

2023-04-28

An Exploration of Colour: Scenography of Argonautika

Holmes, Cassiopeia Jillian Lorraine

Holmes, C. J. L. (2023). An exploration of colour: scenography of Argonautika (Master's thesis, University of Calgary, Calgary, Canada). Retrieved from <https://prism.ucalgary.ca>.

<http://hdl.handle.net/1880/116193>

Downloaded from PRISM Repository, University of Calgary

UNIVERSITY OF CALGARY

An Exploration of Colour: Scenography of *Argonautika*

by

Cassie Holmes

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE
DEGREE OF MASTER OF FINE ARTS

GRADUATE PROGRAM IN DRAMA

CALGARY, ALBERTA

APRIL, 2023

© Cassie Holmes 2023

Abstract

The following artist's statement discusses the process of designing the scenography of Mary Zimmerman's *Argonautika*, directed by Randi Edmundson and produced by the University of Calgary in February of 2023. It examines the process of set and light design, through ancient Grecian wayfinding and human skin undertone and pigment in light.

Acknowledgement

I must begin by acknowledging the black artists and scholars on which my research of skin tone is based: Keith R. Tucker and W. Dury Cox, Jr. Their prolific work often goes unrecognized.

Thank you to the fantastic team that helped put this show together and worked tirelessly behind the scenes.

I would also like to thank the incredible creative team that acted as a sounding board and collective: Randi Edmundson, Bonnie Garland, Alix Cowman and Sabrena Shah Baigzada.

I have utmost respect and gratitude to my supervisors for all their wisdom, April Viczko and Scott Reid, thank you for everything. I would also like to thank my mentor Patrick DuWors for pushing me to pursue design.

Finally, I would like to thank my friends and family who are the only reason I made it through my degree: Mom, Dad, Aunty Melanie, Brock, Emily, Tia, Rachel, Cindy, Shannon, Cali, Sage, Gal, and Jared.

Table of Contents

Abstract.....	ii
Acknowledgement.....	iii
Table of Contents.....	iv
List of Tables	v
List of Figures	vi
Epigraph	vii
CHAPTER 1: INTRODUCTION.....	1
1.1 <i>Argonautika</i>	1
1.2 On Ancient Grecian Travel	2
1.3 Early Discussions	4
CHAPTER 2: SET DESIGN CONCEPT	8
2.1 Understanding Through Workshop	8
2.2 Solidifying Ideas	10
2.3 Astrolabe of Ptolemy	12
2.4 Evolution.....	14
CHAPTER 3: COSTING & REDESIGNING.....	19
3.1 Preliminary Costing	19
3.2 Final Designs.....	21
3.3 Unexpected Illness	23
CHAPTER 4: LIGHTING DESIGN CONCEPT	26
4.1 The Science of Skin Tones.....	26
Understanding Undertone	26
Pigment's Place	28
Analyzing the Actors	29
Implementing Research.....	31
4.2 Early Ideas	32
4.3 Setting Motifs.....	34
4.4 Lighting Plot.....	39
CHAPTER 5: EXECUTION	40
5.1 Set.....	40
5.2 Paint	41
5.3 Lights.....	47
CHAPTER 6: REFLECTING ON THE PROCESS.....	51
Works Cited	55

List of Tables

Table 1: Initial thoughts spreadsheet	35
Table 2: Detailed cue sheet	37

List of Figures

Figure 1: Trireme reconstruction (Coates, 98).....	3
Figure 2: Workshop testing boat configurations	9
Figure 3: Ancient Roman Marble by Farrukh.....	10
Figure 4: Draft model.....	11
Figure 5: Ptolemy's astrolabe (Kostas Kotsanas).....	13
Figure 6: Second draft model	15
Figure 7: Preliminary ground plan	16
Figure 8: Draft final model	22
Figure 9: Paint elevations.....	23
Figure 10: Interim final drafting.....	24
Figure 11: Undertone in skin (Middleton, 64)	27
Figure 12: Examples of actors' skin tone (order as seen: neutral, warm and cool) ..	31
Figure 13: Focus on Medea (Photographed by Tim Nguyen).....	37
Figure 14: Drop test.....	40
Figure 15: Paint calculations	41
Figure 16: Mast paint technique	43
Figure 17: Platform painting technique.....	44
Figure 18: Purple effect on the platform	45
Figure 19: The purple culprit: red paint.....	46
Figure 20: Amycus the boxer dynamic light (Photographed by Tim Nguyen).....	48
Figure 21: Focus on stage (Photographed by Tim Nguyen).....	49

Epigraph

“Why do we tell stories? To try to make sense of a world that can be terrifying and enormous.”

- Brennan Lee Mulligan

CHAPTER 1: INTRODUCTION

1.1 *Argonautika*

Argonautika by Mary Zimmerman is based on the poem “The Argonautica” by Apollonius Rhodes. It follows the Argonauts on their quest for the golden fleece, featuring many legendary Grecian figures: Hercules, Jason, Medea, Athena, Hera, and Boreas, for example. The story is an epic that explores xenophobia, sexism, and colonisation.

The story is told through the perspective of the Argonauts, of their treacherous journey to Colchis. They adventure to many foreign lands and encounter numerous challenges on their journey: a sea monster, widowed women, a Dryope, a boxer, and a dying prophet. Through these challenges the gods, Athena and Hera, act as their guides and advisors. Often the gods use their powers to intervene, mostly to the Argonauts’ benefit but sometimes to their detriment.

When they finally reach the land of Colchis, the Argonauts learn that the challenges are not over, instead they will face the hardest ones yet: a woman madly in love, fire-breathing bulls, a skeleton army, and a dragon that never sleeps. None of these challenges would be possible without Medea, who has been shot with an arrow, inflicting her with immense love for Jason. The relationship between Medea and Jason is the most significant part of this act; it is through the lens of their love we see the exploration of xenophobia, sexism, and colonisation.

While the Argonauts do eventually succeed, it is not without sacrifice, losing almost all their comrades along the journey. None of the Argonauts' deaths are as devastating as Medea's; Jason's abandonment leads her to kill her children and herself.

It is clear throughout the play that Zimmerman is using this ancient Greek tale to tell stories of our society now. The story weaves contemporary language into the text and depictions of characters. This makes the story accessible to current audiences and allows them to relate to the story. However, it is the ending that exemplifies the story's roots in the contemporary zeitgeist, telling the audience that they can see these figures up amongst the stars. The ending expresses that these themes of xenophobia, sexism, and colonisation are as alive and well now as in ancient times.

1.2 On Ancient Grecian Travel

My research began with Grecian travel, from vessels to navigation tools. As Athena points out, the Argo is the first established boat in recorded history to dock on foreign shores. The boat was a Greek trireme (or trieres, the proper Greek name). Triremes were large boats that would have been manned by large companies of men (Coates, 94). These boats were up to 38m in length, built of timber that was soaked or steamed and shaped to form the hull, affixed by a complex, sophisticated system using ligatures, dowels, wadding, stitching, and wax (Coates, 96; Pomey, 46, 49). Since the boats were man-powered with oars, they had a pattern of holes lining the sides of the ship, supplying two decks of rowers (Coates, 94, 98). There would have been around 170 men in the company of rowers who were dispersed amongst the rowing positions (Coates, 96). Heavy rope was rigged to either end of the boat, which tightened by twisting. The sails, attached to the mast, were controlled by pulling and twisting ropes (Coates, 97). With all this technology they travelled at impressive speeds, 184 nautical miles in 24 hours (up to 7.5 knots) (Coates, 96).

