – the songs of birds, the cries of animals, the rhythm of the season, and the reverberations of the elements – all echo in the music of a place… The rich diversity of music around the world is a result of people living for centuries in harmony with their own physical and cultural geographies.

Thorvaldsdóttir speaks of the droning of the wind and being surrounded by the ocean and mountains in Iceland having a formative influence on her view of her place in the world, and Adams sees things through an Alaskan lens as well. He speaks of how the silence of the landscape, muted by snow, can change and attune the ears in extraordinary ways, saying, “I listen for that music: in the growl of boot steps in fresh snow at 40 below zero, in the haunted cry of a boreal owl, in the luminous dance of the aurora borealis across a moonless sky.”

Thorvaldsdóttir’s music, like that of Adams, goes beyond simply painting landscapes with music, as she elaborates on in her PhD dissertation:

Generally I do not find it desirable to try to imitate the actual sounds heard in nature. The listening is in the form of hearing what the visualization present me with. I look at the sky, I see the moon aligned with a very bright star. Instantly I hear the harmony of this image – it is still, but moving slightly as the light from the star pulsates ever so lightly. I look at a mountain – from a distance it looks very still, as if it were a substance of a single color. I listen, and as I move closer the details become clearer. From there I can choose how to listen. I can listen to the entire image or pick out parts of it to concentrate on.

A difference here is that Adams does transcribe actual sounds from nature in some of his works, which could be anything from birdsong to natural sounds that he has recorded

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31 Feisst, Grove Music Online.
33 Ibid, 9.
while hiking in the Arctic Wildlife Refuge, or even the spoken word of the Iñupiaq, one of the native peoples of Alaska as he does in *Earth and the Great Weather* (1990-93).\(^\text{35}\)

Thorvaldsdóttir also incorporates a unique way of interpreting the role that emotion plays in composition. Her master’s thesis delves into the idea that emotions that spark the motivation to compose, in that she believes that emotions felt most intensely during conception of a composition are incredibly important and form the framework to the piece from which subsequent passages are built.\(^\text{36}\) Her views on how emotions play a role in composition center around this idea, rather than writing music with a specific emotion being portrayed.\(^\text{37}\)

Although Thorvaldsdóttir’s ability to hear the music internally comes instinctively, the challenge of getting it onto paper to share with others can be daunting. She often starts with large-scale sketches rather than staff paper, something she believes is important because it can take so long to notate music and a musical idea may come to her very quickly. These sketches act as a bridge between the sound world in her mind and the constraints of regular musical notation, and she compares them to a mnemonic device that allows her to focus on sounds without having to constantly recall the piece’s form.\(^\text{38}\) Because she lives and feels the music in sounds more so than actual thoughts, much of her work at UCSD with Rand Steiger centered around developing a vocabulary to talk about her music while being careful not to disrupt her internal process of hearing her music.\(^\text{39}\)

^{37}\) Thorvaldsdóttir, “Music and Ideas.” 
^{38}\) Armbrust, *Music and Literature*. 
^{39}\) Sirotta, Meet the Composer.
Steiger describes a complete change in demeanor whenever Thorvaldsdóttir would reach the point of bringing her work, scores, or sketches, that were typically vast and had to be laid out on the floor, into him. At this point, a more extroverted and excited Thorvaldsdóttir would emerge, and Steiger saw a completely different side of her as she described how her imagined sound world was finally taking form as a new piece of music. These times were exhilarating, since much of the difficulty in composing lies in getting ideas out of one’s head and onto a space to work with the piece and fine-tune it, all without losing the original idea in the process. The editing process is crucial to Thorvaldsdóttir’s work and is often a very in-depth undertaking. However, she says, once the piece is ready and done, then it is done; she does not typically go back to an old piece to make changes later. Here is some insight from Thorvaldsdóttir on this part of the process:

I try to never finish a piece until I am satisfied… when I have a deadline for a commission, my deadline is always at least two months earlier… because I need to know if the piece is ready, and I don’t know is ready if it’s not ready for at least a few weeks until I have to hand it in. This has something to do with myself and I have to feel the resonance of the music in its absolutely finished format, until I’m ready to say, okay you can go out in the world now, and so… at least I’m always very true to the things I’m doing. You can always think about what you could do better, but at some point you just have to trust the music that it is ready. It is more about trust than satisfaction.

This sense of finality is apparent when experiencing the precision of details in Thorvaldsdóttir’s finished scores, though she does allow for some “give-and-take” in

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40 Sirota, Meet the Composer.
41 Ibid.
42 Ibid.
43 Ibid.
performance, “I want the performers to feel natural, not restricted by parsing quintuplets,” and in this way, the fluid lines and layers on the page are given life.\textsuperscript{44} Thorvaldsdóttir feels a very close connection to her home country of Iceland, saying “I take my roots with me wherever I go. It is almost easier to be inspired by your own backyard when you’re away from it. I’m always moved by my home country and the nature we have there. Whenever I arrive back home, I feel the connection with Iceland very strongly.”\textsuperscript{45} John Luther Adams feels a similar connection to his adopted home of Alaska.

Thorvaldsdóttir finds much of her inspiration from nature, specifically within the context of growing up (and since returning to reside there in 2013) in Iceland, where the whims of the earth hold a great amount of sway on everyday life. Coming from a place where nature is the ultimate authority, the droning of the wind off the ocean and the great power found in the depths of a volcano can often be heard and felt in Anna’s compositions. Natural forces govern the structure of her compositions as well; in regards to proportions, often the Golden Section emerges: “This is not always intentional, but we are also a part of nature – that is also who we are.”\textsuperscript{46} This is true of her orchestral composition, \textit{Aeriality} (2011), in which the Golden Section of the peak marks the apex of the entire work. In this measure, a lengthy bar in 4/2 meter in a piece primarily in 4/4, the evolving drones of the work come together to create a sound wall of 53 voices sustaining 46 pitches (including quarter tones) over the range of two and a half octaves.\textsuperscript{47} The

\textsuperscript{44} Armbrust, Music and Literature.
\textsuperscript{46} Quoted in Lanzilotti, Music and Literature.
\textsuperscript{47} Thorvaldsdóttir, \textit{Aeriality: Music for Orchestra}, 13.
concept of the Golden Section and the emergence of these ratios in *Aura* will be covered in detail in a subsequent chapter.

Thorvaldsdóttir often makes use of what many would consider extended techniques in her music, using super ball mallets to drag across a gong and cello string or playing inside an open piano. Open-minded parents, encouragement from her teachers in Iceland and at UCSD, and roots in the Icelandic musical culture in which she grew up fostered Thorvaldsdóttir’s sense of compositional freedom. Indeed many see Iceland as witnessing an active experimental music scene, which Anna attributes to the relative (compared to most western art music) young age of the classical music tradition there:

> In the case of Iceland, I think at least one significant aspect of it…might be that in an important sense Icelandic music history isn’t very old, which can facilitate a certain type of freedom. This freedom nurtures a great deal of diversity and is also partly responsible for the fact that musicians here work across genres a lot as well.  

In addition to creating new sounds as she pulls the music from her mind into the outside world, Thorvaldsdóttir also works in creating a completely cohesive experience for the audience by creating the environment the music is to take place in as well, seen particularly in *Aura* as I will discuss subsequently.

Another piece of Thorvaldsdóttir’s that considers and dictates the visual elements of the performing space is *In the Light of Air* (2013/14), commissioned and premiered by the International Contemporary Ensemble (ICE). This piece, which is scored for viola, cello, harp, piano, percussion, and electronics, creates a setting in which the audience can fully immerse themselves by using lights and installations, as well as allowing the

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48 Jeffery, Primephonic.
audience to surround the performance of the piece.\textsuperscript{49} The light constellation used with a performance of this work was designed in collaboration with ICE and was used in the premiere of the work by that group at the 2014 Reykjavík Arts Festival.\textsuperscript{50} Thorvaldsdóttir views these lights as one of the “instruments” in the work, and she intends for them to be programmed so that they seem to react to the performers’ breaths and instrumental cues, something she had to work very closely with ICE to accomplish. The idea for the metal installations, called Klakabönd (translating loosely to “a bind of ice”) started out as a small metal ornament that Anna received as a gift made by Icelandic artist Svaná Jósepsdóttir, and she experimented with the ornament to see how it sounded when struck.\textsuperscript{51} Thorvaldsdóttir enjoyed the sound, so she asked Jósepsdóttir to make a few really large versions of the ornament for \textit{In the Light of Air} to serve as both decorative installations and instruments used by the percussionist in the fourth movement of the work, “Remembrance.”\textsuperscript{52} Her 2013 composition, \textit{Trajectories}, for piano and fixed electronics also calls for a video projection constructed by visual artist Sigurður Guðjónsson, again going beyond the realm of music making alone.

A sense of being close to or even within the music is even present on her recordings, of which she does most of the editing and mixing herself. Doyle Armbrust describes listening to her album, \textit{Aerial}, by saying “It’s as though you’ve commandeered an invisibility cloak, stolen onto the concert hall stage, and tucked into the center of the ensemble, the stage pulsating beneath you.”\textsuperscript{53} Andy Bliss (University of Tennessee –

\textsuperscript{49} Anna Thorvaldsdóttir, liner notes for \textit{In the Light of Air, ICE Performs Anna Thorvaldsdóttir}, International Contemporary Ensemble, Sono Luminus DSL-92192, 2015.
\textsuperscript{50} Ibid.
\textsuperscript{51} Jeffery, Primephonic.
\textsuperscript{52} Ibid.
\textsuperscript{53} Armbrust, Music and Literature.
Knoxville), describes listening to her music in a similar fashion, describing a live performance of *In the Light of Air*.

She has this sound world where she’s basically operating inside the instrument. When I listen to her music I feel like I’m inside of the sound. Everything is extremely granular and microscopic and texture based… The beginning of the piece was all these low piano sounds that were somehow reacting through the electronics, then it went over to this long solo cello section and she manages to live in that same vocabulary, and continue to innovate and find new textures and combinations of sound, all in that environment.⁵⁴

Even as new instruments enter, the sound world is undisturbed and continues to evolve, glacially moving towards the next thing.

While never forgetting her Icelandic roots, Thorvaldsdóttir sees herself as a citizen of the world as well, and she is especially grateful for the opportunities she’s earned to work with groups such as ICE and the New York Philharmonic. With the commission she recently finished for the New York Philharmonic she says the following:

It was an amazing experience for me, because they simply asked me what I would like to do and we talked over the ideas together. I said I’d love to work with the entire orchestra rather than an ensemble (it was an opportunity I could not miss) and create a 10-15 minute piece. There were no requirements on their part, they just said yes.⁵⁵

*Metacosmos*, deals with the “natural phenomenon of chaos and its relationship to structure, order, and beauty,” was premiered in April of 2018.⁵⁶ Thorvaldsdóttir feels especially grateful to work with groups that are committed to supporting contemporary music, since they are very important to all composers of this genre. She also sees it as her responsibility to be a champion for female composers in a world where women are rarely commissioned for full orchestral works. She recalls what it was like for her as a young woman getting started composing:

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⁵⁴ Andrew Bliss Interview.
⁵⁵ Anderson, International Arts Manager.
⁵⁶ Lanzilotti, Music and Literature.
When I was nineteen and first composing there were very few female composers I could look up to; you were not exposed to their music… But that has changed. Absolutely it has changed. There is still a long way to go before young women are matching the opportunities of old men, but at least now you do see women making music and receiving significant commissions.  

While she is not read to take to academia just yet, Thorvaldsdóttir sees it as her duty to work with students and be a role model for young women in composition. She has had a young female composer working for her as an intern, which has been an incredibly positive experience for both of them. The primary idea she would impress upon students of composition is to “create connections and write as much as possible.” This will allow one to refine their craft and find like-minded people to perform music with and present opportunities to make more connections.