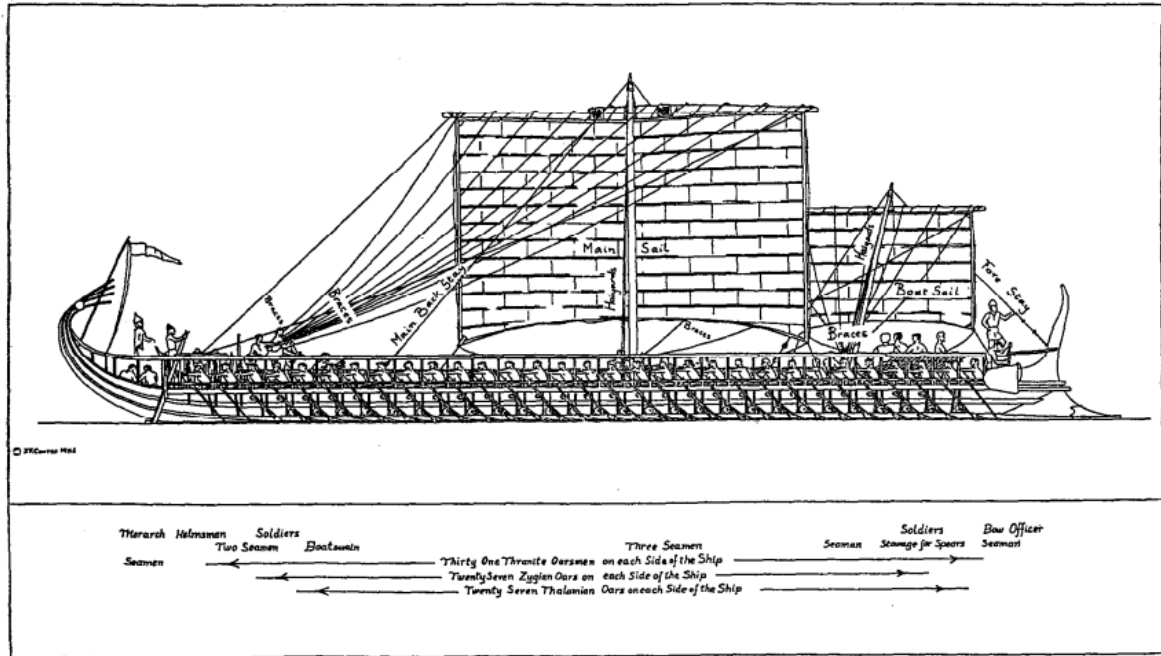


Figure 1: Trireme reconstruction (Coates, 98)

The construction of the Greek trireme was an impressive feat, likewise, the Argo is described in the play as fantastical and built by the gods. In this preliminary phase of my design process what struck me was the repetition of circular holes, the mast, and ropes. While the final design would not hold on to all these aspects of the boat, they inspired and influenced the final product.

In Ancient Greece seafarers primarily used stars, sun, and moon as their guides (Morton). As indicated multiple times in the script, characters mention these navigation tools: “the stars were their guide,” “Cynthia’s moon with her delicate horns,” “Where is the sun going?” (48, 47, 45). There is extensive talk about the weather and their environment throughout the script; Grecians were trained in these methods of navigation.

Zimmerman’s script frequently mentions that Typhis is a pilot. In ancient times the Greek systems of navigation were not reliable; a pilot or experienced sailor was

needed to have a chance to maintain their course (Morton). There were other forms of Grecian navigation that while interesting are not imperative to our show, so in the words of Athena “we must omit these from our tale” (48).

Early in my research wayfinding, navigation and vessels were very important to the Argonauts and therefore important to me. I wanted to emphasize these environmental elements both through the set and lighting design. Understanding the way Ancient Greeks would navigate, and their modes of transportation, helped to develop my design. Not only did it provide roots to draw back to throughout the process, but it also provided a deeper meaning to my design.

1.3 Early Discussions

Our creative team’s first meeting was in May 2022. Prior to that I had the chance to read the script with Bonnie Garland (costume and prop designer). In my creative process I find it important to read the play with no pressure, focusing on how I feel about the story rather than what is needed scenographically. Often, I will get a strong image or immediate impulse about my design for the play, but this one was more challenging. There was so much action, I had a hard time feeling what the text was calling for. However, in my first reading there were a few elements that stood out to me: location, levels, incorporating lighting, and natural material.

When thinking about the location for the set, it was important to me that it be a space which could be anywhere. In the script location changes happen rapidly with little transition; having multiple set changes would not be ideal. Additionally, as a creative team we discussed using props and lighting as transformation tools, rather than

large set changes. It was quite important to Randi Edmundson, the director, that the stage action move fast and flow quickly to maintain the pace of the voyage. It was the speed and the abundance of locations that drew me to a unit set that would stay the same throughout the duration of the performance.

Levels were important as the script mentions many times that characters were elevated or that they were flying. The script uses this device to show status and differentiation between characters.

I was interested in incorporating lighting into the set for a couple reasons. First was that stars play a huge role in the text, and I thought that creating a built-in star effect would really suit the show. I was interested in having small lights built into the set so when we turned them on it would look like the night sky. Additionally, as the lighting and set designer I was interested in melding the two disciplines in a more physical way.

Finally, I was interested in natural material and the textures that they would provide. Since so much time is spent on a boat, I was drawn to the textures of cotton, wood, and metal. If there was no physical boat, I was interested in how I could incorporate the feeling of a boat.

All these initial thoughts found themselves, one way or another, in my final design. I recorded a video that contained all my initial thoughts so that I could reference them in times of redesign. I know from experience that sometimes throughout the process we must return to the drawing board. By recording those initial thoughts, I was able to come back to them later.

Early discussions included meetings between Edmundson, Garland, and me. We discussed our initial thoughts and feelings about the show as a group. The most important goal from our meeting was Edmundson's vision of the show:

transformation and spectacle. Edmundson spoke about how she wanted the show to feel like actors playing characters. It was a show written to use the magic of theatre, to feel a sense of wonder and amusement. The ideas of transformation and spectacle were foundational and carried throughout the creative process to the final product.

After our meetings I was left with many ideas and curiosities. How could I play with transforming the set? I was interested in using a unit set which meant that the base of it would stand on its own but how could different pieces be incorporated to transform the space? Throughout the design process I wanted to keep coming back to this idea of transformation and spectacle.

I continued to ponder these ideas over the next few months, compiling images that were inspired by my navigation research and my initial thoughts after reading the script. I had a meeting with Edmundson to go over all the photos that I collected. My goal in collecting photos was specifically exploring the idea of shapes and colours. I felt curious about colour blocked shapes. The shapes came out of my research with boats, as I was drawn to the repetition of holes on the sides of the trireme.

I was not just interested in exploring circles, I also investigated triangles and squares. I was curious to determine if other shapes would also work and how they would feel with different colours. I felt that the set should live in a single-colour palette so that I could use lighting to manipulate the colours and transform them into anything we desired.

When analysing the photos there were a few thoughts that we would share and find intriguing that would carry us through the process. Edmundson said that “it is valuable for the set to be the most abstract thing”, and this aligned with my initial thoughts and goals for the show. Edmundson was interested in exploring depth on stage, repetition, and an off-centre stage picture.

The workshop would be a place for us to try different colours and shapes. I came into the workshop with no solid ideas, ready to explore visual possibilities. I decided to ruminate in this liminal space for as long as possible. A conversation between Edmundson and I perfectly sums this up: when I said, “I have no idea where this will go” and Edmundson responded with “I love that.”

CHAPTER 2: SET DESIGN CONCEPT

2.1 Understanding Through Workshop

After initial conversations, we were fortunate enough to have a workshop, and have that workshop in the theatre. That meant not only would we be able to experiment with props but also lighting, space, and atmospheric elements. In this workshop Garland, Edmundson and I worked together and tried out all ideas we had. Instead of testing things individually we worked collaboratively throughout. We explored all thoughts we had, big or small; it was all worth trying at least once. There were a few very valuable lessons that I took away from this workshop including understanding Edmundson's vision, the possibilities of the space, and what my set needed to provide.

I have worked previously with Edmundson on a couple smaller projects, so I was familiar with her process. She comes from a devising background, so she is a very collaborative director who responds well to offers. Devising in this context is working as a collective to create, rather than as individuals. During the workshop we explored how we would make a boat on stage with the actors and their props. However, I was very curious what that would look like in space and how the set could help convey the boat to the audience. Edmundson envisioned a triangular shape, like a flight pattern that birds form.



Figure 2: Workshop testing boat configurations

This exploration provided me an understanding of how Edmundson wanted to use the space in her staging. I was able to understand how the actors' bodies could be used to create the shapes of the monsters and creatures in the show. We looked at different variations of the bull, dragon, boxer, and sea monster. We tried using props as different pieces, such as the shields, dragon scales, or the eyes of a monster.

This exploration answered many questions about which department would create which creature. It was clear that most of them would be created by the actors, with their props, and costumes. We decided that the scenic department would not create any of them and that the light would be used to expand the image. I wanted to use colour, direction, and the quality of light to further expand the staging that was created. We talked about being bold with colour to create the feeling of spectacle and to establish the emotional quality of the scenes.

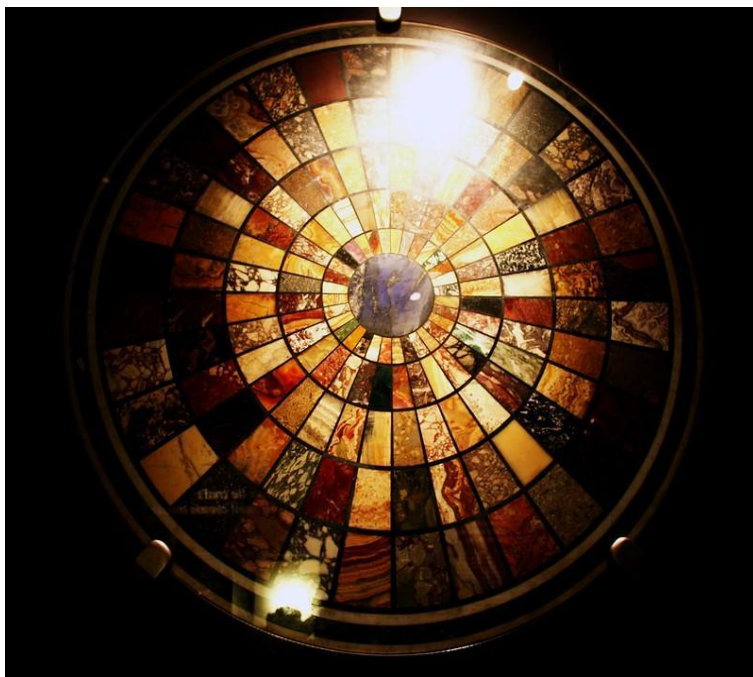
I knew from my research prior to the workshop what the script needed. I was able to talk with Garland and Edmundson to decide what our production required. It was still clear at this point that levels would be very helpful; Edmundson was excited to

explore levels whether they went above or below stage level. The workshop also made it evident that most of the transformation in the show would be done with costumes and/or props. That meant that the set only needed to serve as a playing space for the show; it could have hidden moments, but its main purpose was to be a blank canvas for Edmundson to explore the movement and placement of the cast.

With the workshop under our belt, I was finally able to begin visualizing the set design.

2.2 Solidifying Ideas

By the end of the workshop, I had started to formalize a solid plan for the set design. Drawing back to the inspiration images that I had pulled for Edmundson and me, this photo caught both of our attention for its composition, particularly the juxtaposition of the circular shape and the rectangular segments. I was also interested in the way



that all the colours and textures of the pieces worked together. When thinking about this photo, it reminded me of a compass and the strong ties a compass has to navigation. I wanted to explore these pie-piece segments as scenic elements.

Figure 3: Ancient Roman Marble by Farrukh

I envisioned having three triangular shaped pieces on stage, meeting at a point in the centre. I wanted to examine the shape and size of them to see what the most dynamic position would be. My first instinct was to have a painted triangle that would line up with the width of the vomitorium, and to have two more with different heights and widths. I also played with having a large column which could be representative of a mast, a tree, or whatever we needed it to be. While I used cardboard and paper to make a simple draft model, I had always seen this as being a monochromatic set with different textures and shades of blue.

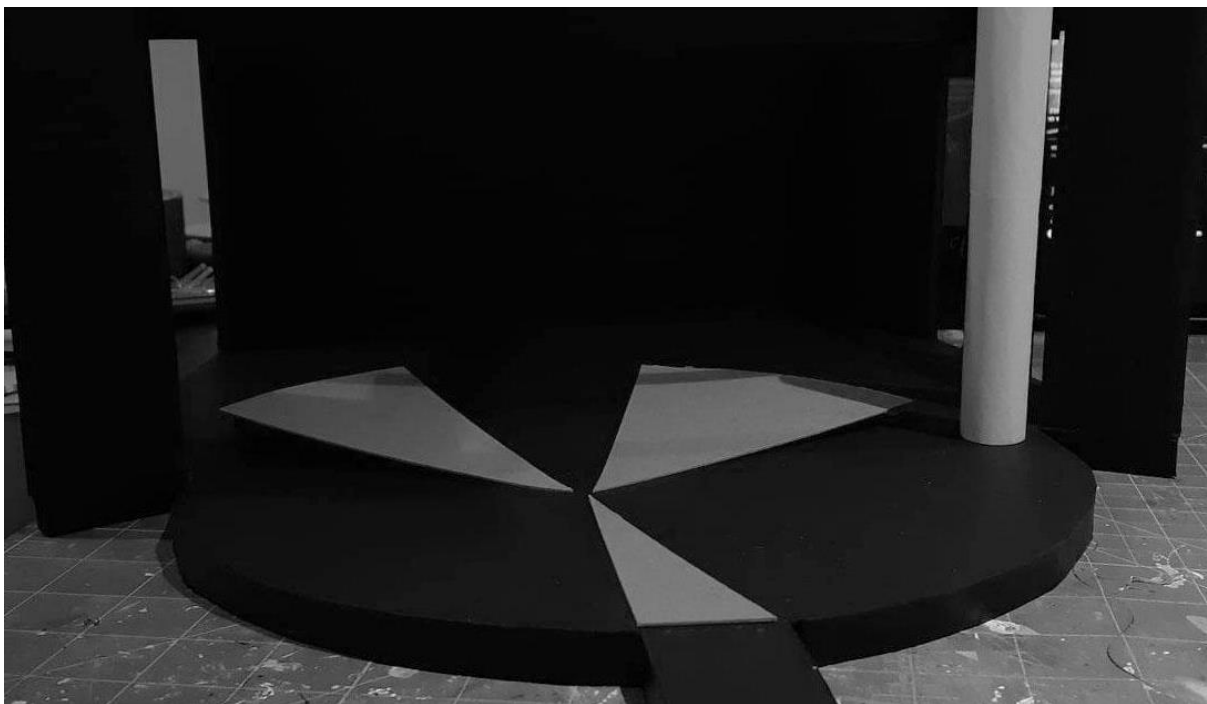


Figure 4: Draft model

Edmundson liked the asymmetry of the model (as seen in figure 5); it was clear to me from the meetings we had, that Edmundson had no interest in symmetry. I felt similarly; this show is not symmetrical, there are immense changes throughout the show that would not be truly represented by symmetry. This play explores complex power dynamics, which inherently mean that there is no equality. To have a symmetrical set would contrast that core theme.