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57 Anderson, International Arts Manager.
58 Ibid.
59 Ibid.
CHAPTER 3

PERFORMANCE NOTES – AURA FOR FOUR PERCUSSIONISTS

Anna Thorvaldsdóttir first composed her percussion trio, aura, in 2011 for the NorthArc Percussion Group. The program notes for the piece come with the subtitle of “Three Sides of the Same Being,” and calls for the three performers to rotate around three different stations over the duration of the piece, which is roughly six minutes. The three stations are set up around a central vibraphone, which must be reachable from all three, and consist of a concert bass drum each, in addition to a few other instruments.  

Thorvaldsdóttir developed a revised edition of aura (titled AURA) in collaboration with the members of the Los Angeles Percussion Quartet (LAPQ) in 2015. Quartet member Justin DeHart was a neighbor and friend to Thorvaldsdóttir during their studies at UCSD and this led to the LAPQ commissioning the work from her. Thorvaldsdóttir was booked for years in advance however, so they decided to rework one of her existing pieces into a quartet configuration in place of a brand new composition. This is how aura became AURA.

The setup of Aura calls for a central vibraphone and three stations of other instruments that surround it. In the case of the quartet the vibraphone itself acts as a fourth station. This “central station” includes the vibraphone and a set of four “bells,” which the composer indicates should “provide contrast to the reverberating resonance of the sustained sounds and the vibraphone and ideally have a ‘warm’ sound quality.”

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61 Interview with Justin DeHart of the Los Angeles Percussion Quartet, conducted through email by Matthew RUSH.
62 Ibid.
63 Ibid.
Thorvaldsdóttir goes on to list several preferred options, which include four bells (she gives no further description), four crystal glasses filled with water (to various degrees), four crotales, four glass bottles of different shapes/sounds, or four metal objects. She also specifies that the four bells be of the same type from the categories above rather than mixing and matching, that the bells have a moderate resonance (ring for a short while), and that they can be pitched. She suggests D4, F4, A4, and C5 for the pitches, allowing for quartetone variances as well and indicating that precise pitches are not necessary.

Surrounding this central station are Station 1 (concert bass drum that can be laid flat and has a real skin head and two almglocken, pitched to C and D-flat), Station 2 (a similar concert bass drum and a “big” tam-tam), and Station 3 (another similar concert bass drum and two almglocken, pitched to F and G-flat). It is indicated in the score that Stations 1 and 3 need to be able to reach the vibraphone or central station for performing throughout the piece. In the trio version of the piece, the tam tam also must be accessible from the vibraphone, as some parts require a performer to play the two instruments simultaneously.

Thorvaldsdóttir labels the players with the letters A, B, C, and D, with player D being remained motionless at the central station for the entire duration of the piece. In the trio, each player will make a stop at the central vibraphone station (which also includes the tam tam) over the course of the piece. Players A, B, and C start at Stations 1, 2, and 3 respectively, and as in the trio version of the piece, rotate from station to station as indicated in the score, i.e. Player A starts at Station 1 and ends the piece at Station 3. Players are indicated to perform from the score, and Thorvaldsdóttir also indicates that it

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65 Unless otherwise noted, all of the information in this chapter comes from the scores.
is preferable for the audience to surround the performers with the piece being in the center.

According to the performance notes, the piece should be performed in the dark wherein the performers attach lights to themselves (ideally on the hands or fingers), and the instruments can also have small lights attached to them, perhaps inside the bells if crystal water glasses are used. Ideally the performers’ shadows are projected onto the walls of the performance space by the instrumental lights, and the performers themselves become moving lights. These lights serve not only to create an atmosphere in which the work can take place, but to add indirectly to the aural landscape as well. One way Thorvaldsdóttir manipulates the sound world occurs through changes in textural density, that is to say through the number of voices happening at once and through the dynamics in which each voice is being heard. Drones created with scraping motions are altered dynamically by moving the implement more quickly and in larger motions across the surface of the instrument to create louder dynamics.66 As the implement moves in faster and larger motions, so too will the lights attached to the performer’s hands or arms, thereby creating a visual projection of the textural effects being heard.

*Aura* requires intense choreography in its musical transitions and execution. The piece must have a sense of ballet to it, as some of the interactions between performers in the piece indeed require precise movements to execute them in a way that is successful and appropriate to the flowing aesthetic of the work. The lights augment the importance of gesture and movement in this piece great, as expounded upon by Andy Bliss who has rehearsed and performed the piece with Thorvaldsdóttir present.

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66 Information regarding the execution of dynamics is indicated in detail by the composer, and is found in the performance notes in the score.
(The lights) completely enhance the gestural aspect of the piece. Now you have to not get out of sync with your partner, you can’t move suddenly 'cause now you’ve just sent this strobe light through the environment. These lights should be moving on the ceiling and walls in kind of a kaleidoscopic fashion, and you don’t want an outlier in there that suddenly zips around. 67

With the lights attached to the performers, every motion is magnified greatly. How a percussionist moves while performing is always important to the effectiveness of the performance, but due to this factor it is that much more crucial for movement to match the music in *Aura*.

A variety of implements are called for when performing this piece, each to be used in multiple ways throughout the piece.

- “Big” soft mallet, i.e. a gong or bass drum mallet
- Wire brushes
- Super balls (a rubber ball attached to the end of a thin fiberglass dowel)
- Soft yarn mallets
- Drum/snare “mallets” (given the graphic representation she likely means a general snare drum stick)
- Double bass bows (the piece requires eight in total)
- The performers’ hands

Each of the above implements includes a small graphic to be used in the score whenever said implement is to be used, as shown in figure 1.

On the non-pitched instruments Thorvaldsdóttir indicates that a sustained note value on an instrument means to move the appropriate implement in a circular fashion on the surface of the instrument while a tremolo note value (typically indicated with three slashes through the note stem) means to rapidly move back and forth on the surface of the instrument. A tremolo is created on the almglocken by placing a stick inside the bell and

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moving it quickly back and forth, and a tremolo with “big soft mallet” should be performed as a single stroke roll.

**Figure 1 – Graphics used in the score to represent implement changes.**

![Diagram](image)

The performance notes indicate that dynamics are achieved through speed and density of the circular sustains and back/forth tremolos more so than loudness and softness: a *piano* dynamic would be slower motions across the surface of the instrument whereas a *forte* dynamic would be faster; a *crescendo* would be performed with gradually faster motions while a *decrescendo* would be gradually slowing motions. Occasionally both hands must be used on the same instrument to create two independent lines, and this is indicated for the bass drums or tam-tam by a two-line staff with the top line (and corresponding dynamic markings) indicating the right hand and the bottom line (and dynamics) indicating the left. Thorvaldsdóttir indicates that sustained sounds (including super ball drags) on the bass drums and tam-tams should move across different areas of the surface of the instrument for a varied sound.

Lastly, two other sounds include using a stick to play on the shell of the bass drums (indicated by an X-shaped note head) and a bowing technique performed with two double bass bows. The tip of one bow is pressed into the head of the bass drum and then bowed by a second bow to create a deep, resonant drone. This double-bow technique is
only present in the quartet version of the piece, and it creates a sound similar to a super ball drag but with a deeper, more open resonance. This technique often corresponds with the bell themes heard throughout the piece, and the presence of it in the quartet piece is because of the extra player. This sound adds an interesting new timbre that has not appeared in other percussion music and is described by Andrew Bliss as “one of the most innovative things I’ve ever seen in percussion.”

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68 Andrew Bliss Interview.
CHAPTER 4
A MUSICAL ANALYSIS OF AURA (2015)

4A. Macro Formal Analysis

*Aura* presents a sound world built around timbres and textures and moves from one section to the next through the interaction of the two. The piece does not follow traditional formats regarding harmony and melody, which can make it difficult to find ways to observe the overarching form of the piece. In order to look at the whole work at a glance it was necessary to graph all of the individual timbres heard in the piece against how they occur in time. This graph allows one to observe how the different timbres interact with one another and makes it possible to see patterns that are helpful in delineating the formal structure of the composition.

Figure 2 – Full timbral analysis graph of *Aura* of different timbres over time (Full sized versions of this graph can be found in Appendix I) The black areas represent when a timbre is present in the given measure

The most salient features to examine when looking at *Aura* from a formal perspective are the three bell themes that occur throughout the piece. In the context of a piece filled with mostly sustained drones, tremolos, and bowed vibraphone tones, the bell
themes are by far the most rhythmically active material in the composition. In the quartet edition of the piece, player D performs all three of the bell themes, while in the trio each of the three players performs one of the bell themes as they rotate from station to station.

The bell themes consist of highly active thirty-second note-based material played on the “bells,” with interspersed struck notes on the vibraphone. After an eight-bar introduction that establishes the sound world of the piece, the first bell theme begins in m. 9 and carries through the end of m. 13, lasting for a total of five measures.

Ex. 4.1 – Thorvaldsdóttir, AURA, m. 9 – First Bell Theme entrance (Center Station – upper staff – vibraphone, lower staff – bells)

This bell theme is accompanied by many of the same drones from the introduction, but it is also worth noting that in the quartet version there is the added presence of the double-bow technique on the bass drum, performed in this instance by Player B at Station 2 and also by Player C at Station 3. This timbre is only present in the quartet version of the work, and it adds another deep droning sound that fits well into the existing sound world of the composition. Between the two players, this double bow sound is sustained throughout the entirety of the first bell theme.

Within m. 19 the players rotate stations for the first time, with A moving to 2, B moving to 3, and C moving to 1, and this transition must be done seamlessly without a
break in sound. As seen in Ex. 4.2, Player C moves to Station 1 and begins the sustain on the almglocken in the top staff, while Player A finishes the circular strokes on the bass drum skin. These transitions will be looked at in detail in a subsequent chapter.

Ex. 4.2 - Thorvaldsdóttir, *AURA*, mm. 17-20 (first station change, at Station 1)

An interlude of more sustained drones takes over the texture, and an active passage of bowed vibraphone notes by Player B (now at Station 3) leads to the second bell theme, which begins on the downbeat of m. 25 and carries through m. 34 for a total of ten measures this time. Once again, more than half of this second bell theme is accompanied by the double bow sound, split between Player B at Station 3 and Player C at Station 1, along with other various drones and tremolos. The augmented length of the second bell theme is striking when compared to the first, as it seems to linger on; this effect is compounded by the fact that it takes longer to fade back into the fabric of droning material, as it includes a few echoic reentries after the initial diminuendo.

Players rotate stations again, for the second and final time in measure 43, with Player B taking over Station 1, Player C taking over Station 2, and Player A moving to

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69 A method for achieving the transitions in an efficient manner will be provided in the performance guide section of this document.
Station 3. In contrast to the previous two bell themes, the third bell theme begins with an anacrusis in m. 47 leading to the downbeat of m. 48 and seemingly ends in m. 52. However, after three beats of rest there is an echo reentry of the bells and vibraphone in m. 53 on beat two, which happens at a softer dynamic than the initial conclusion in the previous bar, in similar fashion to the extended exit of the second bell theme. The bells and vibraphone assert themselves one final time in the penultimate measure of the piece, as shown in Ex. 4.3. All playing ends at the conclusion of beat three in this same measure, and the piece ends with a silent fermata on beat 4 of m. 56 and m. 57, which consists only of rest. This empty measure emphasizes the need for time to allow any remaining resonance to die away naturally, as nothing in the piece is to be dampened. The character of the performance should not be broken without sufficient time given to achieve complete silence at the end.