We also both loved the mast and how much power and potential it had for blocking; we specifically enjoyed an off-centre position. Edmundson also loved the height that the rakes would provide, but she desired more height, which meant that in future reiterations I wanted to explore pieces that could provide significantly more height than the rakes. While we liked these few aspects, Edmundson was concerned about the logistics of staging and how she could work between two rakes. There was also a lack of visual interest behind the rakes, which I felt did not satisfy the play.

It was clear from our meeting that this concept was not working and that it would have to be redesigned. While there were aspects that worked, there were many that lacked visual interest and playability. It was important to keep sight of where my impulses for this model came from and the aspects that we liked. With that in mind there was nothing left to do but start over again.

2.3 Astrolabe of Ptolemy

It occurred to me that even though the ship itself was not being recreated, my research surrounding navigation and wayfinding could be helpful. *Argonautika*, while about new lands and discovery, is just as much about voyaging and travel. I began to research ancient Greek navigation tools, which led me to what is referred to as an astrolabe of Ptolemy or Ptolemy's astrolabe. Ptolemy was an Egyptian-Greek astronomer, mathematician, and geographer, who is well known for writing *Almagest* (Jones; Rodríguez-Arribas, 130). His work was prolific for the time and provided a voice to ancient Greek astronomy. The astrolabe of Ptolemy was fashioned of seven interlocking rings which as described by the Museum of Ancient Greek Technology all served their own purpose: The seventh (exterior) ring was fixed and represented

the meridian, it was also marked in four points that would define the horizontal and vertical; the sixth ring turned freely, representing the equator and the pole, being



placed on the earth's axis; the fifth ring rotated in the direction of the sun; the fourth ring was also on the earth axis but would track the rotation of the astral sphere; the third ring was aligned with the ecliptic zodiac, it had all the zodiac sign names to read the geographic length of the stars; the second turned around a vertical axis level with the ecliptic and was used to read the width of the stars; the first ring was used for aiming the device. All these rings made up Ptolemy's astrolabe.

Figure 5: Ptolemy's astrolabe (Kostas Kotsanas)

After understanding the science behind the device, I felt that it would be perfect for my design. The nature of it being a navigation tool tied back into my wayfinding research from the beginning and the use of zodiac signs aligned with the ending of the play. Beyond its direct relation to those aspects of the show, I was also drawn to the visual geometry that the device created. I was particularly interested in exploring

how the rings could be represented on stage, as their shape felt very satisfying and intriguing. When I found the astrolabe of Ptolemy, I felt that I finally had found my way into the show, something that not only spoke to the text itself but also spoke to me as a designer.

2.4 Evolution

With this new image in mind, it was time to model and interpret the astrolabe of Ptolemy onto the stage. I wanted to keep the essence of the astrolabe but also expand it. It was not important to me if the audience knew the origins of the design, but rather whether the design served the show.

I recalled from previous conversations with Edmundson that she had interest in playing with depth on stage. I decided to pursue this and create multiple drops that would layer portals as they went upstage. Individually they all just looked like large drops with oval cut-outs, but stacked over each other, they would read as different rings. By having different shapes and sizes as a diminishing perspective it would provide an interesting portal to the back of the stage and yield a sense of depth.

Since the show moves to a multitude of locations rapidly, Edmundson also appreciated the number of defined entrances that it provided.

In addition to the three drops, I was drawn to using three ovals as a motif in other aspects of the design. Again, I reflected on the previous conversations between Edmundson and I about providing different heights for the actors. I created a platform that was three ovals of differing sizes stacked on top of each other. Like the drops they were stacked in an overlapping and irregular pattern; a similarly satisfying

pattern. On top of all three of the platforms, the only piece from my initial model, was the mast. I saw it in the centre of the overlapping platforms, feeling reminiscent of a ship's mast but also of a tree.

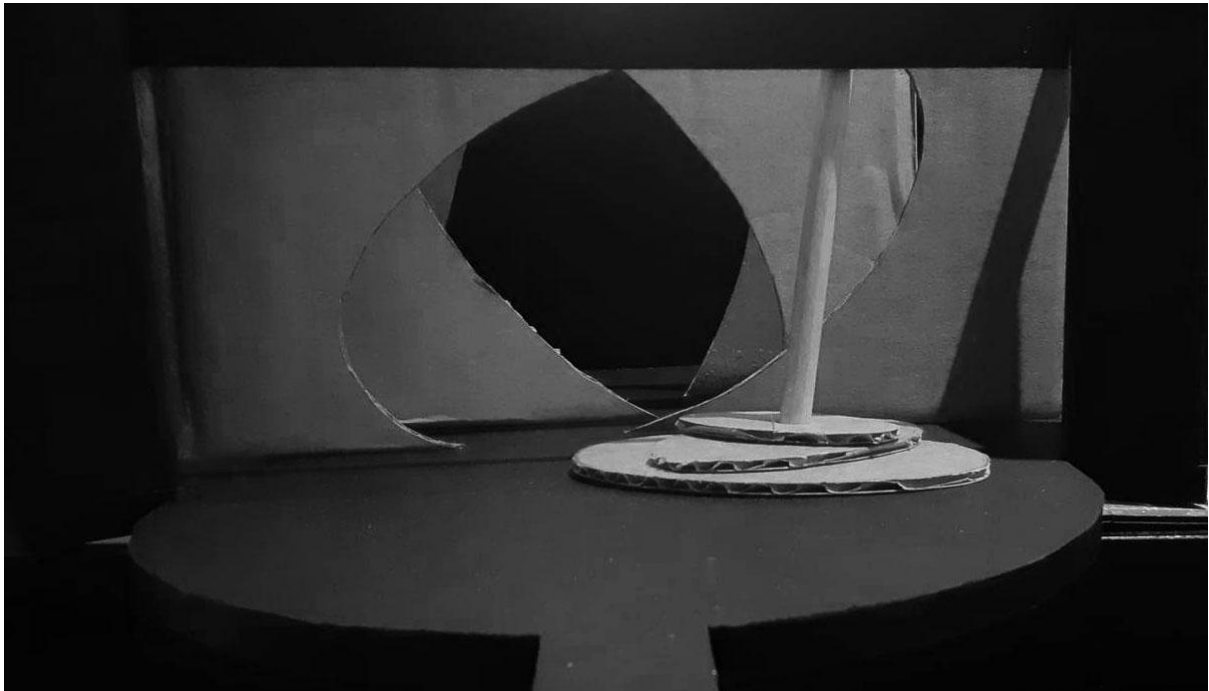


Figure 6: Second draft model

After creating this new model, I had conversations with Edmundson and Scott Reid (supervisor) about the new design and how it fit into the show. Edmundson was ecstatic about the new design, she stated that she was already envisioning the dynamic stage pictures that she could create. With the team on board, I began to move forward, creating my preliminary designs.