Ex. 4.3 - Thorvaldsdóttir, AURA, m. 56 (final bell/vibraphone passage)

It is worth pondering whether to include this last entry of Player D on the bells as part of the third bell theme, since a total of two-and-a-half measures have passed between the last time the bells were heard and the last entry in m. 56. Those two and a half measures are a substantial amount of time in the recommended tempo range of quarter note equals 38 – 40. The amount of space and the brevity of the material seen in Ex. 4.3 above, which comes in at mezzo piano despite the last bell notes fading to pianissimo, leads this entrance to be heard as a separate entity from the third bell theme. This music simply
exists to conclude the composition and present a closing statement, which then fades away into the silence.

Another aspect of this final bell statement is the ambiguous pitch centricity, which hearkens back to the B section and second bell theme. In this brief statement both the F-C and the F#-C# dyads are heard in the four vibraphone notes. This happens after the third bell theme and subsequent struck vibraphone notes had settled on F, and combined with the more firm dynamic gives it a striking character and sense of finality, despite the lack of clear pitch center. The absence of a firm resolution is in itself a nod to the vast expansiveness of the natural world, and this is not an uncommon conclusion to one of Thorvaldsdóttir’s works. However, the pitch center of F is still being established by the F-C perfect fifth dyad being bowed by players A and B.

It would be inappropriate to try to force a label of sonata form, or any other standardized form onto this piece, but the three bell themes and their movement from a more stable sense of pitch centricity to a more ambiguous one (and then back) give a strong sense of ABA to the overall composition. These pitch centers are confirmed by the entrance of the almglocken and bowed vibes in the material that immediately follows each bell theme as well, which will be covered in detail in the next section. The first and third bell themes are also similar in length (not taking into account the reentry of the bells in m. 56), with the second theme being substantially longer than the outer two.

In the big picture, these bell themes stand out in how they focus the perception of the listener in contrast to the more rhythmically ambiguous droning material that surrounds them.

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Thorvaldsdóttir finds that the Golden Section often emerges in her work, and she believes that this happens because we as human beings are as much a part of the natural world as anything else.\(^71\) John Luther Adams has a similar view on humans being part of nature and how it interacts with the creation of art, saying, “The natural world is the most fundamental source of human intelligence, creativity, and culture. We don’t truly create anything except answers to creation. And we’re an inseparable part of nature. But in recent years we’ve forgotten this.”\(^72\)

The Golden Section is a ratio found by dividing a fixed length into two so that the ratio of the shorter section to the longer section is equal to the ratio of the longer section to the whole, as seen in Figure 3.\(^73\) This ratio governs many aspects of nature, such as the arrangement of seeds on the face of a sunflower, the coils of a pine cone, or the organic growth of leaves on a tree; it has also influenced art and architecture since antiquity.\(^74\) The concept of the Golden Section, which saw its earliest mention in Pre-Socratic texts, was initially expounded upon in Euclid’s *Elements*.\(^75\) In this text it was viewed as the extreme and mean ratio in how it interacted with a line, as below in Fig. 3, and while this concept was demonstrated in relative simplicity geometrically, the arithmetical division results in an irrational number.\(^76\)

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\(^71\) Lanzilotti, *Music and Literature*.
The Golden Section is intrinsically linked to the Fibonacci series, which is a series of numbers derived from each subsequent number being the sum of the previous two, starting with 0 and 1.\textsuperscript{77} Leonardo da Pisa, known as Fibonacci, in his 1202 treatise Liber abaci, first described this series, and it allowed an arithmetical way of looking at the geometrical concept of the Golden Section.\textsuperscript{78} This is because as you ascend through the Fibonacci series the ratio of one number to the next approaches closer and closer to the golden mean, as seen Figure 6.\textsuperscript{79} This is true of any summation series, another example being the Lucas series, which starts with 2 and 1 for the first two members. It proceeds in the same format of adding the previous two members to get the next, seen in Figure 5. Like the Fibonacci series (as shown in Figure 6), the ratio from one number to the next of the Lucas series also approaches the Golden Section as it ascends.

**Figure 3 – Graphic representation of the Golden Section of a line**

![Graphic representation of the Golden Section](image)

If AC = 1 then AB = .618
If AB = 1 then AC = 1.618

**Figure 4 – The first 17 numbers of the Fibonacci series**

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987 …

The Golden Section of a piece that is 100 measures long could be found by multiplying 100 by 0.618, which shows that the Golden Section occurs in m. 61.


\textsuperscript{78} Ibid.

Changing meters may require special treatment, such as using the note value that is the least common denominator of all of the meters in the piece for the calculations.

Figure 5 – The first 17 numbers of the Lucas series

2, 1, 3, 4, 7, 11, 18, 29, 47, 76, 123, 199, 322, 521, 843, 1,364, 2,207

Figure 6 – Fibonacci numbers approaching the Golden Mean as they ascend

<table>
<thead>
<tr>
<th>Fibonacci Numbers</th>
<th>Ratio as they ascend</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:1</td>
<td>1.000</td>
</tr>
<tr>
<td>2:1</td>
<td>2.000</td>
</tr>
<tr>
<td>3:2</td>
<td>1.500</td>
</tr>
<tr>
<td>5:3</td>
<td>1.667</td>
</tr>
<tr>
<td>8:5</td>
<td>1.600</td>
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<td>13:8</td>
<td>1.625</td>
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<tr>
<td>21:13</td>
<td>1.615</td>
</tr>
<tr>
<td>34:21</td>
<td>1.619</td>
</tr>
<tr>
<td>55:34</td>
<td>1.618</td>
</tr>
<tr>
<td>89:55</td>
<td>1.618</td>
</tr>
<tr>
<td>133:89</td>
<td>1.618</td>
</tr>
</tbody>
</table>

Sonata form, typical of first movements of Classical era piano sonatas, string quartets, and symphonies (among others), lends itself well to observation of the Golden Section. John Putz observes this phenomenon in the piano sonatas of Mozart, showing that the exposition of a sonata form often makes up the smaller section of the Golden Mean with the development and recapitulation making up the larger section, as seen in Figure 7.

80 Dunlap, The Golden Ratio And Fibonacci Numbers, 42 – 43.
Yet another view of the Golden Section in sonata form is to observe the larger portion of the ratio to come first, that is to say roughly 0.618 of the total piece. Oftentimes the recapitulation begins around this point or the beginning of the retransition back to the recapitulation, as seen in Figure 6.

Beethoven’s String Quartet in C minor, Op. 18, No. 4 has a total of 219 measures, and multiplying that by 0.618 allows an observation of the Golden Mean of 135.34. The recapitulation of this movement begins in m. 136, directly after the measure where the Golden Section falls, similar to the form shown in Figure 8. This phenomenon can also be observed in many other sonata form movements of Beethoven, Mozart, and Brahms among other composers associated with the Romantic era. In *Aura*, which is 57 total measures in length, the Golden Section comes out to 35.226. Measure 35 is the point where the second bell theme comes to a close and the piece begins to return to its A material, seen below in the excerpt from the timbral analysis graph.

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83 In his writings on the music of Bartók, Ernő Lendvai uses the term “positive” to describe an observation of the Golden Ratio where the larger section comes first, and “negative” to describe when the smaller section comes first. I will use this language in a way that is consistent with that. See bibliography.
84 Webster, 239.
85 Webster, 239 – 240.
86 Webster, 242 – 246.
Although Thorvaldsdóttir’s music is not in sonata form, a parallel can be seen between the formal proportions in her music and that of the great masters of the Classical and Romantic. There is no evidence that these composers used these calculations in composing their music; rather their sense of aesthetically pleasing proportions was an aspect of their inherent genius.\footnote{Kiš Žuvela, 275.}

The Golden Section has also been observed in other music that does not follow Sonata form, such as the works of Claude Debussy and Béla Bartók. “Reflets dans l’eau,” the first piece in Debussy’s first collection of piano Images, is one such piece. This music starts pianissimo and after its 94 measures ends even more softly with a marking of pianississimo. The Golden Section of this movement (94 measures • 0.618) comes out to approximately 58, and m. 58 marks the dynamic apex of the movement with a marking of fortissimo.\footnote{Howat, Debussy in Proportion, 24 – 25.} The first 58 measures, which make up the Golden Section, present another layer of division into a negative Golden Section at m. 23, which marks the first entrance of the B theme in the work.\footnote{Ibid.} The final 36 measures of the piece also can be divided further into a positive Golden Section at m. 80, which marks the final exit of the B theme and beginning of the codá, all of these layers are seen clearly in Figure 10 above.\footnote{Ibid.} The Golden Section operates on different levels in Aura as well, and in a very similar layout to the example from Debussy above, as seen in Figure 11 below.
Another level of Golden Section proportions emerges when the Golden Section of the entire piece, consisting of the first 35 measures, is divided at the point of negative Golden Section, circa measure 14. It is at this point the first bell theme comes to a close. When these first 14 measures are taken as their own entity and divided at the positive Golden Section, it is revealed that this corresponds closely to the entrance of the first bell theme. Another layer can be observed as emerging during the shorter part of the division of the entire work (mm. 35 – 57). When this section is divided at the Golden Section, circa m. 48, it corresponds to the entrance of the third bell theme. This observation connects all three of the bell themes to Golden Section proportions in some way. It can be observed that the proportions of *Aura* are closely aligned with those seen in the work of Debussy.

**Figure 11 – Levels of the Golden Section in *Aura***

Another way that the Golden Section has manifested in *Aura* is quite different from how it has been observed in other music. The positive Golden Section (of the entire work; 35.23) comes out to 21.77. The total amount of time (in measures) that the bells are heard in the work comes out to approximately 21.75 measures. This includes the entirety

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91 This graph is a facsimile of one printed in Roy Howat’s *Debussy in Proportion*, p. 25.
of the three bell themes and the closing gesture that takes place in m. 56 over beats two and three. Although the bells are not heard continuously, in the fashion that we have seen the Golden Section applied in other composers’ works, they are still found to be in an aesthetically pleasing proportion to the rest of the work. This is one more way in which Anna Thorvaldsdóttir’s music manifests the principles of natural growth, and could be a lens through which to examine her other compositions as well for emergence of the Golden Section.
4B. Micro Analysis

*AURA* begins with a wire brush on a bass drum, followed shortly by a sustained circular stroke on a bass drum and the dragging of a super ball mallet across the tam-tam. In m. 3 a bowed F3 on the vibraphone adds another timbre to the collection of drones and establishes F as a pitch center in the A section of the piece. This is shortly followed by an entry of wooden sticks on the shells of the bass drums at Stations 1 and 3, which are by far the most staccato sounds of the piece, and a timbre only heard in the A sections.

Ex. 4.4 - Thorvaldsdóttir, *AURA*, mm. 3-5 (Bass Drum, wood shell effect)

The bass drum shell is heard again in m. 5 and is joined throughout mm. 5-7 by other struck sounds, including F#4 and F4 on the vibraphone and one of the few struck tam-tam notes in the piece. As we will see moving forward, the pitches of F and F# will permeate the composition, often coupled with C and C# in dyads of perfect fifths. The bowed vibraphone (now a dyad of F3-C4) establishes a strong pitch centricity of F using a perfect fifth. Brushed tremolos on bass drum heads continue through m. 8 and are joined by a low drone created by using two bows on a bass drum; one bow has its tip pressed into the head of the drum and is bowed by the second bow, creating a low and muted drone.\(^\text{92}\) This becomes an important timbre that is exclusive to the quartet version of the work and is always associated with the bell themes, the notation for this effect is seen below in Ex. 4.5.

\(^\text{92}\) This effect will be referred to as the “double-bow” going forward.
All of the material up to this point serves to introduce the sound world in which *Aura* takes place; long drones are the norm and are created mostly with bows or various implements being dragged across the surfaces of bass drums or tam-tam in different ways.\(^93\) Thorvaldsdóttir’s use of drones is a prominent feature of the majority of her music: “My music is filled with drones. I like the stability of a solid foundation. I sense droning as being a natural state… Life itself comes with an eternal drone.”\(^94\) She elaborates on the way she uses drones in her compositions:

I have searched for various musical parameters to put into drones. This search has led me to construct drones in the following ways: by sustaining pitched material, using long notes where each instrument changes pitches at different times so that the harmony of layered and sustained pitches creates a drone; by using simultaneously performed rhythmic patterns that form a stream of sounds; by writing out ‘airy’ material, and/or extended instrumental techniques, so that the particular performance technique creates a layer of sustained sound.\(^95\)

*Aura* presents drones in traditional pitched material through use of the bowed vibraphone, and also through use of extended techniques of tremolos and circular sustains on the instruments. John Luther Adams has also been known to use droning material in his music, especially that which seeks to embody vastness or great depth, such as *Become Ocean* (2013), for which he won a Pulitzer Prize and Grammy Award.

The initial pitch center of F is established and handed off to player C in m. 8, before being carried into the beginning of the first bell theme in m. 9, which enters the

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\(^{93}\) These have been previously elaborated upon in Chapter 3.


\(^{95}\) Ibid.
texture with a crescendo from pianissimo to mezzo piano as it rises to the forefront through the sustained drones.\textsuperscript{96} The rhythms of the bell themes consist primarily of thirty-second notes, which stand in stark contrast to the long tones of the material that surrounds and accompanies them. The sounds used are comprised of the “bells” themselves and a selection of notes from the middle octave of the vibraphone.\textsuperscript{97} The pitched material in the piece is largely centered on the use of F-C and F#-C#, which is highlighted by the choices of pitches used on the vibraphone during the bell themes, and rearticulated in almglocken and bowed vibraphone immediately following each bell theme. The use of these perfect fifths help delineate the form of the piece with the outer sections being more centered around F-C and the B section being more centered around F#-C#. This is similar to how Thorvaldsdóttir uses different perfect fifths in her composition \textit{aequilibrria} (2014), for chamber orchestra.\textsuperscript{98} In that composition she makes use of the fifths as pedals to articulate different subsections of the work.\textsuperscript{99}

In the first bell theme, a mix of pitches are used to accompany the bells, often a combination of F# and C, with both F4 and F5 being used as well, but by the end of m. 11, the F takes over and is heard exclusively on the vibraphone until the bell theme fades back out at the conclusion of m. 13. Just as the bell theme comes to an end, a new and striking sonority is heard from Stations 1 and 3; the players use a wooden stick or dowel to tremolo inside the almglocken, which are pitched to F3 and C4. This F-C dyad heard from a dynamic new timbre confirms that F has prevailed in this section of the piece, as it

\textsuperscript{96} See Ex. 4.1 on p. 22 of this document.
\textsuperscript{97} The choice of materials for the “bells” has also been touched on in Ch. 3, the vibraphone material is limited to the middle of the range as the other registers are sometimes put to use by the players at the adjacent stations.
\textsuperscript{99} Ibid.
did during the waning measures of the first bell theme. The intensity of this tremolo increases to forte by the end of m. 14 before fading back into the accompanying drones. This dynamic peak, the loudest marked so far, is echoed in a brush tremolo on the bass drum at Station 2 on the downbeat of m. 16. Throughout mm. 14-16 the centrality of F natural is reiterated by the player at the central station through struck notes on the low end of the vibraphone.

The end of the almglocken tremolo and the struck F3 at the end of m. 16 indicate the closing of that section. The next section of the piece begins when Player C bows a Gb3 on the vibraphone in m. 17 from Station 3. Given the prevalence of F as a pitch center in the preceding material, the resurgence of F#, which is sustained for over three measures before being challenged, establishes a new center of pitch. The Bb3-F4 dyad that joins in m. 18 doesn’t upset this sense of a Gb pitch centricity as the Gb is in the lowest octave, and despite the presence of functional tonality the Gb can still be heard as a root for the sounding pitches in the context of an incomplete GbM7 chord.

After the players rotate for the first time in m. 19, a passage of harmonic interest is heard from the low end of the vibraphone. With the Gb3 that started in m. 17 still sounding (albeit with a different performer’s hand controlling the bow) another voice joins on F3, starting on beat four in m. 20, challenging the Gb centricity that has been established in mm. 17 - 20. Measures 20-25 contain an extensive bowed vibraphone passage containing the aforementioned F3 and Gb3, and also a C4 added to the mix in various alterations. This clouds the sense of pitch center, with the F and Gb clashing and the occasional C sounding over F, which is reminiscent of the opening of the work. This sense of ambiguity continues as the passage concludes on an F/Gb minor second dyad as
the second bell theme’s entrance _crescendos_ out of the fading bowed tones. The lack of a solid pitch center is a feature of the B section of the work. Sometimes Gb/F# takes over, while other times pitch centricity is ambiguous and clouded by clashing intervals; both of these features are demonstrated in the bowed vibraphone passage seen in Ex. 4.6.

**Ex. 4.6 - Thorvaldsdóttir, AURA, mm. 19-25 (bowed vibes, conflict between F/Gb)**

![Ex. 4.6 - Thorvaldsdóttir, AURA, mm. 19-25 (bowed vibes, conflict between F/Gb)](image)

The overall texture of the piece ebbs during this passage, as each player is only producing one sustain or tremolo, which allows the harmonic conflict of F and Gb to flow to the foreground. This is similar to the way Thorvaldsdóttir engages transparency/opacity with drones in her massive work for orchestra, _Aeriality_, where she allows for textural clarity in moments of more complex harmony to become more prominent.\(^{100}\) In that composition the climax involves a completely transparent texture of a long sustained note that is unison and equal in volume across the orchestra to present a sound mass of 53 voices sounding 46 individual pitch levels simultaneously.\(^{101}\) No such sound mass exists in _Aura_, however the use of ebb and flow in regards to her manipulation of texture to present material of harmonic interest is similar in nature.

The second bell theme presents similar textural material to its earlier counterpart, with a flourish of thirty-second note based rhythms split between the bells and the middle

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\(^{101}\) Thorvaldsdóttir, “Aeriality: Music for Orchestra.”
register of the vibraphone. The double bow sound on the bass drums appears again as accompaniment, although this time instead of being heard for the entirety of the bell theme as was before, it begins in m. 26, a measure and a half after the theme starts, and (aside from a short gap) it concludes on beat three of m. 32. This delayed entry of the double bow timbre presents a difference between this second bell theme and the first, setting this section apart from the A section in yet another way. As with the first theme, the sound of a wire brush tremolo on a bass drum head is also present, yet the sustained sound of a wood stick on a bass drum head (a circular motion rather than a back and forth motion) is heard as well, in contrast to the first theme in which it was absent. The bells themselves present similar material to the piece, but they are framed by different timbres in the accompanying drones. It is characteristic of Thorvaldsdóttir’s music for the drones to change over time rather than remain static, as she elaborates by saying “When I refer to a drone I am not simply talking about a steady pitch or steady sounds. It is important that the drone moves and morphs to take different shapes, or else we stop noticing its presence.”

The sound of a tam-tam roll with traditional soft mallets accompanies the second bell theme as well, and it is worth noting that this is the only time that timbre is present in the piece; the second bell theme is again set apart from the other two in this way. The pitch content of the vibraphone notes that are interspersed with the bells is similar to that of the first bell theme, with combinations of F, F#, G, and C heard throughout. Like the first bell theme, the vibraphone notes seem to settle on F4 in mm. 27-31 (downbeat), but unlike the first bell theme, the tension of the F# and C returns by the end of m. 31 and

throughout m. 32. Measure 33 settles again on F4 before the final entry of bell theme two sounds F#, G, and C (with no F natural) in m. 34. Again this supports seeing this central area of the piece as a B section in contrast to the opening material and first bell theme.

Bell theme two concludes in the third beat of m. 34 and is about ten total measures long. These ten measures nearly double the length of the first bell theme and span 17.5% of the total length of the composition. In accordance with its augmented length, the second bell theme takes a longer time to fade away into the droning texture of the piece’s sound world; a decrescendo to piano takes place in m. 32 before echoic fragments in mm. 33-34 fade out to pianissimo.

As at the end of the first bell theme, the sound of a super ball being dragged across the head of a bass drum is present in mm. 32-35, and struck notes on the vibraphone are also heard in mm. 35-37, like quiet echoes of the bell theme. While the sound of wooden dowels creating a tremolo inside the metallic almglocken are heard as in the first bell theme, this time the dyad is a perfect fifth of Gb3 and Db4, up a half step from the last time the same textual sonority was heard. The Gb-based fifth in the almglocken, which starts on beat four of m. 35 and continues into m. 39, is heard in direct conflict with the struck F4s on the vibraphone and an F3-C4 dyad from bows on the vibraphone in mm. 36-41. The Gb-based fifth of the almglocken is then reinforced by the same two pitches being bowed on the vibraphone by the same two players, and the clash with the F-C bowed notes is intensified by the sounding of Gb and Db in the same octave and timbre. This is another moment where a major harmonic clash is being brought to the forefront by use of textual clarity as only two different timbres are being sounded: almglocken tremolo and bowed vibraphone.
Unlike the A section of the piece, which presented an F pitch center, the B section often emphasizes Gb or presents the F and Gb in conflict with one another through harmonic clashes, which are brought to the forefront in moments of textual clarity. In this way, the B section presents less stable harmonic material than the A section, in addition to setting itself apart by employing different timbres in the droning sounds, such as the long roll on the tam-tam and stick tremolo on the bass drum. Additionally, the B section is set apart by timbres used in the A sections that it lacks, the most noteworthy being the wooden stick on the bass drum shell. Although this timbre is not heard often, it is quite singular in how articulate it is in the sound world of Aura, causing its absence to be noteworthy.

The Gb-based fifth fades out in m. 40, and is followed out by the F-based fifth in m. 41, which foreshadows the return to A section material and F pitch center. This leaves the listener with the neutral drones of brush tremolos on the bass drums and tam-tam as well as sounds created with the hands and sticks making circular sustains on the same instruments, and the players finally rotate for a second time in m. 43.

Each player takes over a scraping drone of some sort as they complete the rotation, and the next timbre heard from all three stations is a super ball on the bass drums and tam-tam; this is the first and only time in the piece all three of the rotating players use their super balls simultaneously. A large variety of textual activity is present in this material leading up to the third bell theme, and it is no surprise that the deep opacity of the texture is lacking harmonic accompaniment entirely. The texture thins out in m. 47 giving way to the entry of the third bell theme, which starts as an anacrusis to m. 48 and enters with the now standard crescendo from pianissimo to mezzo piano.
The material that precedes the entry of the third bell theme is also noteworthy in its similarity to some of the sonorities and textures that precede the first bell theme in the introduction to the piece. The sound of a stick on the wooden shells of the bass drums is heard with an identical motive to the opening measures of the piece, the most memorable rhythm being the 16\textsuperscript{th} note triplet on the bass drum at Station 1. In both instances, the two players must act as one for the rhythm to come across properly. Another timbre that has provided cohesion throughout the piece is the sound of a super ball on the tam-tam at station 2, which has now been heard leading in to all three of the bell themes.

The third bell theme comprises six total measures in length, which is only slightly longer than the first but considerably shorter than the second, and this bell theme starts out firmly grounded around F natural on the vibraphone. Unlike the other bell themes that started out with more ambiguous pitch centers, this third bell theme is extremely F-centric, anchoring against the brief interjections of the C-F#-G motive which happens a couple of times.