Most of the draft model would remain the same with a few edits and additions for the preliminary design package. I added some more complexity to the mast, as I was hoping that it could be climbed by actors. This would allow for actors to stand high above the others and create a large spectacle for different moments of the show.

Additionally, I wanted the mast to tilt in the second act to exhibit the difference that time had made on the characters and the show.

In addition to what I had already modelled, I added a rope attached to the upstage side of the mast. Rope was something that we had heavily played with in the workshop and wanted to continue to do so in rehearsals. It was attached to the mast for two reasons: they could tie people to it, and it could facilitate moments of transformation.

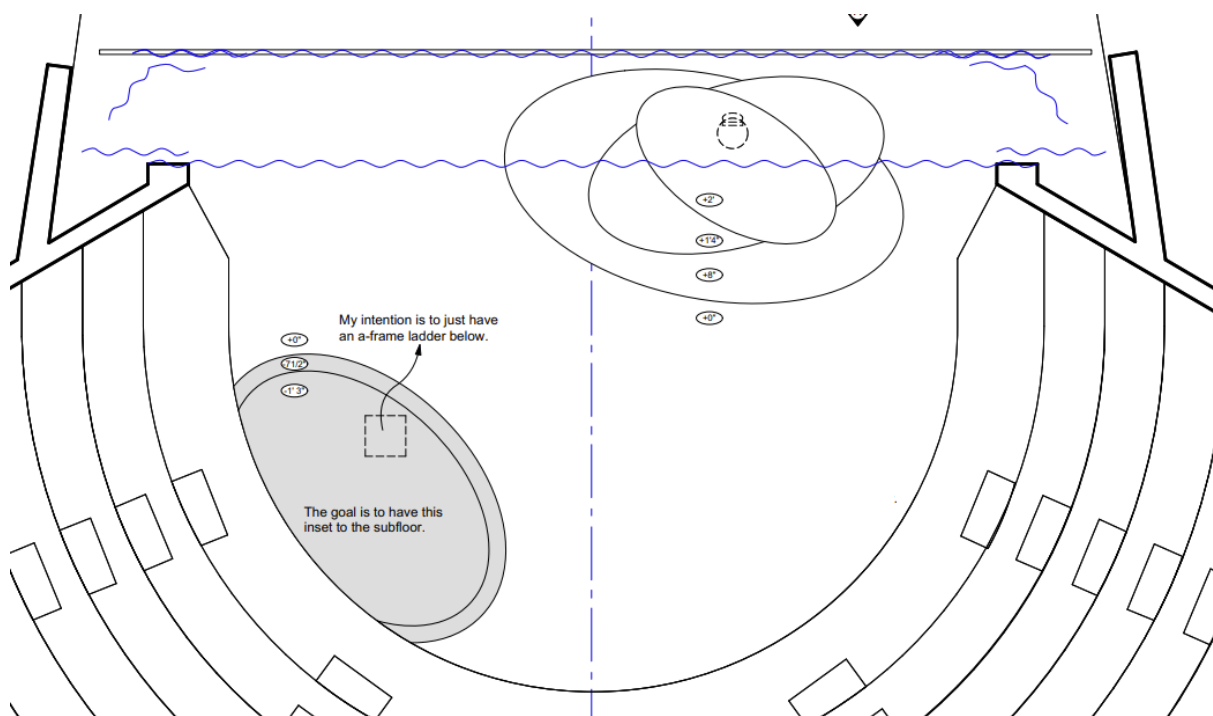


Figure 7: Preliminary ground plan

The biggest addition was a drop-down in the down stage right corner. It would be two steps down, to create more levels and the ability to use the trap room. This drop-down was also an oval shape to mimic the rest of the design. Its placement also balanced out the stage. The use of the trap was very important to Edmundson, to provide a different and dynamic way for actors and props to enter and exit the stage.

Additionally, throughout the script Zimmerman writes in the stage directions that the fleece is always around and seen in the first act. It was Zimmerman's intention to keep a physical reminder of the journey that the Argonauts were on and their goal. While it did not appear in the first design, Edmundson felt that it was an important plot device and reminder to the Argonauts and audience. During the workshop we discovered that hanging it on the railing above the vomitorium would be a perfect spot. This worked well because the audience see it, and the actors could reference it while still facing the audience.

The last addition to the design was three stools. Edmundson and I had spoken about how important it was to her to have some kind of seat for the characters to use. I decided that they should be cylinders to reflect the roundness of the set. I designed varying heights of the same stool to allow further exploration of height and status in blocking. It was also important that the stools feel elegant, as they would be used for both the gods and the Argonauts.

The final aspect of the design was the paint treatment. I was still intrigued by a monochromatic set in a teal blue. In this design I wanted to explore painted texture for each of the areas on stage, to give each of them a life of their own. I wanted the three oval shapes of platform and drops to all get darker as they were stacked. The drops would start with the lightest colour and get darker as they went, and I wanted them to be painted without texture. I felt that it was important that they look very polished and elegant, so that they felt significant and almost godly. I wanted the platforms to be textured in a scumble so that they could feel like dirt or new land. The mast was a simple blue wood grain. The stools, like the drops, would be polished, without texture in the lightest blue colour.

Finally, I wanted all set pieces to be lined with gold paint. The gold was meant to represent two aspects of the design: the astrolabe and Garland's god motif. Lining all the ovals on stage in gold, it emulated the rings of the astrolabe. Furthermore, Garland had established early on that gold would be representative of the gods in their design. This motif worked perfectly in my design; the Argonauts are guided and manipulated by gods throughout the show, and it felt only fitting that the stage be touched by them too.

CHAPTER 3: COSTING & REDESIGNING

3.1 Preliminary Costing

As in every design, I wish we had more money. However, I often find that less money can lead to more creative choices, and sometimes those can be the most interesting. Our costing came in far over budget, and while this was not a surprise by any means, it still required rethinking.

Additionally, we were over in install and restore time. We were only allotted four and a half days at the University Theatre to do the set install, lighting hang, focus, and paint work prior to cueing. The estimated time came back at eight and a half days, with the highest number of days being dedicated to the drop-down in the stage (two days). Likewise, for restore we were only allotted one day, and that was estimated at three and a half days.

The first decision I made was to take on the role of head painter, which would save \$3,000. Due to my past experience, I knew I could accomplish my desired paint treatment for the show, so I was not worried about execution.

I then began to investigate the biggest expenses and how we could eliminate more of the cost without compromising the integrity of the design. I first looked at aspects of the design that cost the most. I started with the mast, which came out to \$3,812.18; this number was heavily impacted by the cost of welding. Since I had asked for the mast to tilt and to have actors climb it, it needed to be reinforced with steel to be safe. As neither of these aspects of the mast were integral to the show nor my design, it was an aspect that was removed.

The next large item was the three drops, they were costed at \$3,922.80. The cost was broken down for framing each of the three drops, cotton to cover them and metal bending. The drop size was an issue for both framing and cotton. The other aspect of these drops that was expensive was their curves, they required metal bent to hold their shape in place. Since there was no evident solution to this large cost, it would require more thought and conversations.