In similar fashion to the second bell theme, the third bell theme takes a full measure to get back down to the pianissimo dynamic and fade away in m. 53.

**Ex. 4.7 - Thorvaldsdóttir, AURA, m. 48 w/ anacrusis (third bell theme entrance)**

Double bows on the bass drums are heard in unison from all three players in mm. 49-52, clearing up the texture of the accompaniment down to a single timbre, allowing the bell
theme to flow to the front more than ever. Also, during a short break in the bells a stick on the bass drum shell is heard, like an echo of the motive that preceded the theme’s entry. This timbre and the rhythmic motive presented are important in connecting the two A sections of the piece, the bells ebb for just long enough to provide the textual clarity for this to come across briefly.

In similar fashion to the first bell theme, the sound of an F-C tremolo from the almglocken is heard and shortly after the final *decrescendo* of the bells, and is echoed by bowed vibraphone notes on the same pitches. The F-C perfect fifth returning provides more evidence to the observation of an arch form, as it firmly reestablishes F as a pitch center. As with the other two bell themes, echoes of vibraphone notes are struck after the bells make their exit, this time beginning with an F# before settling back down to F. One particularly interesting timbre heard in this section is that of a struck tam-tam note, in unison with the struck vibraphone, as seen in Ex. 4.8. The struck tam-tam sound has only appeared before this point in the introduction of the piece, pointing again to the return of the A section material. A new timbre on the tam-tam is heard as well, as the only use of the players’ hand as an implement on the instrument appears in mm. 54-55.

**Ex. 4.8 - Thorvaldsdóttir, AURA, mm. 54-55 (vibes w/ tam-tam effects)**
Aura closes with the sound of the perfect fifth (F3-C4) still being bowed on the vibraphone and the sound of a wire brush tremolo on the bass drums as the piece began. This wire brush tremolo on bass drum is the most widely used timbre in the piece, comprising over 75% of the composition by one or more players, so this gives a sense of resolution as well. The bells are heard for a final time in m. 56 (seen in Ex. 4.3) with both the F-C and for the first time both F# and C# contained in the interspersed vibraphone notes, all of which fades into the silence of a fermata on beat four, followed by m. 57. Both the fermata and following measure are empty to emphasize the importance of allowing the last wisps of sound to decay naturally before the performers break character.
CHAPTER 5

A PERFORMANCE GUIDE FOR Aura

5A. General Performance Guide/Quartet Guide

Aura is a composition that comes with numerous logistical and musical challenges that stand between an ensemble and a convincing performance of the piece. Before rehearsals can begin, an inventory of instruments and implements must be decided upon, and from there a set-up that allows for the ballet of this piece to unfold must be constructed. Once a functional set-up is arranged, the performers must figure out choreography of movements that stems from rotating stations and having three people sharing a lone vibraphone without breaking the steady sounds and ethereal atmosphere this piece means to create. Finally, the visual elements of a performance must be attended to, the most notable being the lights attached to the instruments and performers. This section will address practical these aspects of performance in order to make Aura more accessible endeavor for a percussion trio/quartet looking to program this piece. This section will primarily address the quartet version of the work, although the majority of observations in this section will apply to both the trio and quartet. Details specific to the trio version that are not covered here will be elaborated on in Chapter 5B.

Instrument selection is always an important aspect of any percussion piece, and the large number of different sounds that performers are called upon to create in Aura makes this an even more critical part of the proceedings. The performers must make several instrument selections before a first rehearsal can begin, and the most central decision is what material to use for the “bells” that are played in conjunction with the central vibraphone. The idea of using “found” instruments in this format is a tradition
greatly popularized by John Cage, and evidenced in the works of Paul Lansky, David Lang, and Dan Trueman, among others.\textsuperscript{103} Thorvaldsdóttir gives several options in the performance notes which include, bells (she doesn’t elaborate—this could refer to anything from a glockenspiel to hand bells), crystal glasses filled with differing amounts of water, crotales, glass bottles of different sizes, or four metal objects. In examining this extensive list of options it would be understandable to feel daunted by the sheer number of possibilities. The only further direction she gives is that they should “provide contrast to the reverberating resonance of the sustained sounds and the vibraphone and ideally have a ‘warm’ sound quality.”\textsuperscript{104}

In recommending “bells” as an option, it is not likely that a selection of glockenspiel notes is what she had in mind as these could cause several problems. They are small in size and could end up sounding too similar to the vibraphone. It would also be a challenge to find an implement that would work on both the bells and the vibraphone simultaneously, and they present challenges in finding ways to mount them close to the vibraphone. A selection of four hand bells would likely sound appropriate in the sound world of the work, although the sound might come off as too pure next to the vibraphone. Like the glockenspiel, mounting the hand bells would be a challenge, though with some ingenuity hand bells could be an option. Another option in the same vein, as used successfully by John Lane and his ensemble at Sam Houston State University, is to mount four almglocken that correspond to Thorvaldsdóttir’s pitch suggestions.\textsuperscript{105} Crystal glasses are an outlier on this list, in that playing fragile glasses filled with water with

\textsuperscript{103} See \textit{Threads} – Paul Lansky, \textit{The So-Called Laws of Nature} – David Lang, and \textit{Neither Anvil nor Pulley} – Dan Trueman.

\textsuperscript{104} Thorvaldsdóttir, \textit{AURA}.

\textsuperscript{105} Interview by the author with John Lane.
mallets at a fast paced (thirty-second notes at 38-40 beats per minute) would likely end in any number of disastrous results, the least of which is finding a way to even mount them so that they might be struck with water in them. Crotales, while easy to mount on a rack, present some of the same problems as using individual glockenspiel bars mentioned above; even the larger discs from a standard set would likely not achieve the “warm” sound that the composer specifies. Glass bottles are certainly a feasible option, but they would need to be mounted in a way that allows for optimum resonance when struck, as they do not typically ring for a long duration. Further, careful attention must be given to finding mallets that have enough articulation to make a thick-walled glass bottle create a round attack that is not harsh.

However, conversations with performers and directors of the piece have revealed that aluminum pipes have been the most common choice. Justin DeHart, of the Los Angeles Percussion Quartet, imparted that they used a custom set of aluminum pipes on their studio recording of the piece,\textsuperscript{106} “We had a set of aluminum pipes made specifically for the piece that highlight the tones she indicates in the preface. We have some other pieces we have played that use similar pipes with the vibes, so that we knew (they) worked really well together to create a shimmer.”\textsuperscript{107} Furthermore, ensemble directors Jonathan Ovalle of the University of Michigan, and Andy Bliss of University of Tennessee – Knoxville came to the same conclusion of employing metal pipes.\textsuperscript{108} Similar pipes have been popularized in works such as \textit{Threads} (2005) by Paul Lansky, \textit{The So-

\textsuperscript{106} Justin DeHart interview.
\textsuperscript{107} Ibid.
\textsuperscript{108} This information comes from phone interviews with Jonathan Ovalle and Andrew Bliss, conducted by the author.

The pipe in question is available in various diameters, 1” being a common choice for percussion related uses, and made of aluminum, steel, or copper conduit, found at most major hardware stores. This pipe can be easily cut to the indicated pitch range using a basic disc pipe cutter (or if you come prepared with the lengths in mind, they may even be able to use a mechanical pipe cutter at the store), and they provide a combination of resonance and attack that is preferable, while still contrasting the vibraphone and other sustained sounds in the ensemble. The pipe can be mounted in a few different ways: setting it on textured open cell foam or creating a system where the pipes sit on a long and thin piece of closed cell foam that crosses at the nodal points are two great options. Various types of foam can typically be found at any thoroughly stocked fabric and craft store. Whatever choice is made for the bells, it is crucial to find a sound that fits the character of the piece and also allows the performer to play the difficult permutations required by the score.

Aura requires three concert bass drums, one at each station other than the central vibraphone/pipe station, and the performance notes specifically mention the need for the drum to lay flat and have an authentic calfskin head to allow for maximum resonance with the double bow technique. Finding three bass drums with calfskin heads in the same place is not an impossible feat in this day and age, but from experience it is worth noting that synthetic heads also work well. A head with some kind of texture, such as a coated

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109 Many of the compositions that call for tuned pipes will provide approximate lengths for the notes called for. The best resource I’ve found for finding lengths for different pitches can be found at http://leehite.org/Chimes.htm.
110 A pipe cutter is highly recommended, as opposed to a hacksaw, which will leave the ends of the pipe more jagged. This could have an effect on the sound as well as the safety of your hands.
head or faux-skin drumhead, is optimal for the sustained sounds of the wire brushes to come across well.\textsuperscript{111} There is no need for the drums to lay perfectly flat, so a standard adjustable concert bass drum stand that will allow the drum to be set to at least a 45-degree angle will work. A wooden shell or hoop on the drum is optimal for the drums at Stations 1 and 3, as the piece calls for a wooden sound to come from the bass drum shell.\textsuperscript{112}

The tam-tam selected for the piece should be slightly textured on its surface to achieve the best sustain sound from a wire brush or performer’s hand while also being small and resonant enough to achieve a variety of sounds with the super ball mallet. Thorvaldsdóttir calls for a “big tam-tam” in the score, which leaves a lot of options. A giant instrument is not necessary for achieving all of the sounds in the piece, and something in the vicinity of 26” should be sufficient. Suspending the tam-tam from a tall stand will allow for easier command of the instrument in general, especially in the case of the super ball mallet.

The composition calls for four almglocken, or oxen bells, tuned to the pitches F3, Gb3, C4, and Db4, and it is important for these to have some texture to them to project the scraping sustain effect that the piece calls for. The almglocken will need to be suspended, most likely hanging, from a rack or cymbal stand so that the performers at Stations 1 and 3 can sustain sounds on the outside of them and also use a stick to tremolo on the inside of the bell by rapidly moving the stick back and forth. Another option is to get some sturdy clips from the hardware store (or a very sturdy triangle clip may work) and clip the bells onto the edge of a music stand with a towel on it. This will allow the

\textsuperscript{111} The author recommends the Renaissance or Fiberskyn lines from Remo or the comparable Evans Strata 1000.

\textsuperscript{112} While the dynamic level of these attacks is low, care should be taken not to damage the instrument.
bells to be mounted in such a way that the open ends are facing the performer and the
tremolo effect can be more easily achieved, while the bells are still allowed to resonate
freely.

Any standard vibraphone should fulfill the requirements of the piece, provided it
is in good condition and free of extra frame noise, and no motor is required. The frame
needs to allow for bowing of both the natural and accidental bars; therefore, an
instrument that has an outdoor style frame typically used for a marching band front
ensemble on it may need to remove the auxiliary or crossbar from the front. This will
allow for the bowing of the accidental notes without an obstacle being in the way.

Finding a set-up for the piece that allows the players to have enough room to
operate and still be close enough to allow for the piece to be executed as written is a
challenge. One possibility involves the vibraphone being in the center with the bells
mounted in front, Station 1 being next to the high end of the vibraphone and Station 3
being off the low end. This arrangement allows players at those stations to reach the notes
on the vibraphone needed for their parts. Station 2 would be directly behind the
vibraphone, with the tam-tam being closer to Station 3 to facilitate a smooth transition
during one of the rotations of players; only enough space should be left in the center as is
necessary for the piece to function.