The platform with three oval-shaped pieces stacked were costed at \$2,061.39. This cost was significantly higher than expected as originally, we were using stock risers. Due to the cantilever, they were not able to be built with stock risers. Additionally, the mast tilting into the risers meant that the centres had to remain hollow. This was a simple fix, with the mast no longer tilting it relieved that problem. Moreover, by turning all the ovals they could be stacked so that there was no overhang and thus could use the stock risers.

The final big item was the trap and its required infill, which was costed at \$1,658.71. Prior to any official costing, I modified the shape of the trap so that it would cover less pieces of Masonite. The stage in the University Theatre is the floor used in all productions that do not require a floor paint treatment, this meant that we would be required to replace all floorboards that were cut. The other issue with the trap was the install and restore time, since there was very little allocated time this would cause an issue. This was not an easy fix and would require further conversations with the team before modification.

After I received the budget and had gone over it, I was ready to have additional meetings with my team to prioritise what was most important.

3.2 Final Designs

In conversations with Edmundson, we began by discussing what was most vital to the overall show. Edmundson was very flexible and willing to focus on the aspects of the design that were truly necessary. There was only one week after our meeting prior to the final design deadline, so it was important to work efficiently and precisely.

We started by discussing the trap. We agreed that a trap in some form was imperative to our goals as a creative team. I wanted to leave the trap in its updated position; I was hopeful that by cutting more from other areas we could keep the existing trap and drop-down. The only minor change we made was that the trap would open and on stage rather than down, to save us money.

We then discussed the drops and how we could make them work. We both liked the shape and depth that they created on stage; it was clear to us that no matter what we did something still had to resemble that shape. The only question became how to achieve that shape without as much material or with a cheaper material.

After this meeting it was time to rethink the shapes and come up with a design reminiscent of the last iteration but cheaper. I came back to my reference photo, to remind myself why Ptolemy's Astrolabe was important and how I could represent it.

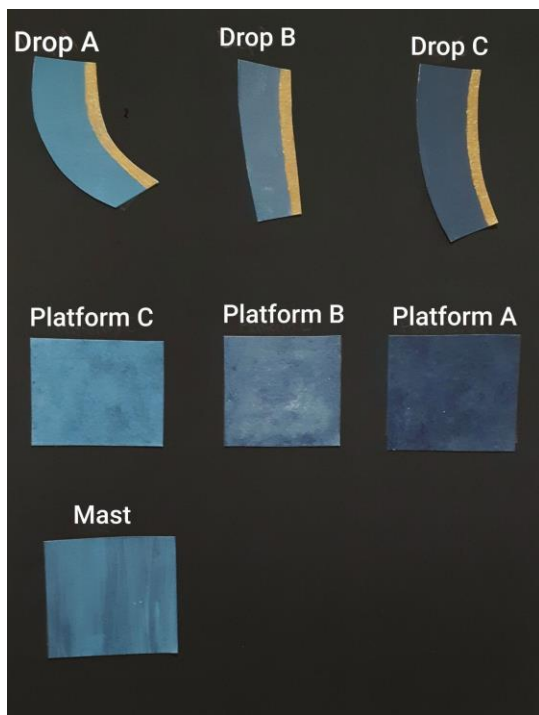


Figure 8: Draft final model

These rings (seen in Figure 8) worked quite well; Edmondson liked the possibilities that these new rings provided. The only modification was moving the rings so there was a more defined entrance through the back portals. This was the new design; the trap would be in a more reasonable location, the platforms would stack without a cantilever, the mast would not move, and the drops would be rings.

The only other slight change made was adding an additional purpose to the stools. I designed holes in the bottom of them to hold the spears. It was to help with one of our final scenes in the show, in the script it describes putting oars upright, so this was created to do just that.

Finally, I created paint elevations for the show to provide accurate samples of the



desired paint treatment. I was sticking with the monochromatic paint look, creating different textures and shades for each aspect of the design. The differing shades were to provide visual interest, but also to help create a sense of depth in the design. The texture was important to me as I felt that it gave each of the elements a defined look in the world but allowed those places to be whatever we needed them to be.

Figure 9: Paint elevations

3.3 Unexpected Illness

Months prior to my thesis project, I had booked wisdom teeth removal for reading break. At the time I figured it would be the best idea since they had to come out and this would hopefully provide me with enough time to rest. On the morning of my surgery, I sat down to have a meeting with the technical team about how best to move forward since the costing was still not aligning with our budget. In this meeting we discussed what was my highest priority and how I could create something that would work for the show.

A few days post-surgery we received the interim costing which placed the set at \$9,979.33. With a budget of \$2,500, there was still work to be done. This meant calls with Edmundson and Reid, to figure out the best way forward to afford my design.

dentist, I was immediately sent to the hospital. After spending eleven hours in the hospital, I was finally informed that I had a bacterial infection, and I would need another surgery. I was put on extremely heavy medication that impaired my thinking and judgement. This meant until I received an all clear from my doctor, I would not be able to work on the show. I informed all those involved of this sudden health change, and I had to be content to let the team make the best choices collectively in my absence. Thankfully I previously had the conversation regarding priorities before my surgery.

There were a few decisions made when I was gone. The most important decision that had to be made was regarding the drops. The drops ended up going back to the original design but instead of being cotton flats, they were going to be made of window screen. Window screen has been used before at the university and one of the best features` of window screen is that it takes light extremely well. While it is not what I originally designed, I was excited to experiment with this new material.

While I was away most of the set and props were built and finished. With the set being taken care of, that meant that I could begin to focus my attention on lighting.

CHAPTER 4: LIGHTING DESIGN CONCEPT

4.1 The Science of Skin Tones

What became clear as I began to ponder lighting for *Argonautika*, was that I had no education on lighting different skin tones. I had never been in a class where that was a topic of conversation, and that seems to be common amongst designers. For this show I had eighteen actors with a variety of skin tones who all were on stage multiple times throughout the show. The question became how do I best light all these actors.

I attended a conference called “Training the Eye,” which was held in Saskatoon by Carla Orosz, Sholem Dolgoy, Chase Cardinal, and Rachel Forbes. They all specialized in different areas of design, each speaking about how human skin tone impacts their field.

I began to investigate the work of Keith R. Tucker and W. Dury Cox, Jr. who both discussed lighting black actors. Since there is very little written on the topic, it is extremely helpful to understand what I learned and how it informed my process.

Understanding Undertone

I had never known that undertone existed in skin tone prior to my research.

Everyone has an undertone that can be sorted into three categories: warm, cool, and neutral (Dolgoy; Middleton, 64, 65). Having a warm undertone means that you have yellow under your skin, having a cool undertone means that you have red under your skin, and having a neutral undertone means that you have a mix of red and yellow (Dolgoy; Middleton, 64, 65). One way to identify an undertone is by looking at our

veins. We see veins as blue because of the way colour wavelengths pass through our skin (Middleton, 64, 90). Therefore, we can identify what undertone someone has by looking at their veins under natural light.