Aura calls for a number of different implements to be employed in methods that
are very specifically defined by the composer. Standard wire brushes are used on both the
bass drums and the tam-tam in two different ways: a tremolo (indicated with three slashes
through the note stem) tells the performer to move the brush in a back and forth motion
while a sustained note (indicated with slurs) indicates a circular motion. Achieving
dynamic contrast is defined in the performance notes as well, which indicate slower/shorter strokes for piano dynamics and faster/longer strokes as the dynamic range moves towards forte. Dynamics therefore not only refer to volume, but to textural density as well.\textsuperscript{113} Thorvaldsdóttir also indicates that the tremolos should move around the surface of the instrument rather than staying in one small area to achieve more variance in the timbre. These indications for tremolo and sustain also apply to wooden sticks and any indications for the performer to use their hand on the bass drums and tam-tam as well.

All material for the bass drums and tam-tam is written on a two-line staff, with the top line indicating the right hand and bottom indicating the left. Dynamics for each hand are placed in a similar fashion; players are often called upon to have two different sustains happening simultaneously. Players will often have to do a tremolo with one hand and a sustained note with the other. As seen in example 5.1, these two gestures can take on individual dynamic shapes and should be treated as two distinct voices, despite being performed on the same surface (bass drum in this case).

Ex. 5.1 - Thorvaldsdóttir, aura, mm. 6-8 (Bass Drum w/ simultaneous tremolo and sustained note, Station III, Player C)

![Ex. 5.1]{108x203 to 540x265}

Playing two separate lines at once can be demanding as far as coordination goes and may need to be worked out in the practice room so that each individual voice can be performed with the musical nuance required. She notes that when a tremolo is indicated

\textsuperscript{113} The composer details directions for all of the techniques in the piece in the performance notes, found in the score.
with larger mallets, such as the tam-tam roll during the second bell theme, the roll should be done in a traditional, concert style fashion as a single stroke roll employed at a hand speed that allows for the smoothest sustain.

*AURA* requires a total of eight double bass bows, two for each performer, which are used on the vibraphone to bow individual notes, as well as to create the previously described “double bow” timbre on the concert bass drum.\(^{114}\) The composer calls for a “super ball” mallet to be used on the bass drums and tam-tam, and these are typically constructed of a small rubber ball (e.g. a child’s bouncy ball) attached to a thin fiberglass dowel. This implement could be inexpensively constructed by the performers or bought commercially from percussion retailers including Lone Star Percussion and Steve Weiss.\(^{115}\) Alternatively, these mallets can be constructed with a selection of toy super bouncy balls, fiberglass dowels (or another flexible material that will not break easily), and super glue.

**Fig. 12 – Emil Richards “Super Rub” Mallets, produced by Mike Balter.**

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\(^{114}\) See chapter 4B for a full description of this technique.

\(^{115}\) The most prevalent model being the Emil Richards “Super Rub” mallets by Mike Balter, which come in sets of three varying sizes.
Dragging a super ball mallet across the surface of the bass drum head or tam-tam causes the instrument (or skin) to vibrate, and it is possible to manipulate the sound in many ways. This includes manipulating the speed of the mallet as it is dragged, changing the positioning of your fulcrum on the mallet shaft (closer to the ball pulls out a higher set of overtones and vice versa), and choice area of the drumhead or tam-tam one drags the mallet to/from. For example, drawing the ball near the edge of the bass drum head produces a higher pitched wail, pulling out high overtones, whereas dragging the ball through the center of the head produces a deep rumble or growling sound. There are innumerable ways to manipulate the sounds created with this implement, and experimentation by each player will be necessary to achieve the most desirable sounds. It can also require practice to be sure that one achieves optimum sound, and experimentations with different sizes of super balls may be necessary as well.

Alternatively, these mallets can be constructed with a selection of toy super bouncy balls, fiberglass dowels (or another flexible material that will not break easily), and super glue.

A very specific challenge associated with the super ball mallets happens right after the second time the players change stations (ca. mm. 43 – 46). Player B, upon arriving at Station 1 is called upon to create a sustained note using their hand on the surface of the bass drum while simultaneously using a super ball on the same bass drum.

Ex. 5.2 - Thorvaldsdóttir, AURA, mm. 43-46 (Simultaneous super ball and hand sustained notes on bass drum)
This instance, seen above in Ex 5.2, causes a problem in execution as the presence of a hand on the bass drum head makes it extremely difficult for the super ball drag to cause the head to vibrate. Executing the sustained note with the hand as close to the center of the bass drum head (the nodal point) as possible helps to allow the head to resonate more freely when the super ball is dragged across it. The fingernails can be employed, rather than the pads of the fingertips or the whole hand, to minimize the muffling effect of having one’s hand touching the head as well.

Several timbres require specific attention compared to others, and an effort to make each sound fit into the sound world of the piece is imperative to a successful performance. One such sound that can stick out literally and figuratively is the tremolo inside the bell of the almglocken that follows the conclusion of each bell theme. Performers are asked to use a snare drum stick for this sound, creating an alarm bell like effect that can easily outbalance the rest of the ensemble, especially given that this tremolo is always happening in unison by two players. It is crucial to the atmosphere of the piece to allow this sound to speak clearly without sounding out of place, and one option would be to use a thinner, lighter implement than a snare drum stick. Some options to consider trying include the back end of a birch or rattan mallet, a wooden dowel that is less thick than a snare drum stick, or even a sturdy chopstick, depending on the relative dynamic range within which the ensemble is working. Jonathan Ovalle mentioned that they used the back end of a thin triangle beater to help hone in this sound for their performance at the University of Michigan.\\footnote{Jonathan Ovalle interview.}

The other sound that is created using the almglocken is a sustained note, made by rubbing a stick back and forth on the surface of the bell, much like the sustained tones on
the bass drums and tam-tam. Andrew Bliss, who has performed this composition in collaboration with the composer and has also directed ensembles in their preparation of it, indicated that the method they arrived at for making this sound involved a similar technique on the inside of the opening of the bell, producing a more consistent sound due to the roughness of the edge of the opening.\footnote{Andrew Bliss, “Interview with Dr. Andrew Bliss,” interview by Matthew Rush, April 6, 2018.}

One final sound that can quickly make or break an effective performance of \textit{AURA} if proper care is not given is the use of a snare drum stick on the wooden shell of the bass drums. This sound is called upon primarily in the opening and closing sections of the piece and is by far the most articulate attack in the sonic world Thorvaldsdóttir creates in \textit{AURA}. From a timing perspective, the sound must be placed with excruciating care as the passages are almost always split between two stations, and players should find a way to create a tone that calls upon the resonance of the full bass drum rather than a sharp attack. Bliss likens the sound to the creaking of a wooden ship on the ocean:

You’re dropping the stick on the rim of the bass drums…like creaking, echoey boat sounds…you have to drop the stick on the bass drum just right to get it to have a resonance…you don’t want them to be too articulate…you’ve gotta get it to be the wettest, roundest articulation possible so it blends, but at the end of the day, you’re hitting a piece of wood on a piece of wood.\footnote{Andrew Bliss Interview.}

This seemingly simple passage requires a great deal of care and preparation from the performers to not disrupt the established aural landscape; it is crucial for each performer to possess thorough knowledge of the specific instruments and implements they are using.

Perhaps the primary challenge of this piece lies in the physical act of performing it. Players have to rotate from station to station while sustaining notes from one player to
the next, and there are times when up to three players have to use the vibraphone simultaneously. Bliss describes a performance of the piece in a visual way:

What makes it so difficult is to keep all of those sounds (going), it’s like a kaleidoscope, or like a big body of water where certain things are kind of in the waves floating, sometimes more to the front (and others more to the back), but not ever out of the water. Our job as the players is to keep all that stuff moving around in the water and never completely let it stop moving.

For the performance to be effective all of the sounds need to be floating in and out of the texture and careful attention must be taken when dealing with the dynamic nuance that is present in the score.

Some of the most challenging moments in a performance of *Aura* happen during the two rotations that call for the players to move from one station to the next. Oftentimes the players must literally pick up a line from another player at the new station while simultaneously handing off a line at their previous station that they are moving away from. Each rotation must have a specific choreography and should be rehearsed until they can be executed consistently, without allowing unwanted breaks in the sound.

The first rotation takes place in m. 19, roughly half way between the first and second bell themes. Player C, who is bowing Gb3 on the vibraphone from Station 3, must allow Player B to take the bow from their hand and continue bowing the note without a break on the downbeat of the measure. On the next beat, Player C must pick up a sustained note with his or her hand on the bass drum at Station 1 and also begin a sustained note on the C4 almglocken at his or her new station. Player B, as mentioned, picks up the G-flat being bowed on the vibraphone while handing off a brush tremolo on the tam-tam at Station 2 to Player A, and Player B must also ready a second bow when he or she arrives at the new station. Player A takes over said brush tremolo on the tam-tam
and quickly readies a super ball mallet for an attack on beat three of m 19. For this all to take place, several things must happen starting with the tam-tam being in a position that can be reached from both Station 1 and Station 3. Player B must simultaneously take over the bowed G-flat and continue the brush on the tam-tam until Player A can take it over. Player A must already have a super ball ready so that he or she can take the brush from Player B with the hand that was sustaining a note on the bass drum and start the super ball note on beat three. Player C must already have a brush ready to start the tremolo on the bass drum at Station 1, and the hand that gave the bow to Player B can continue the sustain that Player A was had started on the bass drum. Player C can also continue to bow the note until Player B takes over while taking a step behind Player D towards Station 1.

Plainly said, this is very difficult and requires exact choreography to realize precisely as is indicated by the score. Cory Hills of the Los Angeles Percussion Quartet indicated that most of their rehearsal time as an ensemble involved working on knowing exactly where they physically had to move and precisely when they had to do it to avoid collisions. The piece requires as much musical choreography as it does physical, as described by Bliss, “It really is a ballet…so many moments when we would choreograph…I start this crescendo, and then I’m gonna hand it over to this person who’s gonna pick it up on their bass drum…and then I’m gonna pick something up from another player and have to resolve it, and that is…the definition of partner dancing.”

While everything in this first rotation is indeed physically possible, the margin for error in execution is virtually nonexistent if the sounds produced are to be true to the notes on the page.

119 Cory Hills Interview.
120 Andrew Bliss Interview.
The second transition takes place in m. 43, in between the second and third bell themes. Player B, at Station 3, must finish a brush tremolo on beat two and hand a drum stick off to Player A so that they can continue sustaining a note, while taking the brush with him or her and picking up both a brush tremolo and hand a sustained note on the bass drum at Station 1. Player C must take the brush to Station 2 once Player B gets to Station 1 and take over a brush tremolo on the tam-tam and ready a super ball mallet for an entrance on beat four. Player A must receive a stick from Player B to continue the sustained note that started at Station 3 and have a super ball ready for an entrance on beat three. This rotation is somehow even more difficult to pull off as written than the first rotation. The dynamics at Station 3 make things even more difficult, as Player B must start a crescendo that Player A must finish once he or she arrives. This rotation is one that works on paper but will likely require some slight inconsistencies in reality, and both of these rotations happening smoothly requires a set-up that is very compact and closed in while still allowing enough room for the players to move. Making the rotations happen in a way that is precisely true to the score will require a great deal of dedication and meticulous rehearsal from the performers, even with an optimal set up.

The visual aspects of a performance of *Aura* will affect the overall success of the piece and determine how well it is received. The piece calls for the performers to don lights on themselves and attach lighting to the instruments so that the piece can be performed in an otherwise darkened space. This lighting projects the performers’ shadows on the walls and causes the performers themselves to become moving lights in the dark.
One option for attaching lights to the instruments would be to use a few strands of white holiday lights to be strung from the concert bass drums, and other options could include stand lights, small lamps set around the ensemble, or even the warm ambiance of a salt lamp. The purpose of the lights is primarily to project the shadows of the players on the walls, and to provide enough light to play the piece, but not to illuminate the entire set-up. Having too few or too many lights will upset the balance of darkness and projected shadows.