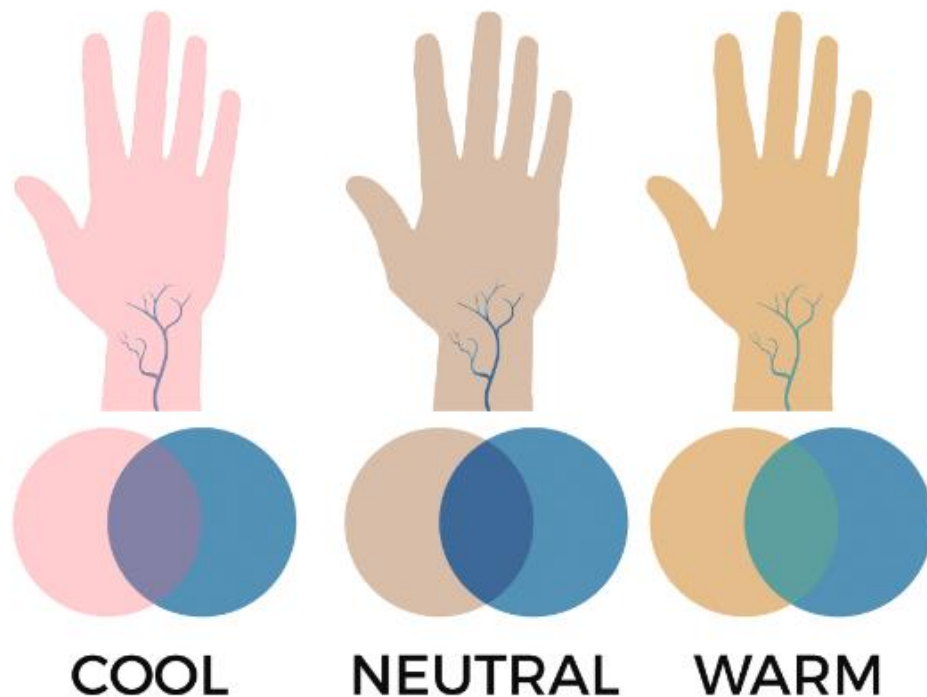


Figure 11: Undertone in skin (Middleton, 64)

As seen in Figure 12, warm undertone will lend to veins looking more green, cool will make them look more purple, and neutral will not significantly change their look (Dolgoy; Middleton, 64, 65). Once you have identified your own undertone you can compare your wrist to others to help identify their undertone. The best place to look at undertone is in the wrist; there is usually a good number of veins visible, and it is less impacted by shadow (Dolgoy; Middleton, 64, 65). If the wrist is hard to identify, then the neck is the next best place to look (Dolgoy). The hardest part in observing faces is that there is a myriad of colours in facial skin depending on where you look.

For example, under the eyes is one of the thinnest parts of our skin hence why it can look different and discoloured (Middleton, 90).

Pigment's Place

Pigment works in tandem with undertone but is a different part of the skin altogether.

Pigment is the amount of melanin in skin which determines how dark the skin is (Middleton, 50). Any pigments can have the same undertone, meaning skin can be very dark or very light but still have the same undertone (Dolgoy; Middleton, 90).

Pigment will determine how the skin tone will best interact with lighting. As stated in colour theory the lighter the pigment, the more it reflects light and the darker the pigment, the more it will soak up. This is a major factor in understanding how light and colour in light will react with the actor's skin tone.

Tucker discussed in his dissertation, that people in the black community are more accustomed to talking about pigment and undertone. He said:

“How does a white person describe another white person to a stranger? Most likely included in the listing of obvious physical descriptors would be hair color and eye color and perhaps hair quality (curly, straight, etc.). Rarely would skin color be included, unless it is extreme (albino, ruddy, sunburned, freckled, etc.)” (44).

This statement resonates with my lived experience. I had never once contemplated skin tone to this degree, since I am a white person, I have never had to consider my skin colour or how it relates to or is described by others.

Analyzing the Actors

In researching undertone and pigment, it was important to test this information prior to the production. In conjunction with my lighting design class, I was able to bring actors and a couple other friends to act as light walkers. I used this project to test Tucker's theories about gels. To give context Tucker's dissertation is from 1990 and he is referencing the work of Cox from 1950. This meant that despite the use of acetate at the time, he was dealing with gels that were still made from gelatin, to best contextualize Cox's work (Tucker, 57).

I had six light walkers, two warm, two cool and two neutral undertones to test Tucker's gels. We were using an LED light which meant that amber drift would not be a factor and the colour in the LED would be different from the gels Tucker once used. In this experiment I had a few takeaways. I learned that none of Tucker's colours looked particularly bad. All of them played well on the actors, but it was even more evident when they were all next to each other that there was a difference in their undertones. When using colours that aligned with their undertone it would bring out a depth in their skin. This was clearest in an actor who had dark pigment and a cool undertone, the red colour would provide an incredible depth in her skin. I have been taught before that more saturated colour look better on darker skin, I learned that is true but even more so when using a colour from the performer's undertone.

This experiment proved that undertone and pigment do impact lighting, it showed how important it is to fully understand actors' skin. To further this research and test out these concepts in our show, I analysed all the actors' skin prior to the show. I was able to get permission from the department to have all the actors come to my

office to analyse their skin. When they came to my office I explained the purpose of my research, asked a few questions, and documented their skin with photos.

The first step was asking them a series of questions about their understanding of undertone. I was fascinated to learn how many of them knew about undertone prior to my conversations with them. Of the eighteen actors, nine of them had heard of undertone, all but one of those people wore makeup. Wearing makeup does not necessarily correlate to knowing what undertone is, but most undertone research comes out of the makeup world as it is key to understanding foundation. That is why it makes sense that most of the actors who knew about undertones wore makeup.

The other nine were mixed: five of them had heard of it but knew nothing about it and the last four had never heard of it. While this did not impact how I would be lighting them, it was helpful for me to know their level of understanding. I was able to explain the research to them and how to look for the right foundation. Additionally, I found it interesting for future exploration in education, seeing as so many students were unaware.

The next step was to ask the actors whether they burn easily; while this may seem like a tangential question there is reason behind it. If someone with lighter pigment burns easily, it means that they have a cool undertone (Middleton, 64). This is because when the sun is interacting with skin it brings out undertone, so this question can help determine one's undertone (Middleton, 64). This does not always apply to people with darker pigment as their pigment can prevent them from burning (Middleton, 64).

Finally, I identified their undertones and took pictures to catalogue their undertones and pigments. I had them come to my office during the day because it is best to look

at undertone under natural light and my office provides lots (Dolgoy). It would have been best to meet them all outside, but it was the middle of winter. I took a series of photos: one of their faces - to have a reference of pigment; one of their forearms against a background; and one of their forearms under a white piece of paper. The photos under a white piece of paper with a circle cut out proved to be the best way to see their undertone without any other influences.

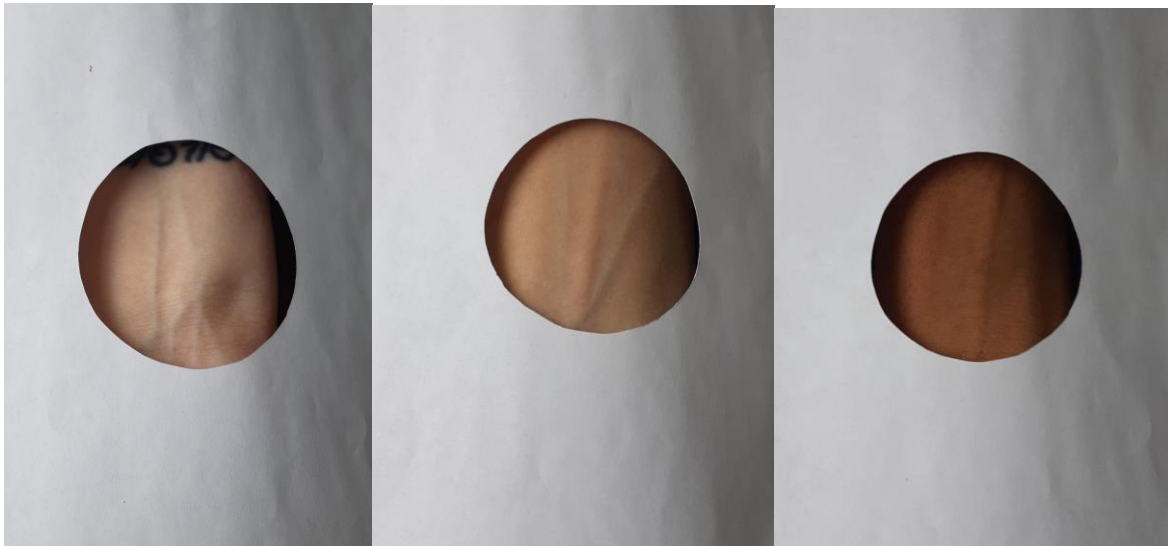


Figure 12: Examples of actors' skin tone (order left to right: neutral, warm and cool)

This information was the most important data I collected because it helped me choose the best lighting for each of the actors. As I move forward in my career as a lighting designer, I would like to keep collecting undertone information.