Since there are no specific indications in the score for what types of lights might work best, finding such lights can take some detective work, especially when starting with no prior knowledge of the piece. LED finger lights, popular for dance raves and children’s parties, are a great option because each individual finger light has its own battery and there are no wires to deal with, and they also typically have a small elastic band so that attaching them to the fingers is intuitive and simple.\footnote{121} As noted by Justin DeHart of the LAPQ, it is wise to buy many more of these than one needs, because they are cheap and don’t last all that long.\footnote{122} Another option is attaching the lights to the arms using athletic tape or using miniature strands of holiday lights that have their own battery pack attached to the performer. Bliss describes how they attached the lights to themselves when he performed the piece with the composer present:

\begin{quote}
We taped the lights to our forearms… We found a way to mount them using electric gauze tape and we’d wrap it around our wrist like a wrist band, and then we had these little LED lights with clips on them that we clipped on. If you tape them to your body, they don’t really move, but if you tape them to your arm then the lights are in constant motion.\footnote{123}
\end{quote}

\footnote{121} One possible example of these that worked well is Fun Central X824 LED Light Up Finger Lights – White, available from Amazon.com.
\footnote{122} Interview with Justin DeHart of the Los Angeles Percussion Quartet, conducted through email by Matthew Rush.
\footnote{123} Andrew Bliss interview.
Bliss alludes to the importance of the lights being on the hands or forearms so that they are in motion during the performance so they can create the effect that Thorvaldsdóttir desires.

**Fig. 13 – An example of the small LED finger lights**

The lighting also adds the need for an electrical outlet nearby, and any group planning to tour with this piece should take care to pack an extension cord and power strip so that they are prepared for any situation. Most importantly, ensembles must consider their safety. Lights that produce heat should be avoided, and performers should also be mindful of any frayed or damaged wires.

_Aura_ presents another unique challenge in how the performers are going to read the music. As mentioned, the piece is in the dark with minimal lighting, but also the work comes in score format. The score is thirteen pages in length and there is little time for frequent page turns. Player D has it the easiest in this regard because they never move,
and the most fruitful option is creating an individualized part by cutting and pasting from the score.

One option for the three rotating performers would be to use stand lights and mount the score onto two-sided poster board or perhaps a large sketch book, and finding a place to do one big page turn around the middle of the piece. This option does come with challenges though, as there is the potential to knock things over in an already tight set-up and the necessity of a light source to read the music on the poster board. Another challenge is that the music belongs to the station, not the individual player. Each player must mark the score that will be at their station when they are there during the piece.

Another option is to use digital tablets with a PDF copy of the score on it as well as an electronic page turning pedal to navigate the large number of pages. To help players keep track of which part they are on the score during rotations, one can go into the PDF and color code the score by assigning a highlight color to each player. If using a paper copy of the music this could be achieved with highlighters, as suggested by Bliss.\(^{124}\) This way when a performer arrives at a new station, they know exactly where to look to orient themselves in the music. Another benefit of this option is that the tablets can be set to a dim enough light setting so that they will not add any noticeable light to distract from the ambiance created by the instrumental and finger lights in the darkened performance space. Justin DeHart of the LAPQ suggests that one can even invert the colors on the iPads to make the background black and note heads white to keep the light from the screen from distracting from the performance.\(^{125}\)

\(^{124}\) Andrew Bliss interview.
\(^{125}\) Justin DeHart interview.
Finally, one crucial aspect of the piece is the element of keeping time. The piece, which largely deals in long note values that sometimes span multiple measures, is marked at quarter equals 38 – 40 beats per minute. Given all of the other logistical and musical challenges of the piece, keeping the timing precise can be quite a challenge, and if a strong sense of pulse isn’t there for the performers then the smoothness of the performance will not be conveyed to the audience.\(^{126}\) One option for dealing with this element would be attempting to be as steady as possible while occasionally embracing an “event based” interpretation. Because all of the performers are reading from a score and that, as cited in a previous chapter, the composer doesn’t want the performers to spend all of their mental energy parsing subdivisions, this could be a potential option. Player D must make every effort to keep the bell part steady in time so that the performers can be synchronized during the bell themes, but what about during the long sections of droning material? Given the level of detail in the score, it is likely best to aim for a steady pulse throughout, so that all of the different sounds speak exactly the way that they might have sounded in the mind of the composer.

Using a synchronized click track is an option to help the piece be in time as written on the page without having to devote an undue amount of mental energy to subdivisions. Bliss states that if a click track frees up the performers to play with more musicality, then it is certainly a valid option.\(^{127}\) He elaborates on the value of a using a click track in contemporary works by saying:

> I’m of the mind that if the music can speak more freely… If having the click track for the ensemble allows them to be more expressive, and put all of their musicality into the parts… (Assuming an already high level of due diligence regarding preparation)… and if you have to put more than 50% of your attention

\(^{126}\) Andrew Bliss interview.  
\(^{127}\) Ibid.
to defining time, because it’s so quiet, or there’s so much space, or you’re so far apart, then I have become kind of an advocate of the click track. That way you can just totally focus on things speaking the way that they should in the music. There is an idealist performance mindset that thinks of that as cheating, but my job as an interpreter is to produce the best audible product possible, and if we can get there and represent the intent of the composer better using a click track so that we can focus all our energy into getting that to occur, then I think it’s appropriate.128

Using Bluetooth or other wireless headphones would avoid the problems of tangled cords and a tripping hazard when the players rotate stations.
5B. Issues Specific to *aura* (2011) for Three Percussionists

The original version of this composition, for percussion trio rather than quartet, presents many identical challenges to the revised version for four players. Having one less performer adds challenges that are unique to the trio however, and these will be covered here.

The set-up for the trio will have a few minor changes compared to the quartet, however a big difference is the idea that the central vibraphone isn’t part of any one station. All three players need to be able to reach the vibraphone at all times. The general area for stations 1 and 3 however can stay the same in how they relate to the vibraphone: station 3 must be within reach of the low end of the instrument while station 1 should be near the higher end. Station 2 is where things change some, as this station is the one that includes the “bells” that the piece requires. The bells should be set up in a similar fashion to the quartet, out in front of the middle register of the vibraphone. This is important because the content of the bell themes has not changed and the performers will still need the bells within reach of the notes on the vibraphone that are used simultaneously. The biggest difference is that the tam-tam also needs to be accessible from station 2, without getting in the way of the rotations. The tam-tam also must be usable while the performer at station 2 is using the vibraphone, as in Ex. 5.3.

Ex. 5.3 - Thorvaldsdóttir, *aura*, mm. 3-7 (Vibraphone and tam-tam, station 2).
Given the above example, the tam-tam needs to be in front of the vibraphone, most likely towards the upper range of the instrument to avoid blocking the accidental notes that need to be bowed later in the work.

The combination of the tam-tam part with added notes on the vibraphone can make for some difficult situations with changing implements as well, as seen in Ex. 5.4.

Ex. 5.4 - Thorvaldsdóttir, *aura*, mm. 14-16 (Vibraphone and tam-tam, station 2)

A potential solution is to have two implements in each hand as this passage approaches, however these examples alone demonstrate how crucial it is to find a set up that will accommodate all of the challenges presented by the combination of the vibraphone and tam-tam being used simultaneously.

The bell themes are played from station 2 as well and are largely unchanged from the quartet version of the work. There are sustained tam-tam notes created with a brush in some of the gaps in both bell theme two and bell theme three. These will need to be facilitated by having a brush in one hand in addition to the vibraphone mallet being used to play the bell theme itself, as there is not enough time to put anything down or pick anything up. This is illustrated in the excerpt in Ex. 5.5 taken from bell theme three, showing the tam-tam sustain that falls in the short two beats of rest in the break from the bells and vibraphone. As with all of the movements in this work, this must be done
gracefully so that the lights attached to the hand or arm do not draw attention away from
the music itself by moving in an unexpected or clunky manner.

**Ex. 5.5 - Thorvaldsdóttir, *aura*, mm. 52-53 (Bell theme three with tam-tam)**

A major difference in the trio edition of *Aura* is that each of the work’s three bell
themes is to be played by a different performer. Player B plays bell theme one, being that
they start out the piece and station 2, after the players rotate the first time bell theme two
will be performed by player A, and after the final rotation bell theme three is performed
by player 3. This is drastically different than the quartet version where the same
performer must play all of the bell themes. The approach to the bell themes in the trio
truly embodies the subtext of “Three sides of the same being” that is printed at the top of
the performance guide. However, the points of rotation themselves operate identically in
both editions of the piece.¹²⁹

¹²⁹ See Chapter 5A for detailed suggestions regarding the points of rotation. These work identically in the
trio and quartet versions, as they fall in between the Bell Themes.
CHAPTER 6
CONCLUSION

*AURA* for four percussionists and its original incarnation, *aura* for three percussionists, both seek to create a deep musical experience for the listener using a combination of new and traditional techniques on a small battery of percussion instruments. The darkened performance space, moving lights, and dance of shadows on the walls, combined with the audience literally surrounding the performance, create a unique experience not seen in other percussion chamber literature.

*Aura* is an incredibly valuable experience for a performer, providing ample opportunity for the development of one’s musical voice. I believe that a musician of any experience level will find their abilities expanded through preparation of a performance of this composition. It is imperative that the performers of this piece find ways to create beautiful sounds using the instruments and techniques specified in the score.

Pedagogically speaking, *Aura* provides an excellent opportunity for an ensemble of any level to be pushed to think about the sounds they are creating in different ways. Often times, especially in a school environment, the high school and/or college aged percussionist is pushed to primarily develop their sound on the marimba and snare drum, which can result in a lack of exposure to the vast array of instruments and techniques we have available to us. *Aura* will help a performer in this situation step outside of those constraints and think about music in a refreshing way.

Although this piece presents many logistical challenges and calls on the performers to draw upon all the musicality they can muster, the work they put in is worth the reward of an effective performance. It is my hope that this document will make this
excellent composition more approachable and lead to it being programmed more
frequently, thereby drawing attention to Anna Thorvalsdóttir’s body of compositional
work. Another goal for this document is to add to the limited body of research on
Thorvalsdóttir and her music so that other scholars may be inspired to take a closer look
at other works in her ever-growing catalogue of compositions. I hope to see more in
depth looks at Thorvalsdóttir’s body of work as time goes on, and even more
importantly, quality performances of her wonderful music.
APPENDIX II – Interview with Justin DeHart, Los Angeles Percussion Quartet

MR: What aspects of Anna Thorvaldsdóttir’s music initially drew you in?

JD: Anna was a classmate of mine at UC San Diego and also my next-door neighbor. I was introduced to her music there and developed a friendship with her. She is a very thoughtful and kindhearted person and I liked her ideas about sound and the relationship between the music and the listener.

MR: How was the idea of a quartet version of Aura conceived? How did the composer receive the idea? Did she share anything about the conception of the piece or what the music is meant to portray to her?

JD: We wanted to commission Anna to write a piece for us but she was booked for a few years and so we talked about repurposing a piece for quartet that she had already written for trio. Although in the original piece, everyone of the three players alternates on the vibes, our version has one person only that stays stationed at the vibes while the rest rotate around.

MR: This work presents some unique challenges compared to many other percussion quartets, most notably the set up and rotation of players throughout the piece. How did your group go about smoothing out the transitions and not bumping into one another while still making beautiful sounds?

JD: We had to adjust the indications on the score. Sometimes it worked out better to transition earlier than indicated, and sometimes a bit later. It’s kind of like a trading game, where we talk to each other and negotiate who can take which notes, etc.

MR: One of my favorite aspects of the piece is the suggested lighting effects and the performance environment that they create. Could you share what types of finger lights your ensemble settled on? Did you add any additional lights to the instruments?

JD: We searched the Internet and found some LED finger lights that are strapped onto each finger. Through experimentation, we found that the white light worked the best, as the colored lights looked too much like a Christmas tree. We try for 3-4 lights per hand, pending on how many of they are working (they are cheap and constantly break). Our advice would be to buy much more than you need to account for the success rate of operations. The instructions say to have the hall blacked out, and we even invert the colors of our iPads to be predominantly black with white note heads to minimize screen glare. In the video we made, the producers opted to put a soft overhead light to capture a least a little bit of body movement, which would aid the viewer’s awareness of what is happening… Otherwise it might have been too abstract to watch online (though I personally would have liked to see this!!).
MR: When performing the piece live, have you found it practical (or even possible) to have the audience in a circle around the set up as she mentions in the performance notes?

JD: I think it is totally practical, but we have only had opportunities to play it on a stage, without seating, so we have not had the benefit of staging it this way yet. The best view is probably in front of the vibes though; as that player is stationary, and you can see other people revolve around. An overhead camera could be nice too.

MR: How many different options did you try for the “bells” that she calls for in the central station? What did you settle on for your studio recording?

JD: We had a set of aluminum pipes made specifically for the piece that highlights the tones she indicates in the preface. We have some other pieces we have played that use similar pipes with the vibes that we knew worked really well together to create a shimmer.

MR: I have not been able to speak directly with Dr. Thorvaldsdóttir for my research, is there any other insight about the composition from the composer, or from your experience with the piece, that you would like to add?

JD: When we were working on the piece, her main advice was to make it “beautiful”. I think she prefers a performance done with a lot of care of the sounds and flow between movements/sound.
APPENDIX II – Interview with Dr. John Lane, Sam Houston State University

MR: How did you first hear about aura? Are you familiar with other works by this Anna Thorvaldsdóttir that involve percussion? What aspects of her music speak to you the most?

JL: Over the last 12 years, I gradually awakened to the fact that my own programming, and programming generally in our percussion field, was largely dominated by male composers. There are a lot of reasons for that, which is a bigger topic than we can really cover here. Suffice it to say that as a mentor and teacher to a number of impressionable young college students, I thought it pertinent to raise some awareness of this issue. In 2014 I put together a program of percussion ensemble music entirely by women composers, both emerging and established. That led to an extensive search and survey of music by women composers. I was thrilled with the wealth of terrific music out there and have been including this music and continuing the search to the present day. Aura and Thorvaldsdóttir’s music, generally, was one of the great finds in my research. She has now made a significant footprint in modern music and is becoming more widely known/played, which is a really great thing for all of us!

It is the physicality of the music that appeals to me. Aura is a great example of that concept. It requires a new kind of virtuosity. It’s not technically virtuosic in the traditional sense. The virtuosity of Aura is that the players have to have a deep understanding for the creation of sounds and coordinated gestures—three people, one body. It is also fascinating to think about the connection between these sounds, gestures, forms and the starkly beautiful landscape of Iceland. I think the two are intimately connected. That is the through line, I think, of all of her work: a deep and intimate connection to place.

MR: This work presents some unique challenges compared to many other percussion quartets, most notably the set up and rotation of players throughout the piece and the use of “extended” techniques. How did your ensemble go about smoothing out the transitions and not bumping into one another while still making beautiful sounds?

JL: Yes, in my opinion getting the coordination (I’d even go so far as to say choreography) is the most important aspect of a performance. For us it was really trial and error. We ended up doing the piece twice. The first time the students came up with a kind of rotational system with (I seem to remember) multiple bass drums and tam-tams, which wasn’t great, but seemed to solve some of their problems. Jennifer Torrence, who was one of the commissioners of the work, graciously Skyped in for a rehearsal. She really helped us develop the choreography and approach. She suggested that all three players should be behind the vibes and that proximity – the idea of three people, one body – was the most important aspect. We suspended the bells above the vibes, so that it was easy for the person in the middle to play them, and had one bass drum and tam-tam behind the vibes. Then, you kind of rotate so that whoever is playing the bell line is moving to the middle each time it comes around. It became this kind-of beautifully
mysterious ballet where the players were extremely close to each other, reaching under each other’s arms, that kind of thing. It was lovely.

MR: One of my favorite aspects of the piece is the suggested lighting effects and the performance environment that they create. Could you please share how your ensemble handled this added aspect of the performance?

JL: Jennifer said that the composer was really excited about simple DIY lighting effects. So, we embraced that aesthetic. We hung strings of LED lights around the bass drum, tam-tam stand, and up and down the rack holding our bells. We attached a clamp-style work light to the bottom of the bass drum, so that it had an ambient glow. Then, we suspended small reading lights above each bell, to kind of highlight those. I think we also had a nice floor lamp on stage, so that there was a little ambient light for them to see the instruments, and stand lights for the music reading.

MR: When performing the piece live, have you found it practical (or even possible) to have the audience in a circle around the set up as she mentions in the performance notes?

JL: We weren’t able to do that in our space, but I think it is a good idea. Proximity would certainly give you a better view into how the players have to be moving around each other.

MR: Do you find it necessary (or beneficial) to amplify the piece when performing it live?

JL: We didn’t, but I suppose it would depend on the space… I think the more intimate, the better, so I would think amplifying might introduce a kind of artifice… An acoustic sound is definitely my preference.

MR: How many different options did you experiment with for the “bells” that she calls for in the central station? What did you settle on in the end?

JL: We settled on almglocken, but experimented with Indian Noah bells. We decided that we wanted particular pitches, so almglocken seemed the easiest/best choice.

MR: I have not been able to speak directly with Dr. Thorvaldsdóttir for my research, is there any other insight about her compositions, or from your experience with aura, that you would like to add? Do you have any thoughts about the original trio versus the reworked edition for quartet? If you were to program the piece again, which version would you lean towards?

JL: I would just point to what I said above about the choreography being so important. I didn’t realize there was a quartet version… I am not familiar with it, but she must have had a good reason for reworking the piece. Of course, either would be equally valid, if
the composer’s hand has been involved. Because of our experience--no matter how tricky it is--I prefer the trio version.
APPENDIX III – Selected Responses Transcribed from a Phone Interview with Jonathan Ovalle, University of Michigan

[Aura] had a really exotic sound palate, sometimes you hear similar sounds segregated in spots in other pieces, but to have them all together, it is very different. I liked the sound world, and getting a woman composer on the program too, which is good.

The video… LA Percussion Quartet doing it with the lights, like something out of a science fiction movie… That really attracted me to it.

During the rotations… I was more concerned with what things looking like, not to make the hand off look clunky.

We did the piece in the dark with stand lights and then I found these little tiny kids’ party favors, these little LED finger lights, with a little piece of elastic… Each player wore one on each hand.

No I don’t think the piece needs that, I think it is nice if it is not amplified, maybe if you were playing it in a stadium or something, but I can’t think of a room that’s big enough… There’s a certain intimacy with the piece and those sounds aren’t quite the same when running through a speaker.

We used Lansky style pipes, conduit on some weather stripping. [for the bells]

[In reference to managing time] There’s the tempo marking that you want to honor, but I didn’t have the players try to super subdivide, but we did it as more of an event-based kind of a thing. We just tried to pace things out to make sure that we could get some clarity on the sounds.

The scrape on the almglocken and the tremolo inside the almglocken were hard sounds to dial in, we ended up using the back end of a thin triangle beater.

She lives in Iceland, so it definitely has that sonic landscape, very much like a lot of the John Luther Adams pieces from living in Alaska… It has spaciousness… like the sound of slow glaciers moving.
APPENDIX IV – Selected Responses Transcribed from a Phone Interview with Andrew Bliss, University of Tennessee – Knoxville

I’ve played both and I’m glad the quartet version exists. I think there is really something beautiful about a well-rehearsed version of the trio.

Her music is so unique that I really think that she could say something particularly special in a solo environment. [On the topic of commissioning a solo work]

Getting to hear *In the Light of Air* live was a nice way of reconnecting with the sound world that she constantly operates out of. She has this sound world where she’s basically operating inside the instrument. Everything is extremely granular, microscopic, and texture based. There are other people that do that, but the thing that is really refreshing is… how she manages to live in that vocabulary and continue to innovate and find new textures and combinations of sounds. Even when a new instrument enters, the sound world is still related to the one we just heard, but they don’t sound anything alike.

She uses extended techniques to get nontraditional sounds, scratching, overtones, and all sorts of baseline sounds from the instruments.

What makes it so difficult is to keep all of those sounds going. It is like a kaleidoscope or a big body of water where certain things are floating more to the front, but never out of the water. The music is never stagnant; everything is always going somewhere even though it’s all on a micro level. Hands are slowly speeding up or slowly slowing down, and the amazing thing is that it is all right there in the score. If you just do what is written you end up in pretty good shape, but it’s really hard to pull it all off.

When you’re trying to negotiate all of the mallet changes, the fact that you can’t see cause it’s in the dark, and you’re wearing lights that are flashing all over the place… the logistical demands are extreme.

The ballet aspect of what we [as percussionists] do, which is always present, is even more present in *Aura*.

You have to crescendo this thing on the bass drum while you’re simultaneously reaching over to pick up a stick to use on the almglocken, and it’s not there anymore because the person before you took it. We eventually started putting out extra mallets just so that wasn’t an issue.

The rubbing thing on the almglocken, when I was working with her in person, it wasn’t necessarily on top of the instrument. She wanted something really specific, something inside the bell on the open edge.

You have to have your ears open the entire time to ensure that the sum is greater than the parts. You’re moving together at the same time and everything has to be choreographed to ensure that everybody is moving in sync with one another.
The experience of listening to it is much different than the experience of playing it. It is like minimalism in that way, we can’t ever really enjoy the moving sense of pulse or the different ideas of where beat one might be, because we’re up there playing and we’re in it. The audience is allowed to completely go swimming and not worry about it at all. No matter how relaxed and calm you are as a performer, you’re still just dealing with a lot of stuff.

The work lends itself to slowing down, each part goes from one player to the next and if there’s any hesitation, then the piece just slows down more and more. You can’t have a lot of nonverbal communication because you can’t see.

The bell themes can be a real challenge with the interpretation of the piece. You want that section to be lyrical and to be kinda waving in the wind, but there are issues if you don’t keep a steady time then the other players in the group really don’t have any sense of pulse anymore.

If the sense of pulse isn’t very strong internally, then the hand off of those gestures will not work. Everything about her music that makes it work is the precision of those gestures being dovetailed just right.

I’m of the mind that if the music can speak more freely… If having the click track for the ensemble allows them to be more expressive, and put all of their musicality into the parts… [Assuming an already high level of due diligence regarding preparation]… and if you have to put more than 50% of your attention to defining time, because it’s so quiet, or there’s so much space, or you’re so far apart, then I have become kind of an advocate of the click track. That way you can just totally focus on things speaking the way that they should in the music. There is an idealist performance mindset that thinks of that as cheating, but my job as an interpreter is to produce the best audible product possible, and if we can get there and represent the intent of the composer better using a click track so that we can focus all our energy into getting that to occur, then I think it’s appropriate.

We taped the lights to our forearms… We found a way to mount them using electric gauze tape and we’d wrap it around our wrist like a wrist band, and then we had these little LED lights with clips on them that we clipped on. If you tape them to your body, they don’t really move, but if you tape them to your arm then the lights are in constant motion.

[The lights] completely enhance the gestural aspect of the piece. Now you have to not get out of sync with your partner, you can’t move suddenly cause now you’ve just sent this strobe light through the environment. These lights should be moving on the ceiling and walls in kind of a kaleidoscopic fashion, and you don’t want an outlier in there that suddenly zips around.
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