Understanding the skin of my actors lends itself to better accentuating the lighting and focusing on how to light their specific skin.

Implementing Research

After I had collected all the information from the actors, I created two types of documents to refer to. I created a spreadsheet which had their names, character

names, undertone, and their answers to all the questions. I also created a document which had their names, character names, undertone, and the photos I took of them.

I used these documents throughout the process, referring to the information when choosing lighting gels and overall colour palettes on stage. I also would use it throughout runs of the show to help adjust the light for different actors. The biggest benefit of collecting this information was my deeper understanding of the actors' skin. By doing my analysis early on, I was able to memorize everyone's undertone and use it throughout my work both consciously and subconsciously.

4.2 Early Ideas

I had never designed a show of with this large of a cast or at this scale of lighting before, which meant that prior efforts would lead to efficiency once tech began. I decided for this show that being in the rehearsal hall would be very beneficial for me, it would allow me to see the blocking and the intention behind it. I would also use this time to create paperwork; it provided a chance for me to reflect the work in the rehearsal hall in my design.

Edmundson and I had conversations discussing how she felt about each of the locations in the show. It was important to speak in adjectives and feelings when talking about lights so that we could find a common language. Since Edmundson is such a visual director, I thought it would be best for me to put together images from our conversations.

It was very important to me that every location feel new and different to avoid confusion with the rapid changes. Each of the locations were given different photos

and feelings that Edmundson and I attributed to them. Since the show was not using realism, I knew I would be using strong colours, so these photos helped create a colour palette. I also used the photos to help me understand the texture of the scenes and how each scene differentiated from one and other.

These photos not only helped facilitate the dialogue between Edmundson and myself but also provided me with room to create. These would be helpful in setting each location with their own unique colour and texture. Texture in this case refers to using instruments like gobos to create patterns that become visually satisfying.

The other aspect of my early ideas was my use of a pre-cue sheet. What that meant for me was creating a sheet prior to my industry standard cue sheet that was a place for me to collect all ideas. I used this for our first runs of the show, to put on paper the areas that I felt would need different lighting cues. By doing this I was able to learn a few things, including the size of the show, areas where I needed more thoughts, and what my overall goal in lighting was.

Table 1: Initial thoughts spreadsheet

Sc.	Pg #	Cue Description	Thoughts	Where?	Characters	Actors	Undertones
3	7	loud thunder	can this be the same as thunder cues		Cepheus, Asterion, Pelias	Gabrielle Pinky, Mathew	neutral, warm, cool
	7	restore		all DS	Cepheus, Asterion, Pelias	Gabrielle Pinky, Mathew	neutral, warm, cool
	9	Jason and Hera enter	I think there is a shift here, Hera & Athena need their own light (USR)	all DS, USR different	Cepheus, Asterion, Pelias, Jason, Hera, Athena	Gabrielle Pinky, Mathew, Steph, Gracie, Kali	neutral, warm, cool
	10	tale look	I am wondering if there is a story light that we come to often (this look will really depend on what is happening on stage), I think this should slowly build with the story - the music is very daunting and I think the lights should reflect that	circle around the edge of stage	Cepheus, Asterion, Pelias, Jason, Hera, Athena	Gabrielle Pinky, Mathew, Steph, Gracie	neutral, warm, cool
	12	entice Jason with the water?	should we bring back the waves and the feeling of water, almost enticing Jason	around jason - DSC	Cepheus, Asterion, Pelias, Jason, Hera, Athena	Gabrielle Pinky, Mathew, Steph, Gracie	neutral, warm, cool
	12	restore		all DS	Cepheus, Asterion, Pelias, Jason, Hera, Athena	Gabrielle Pinky, Mathew, Steph, Gracie	neutral, warm, cool
	12	Jason leaves	restore to the palace	all DS	Cepheus, Asterion, Pelias	Gabrielle Pinky, Mathew	neutral, warm, cool

I created this spreadsheet to investigate questions and thoughts I had in detail. It can be overwhelming to add an abundance of thoughts and questions into a formal cue sheet that is standard in the industry. This provided space to work out what I was looking for and what information was missing. I also knew as I transitioned to more

formalized paperwork that choosing colour for the location and the actors would be important.

Lastly, we knew from the beginning that the atmospheric element of haze would be important to the production. We tested haze in our workshop and felt that it would be important to provide another element to the lighting and the set by taking up space. It was important to me that it be present on stage throughout the show to have a life of its own.

4.3 Setting Motifs

When I transitioned from my initial idea spreadsheet to an official cue sheet, I wanted to be specific with my designs. I began by choosing the palette that I would put on the drops and cyclorama. This was very important because these pieces would set the tone and mood for the whole location. I wanted to draw from my initial ideas about the set painting, specifically regarding my interest in paint getting darker as the drops go upstage to create a sense of depth. To do this I wanted to set specific colours I would use for each drop and the cyclorama.

Table 2: Detailed cue sheet

			Argonautika				Designer: Cassie Holmes			
			Version 1.0 (01.13)				Director: Randi Edmundson			
Built	Cue #	Cue Name	Cue Description	Up	Dwn	Gobo	Drop 1	Drop 2	Drop 3	Gel Cyc
<input checked="" type="checkbox"/>	0.1	Preshow		n/a		star, water	r367	r68	r80	r367
<input checked="" type="checkbox"/>	0.3	House Half								
<input checked="" type="checkbox"/>	0.5	FOH Speech	(where is it happening?)	5		star, water	r367	r68	r80	r367
<input checked="" type="checkbox"/>	0.7	post speech								
<input checked="" type="checkbox"/>	1	blackout		10						
<input checked="" type="checkbox"/>	2	isolation on Jason	moving light narrowed on Jason (MSC)	0						
<input checked="" type="checkbox"/>	3	establish the boat	establish the ship / the feeling of the journey (the world of story telling)	2			r13	r14	r15	r316
<input checked="" type="checkbox"/>	4	night sky	the feeling of the stars	2		Star	r13	r14	r15	r316
<input checked="" type="checkbox"/>	5	waves	a subtle feeling of water	2	10	water	r13	r14	r15	r316
<input checked="" type="checkbox"/>	6	restore	restore to the established boat	5			r13	r14	r15	r316

The next motif I set was base looks for the entirety of the show. I set out to make twenty-two base looks for the show, to represent all the different locations in the script. The goal for this was to make programming my cues easier and more time efficient. In turn creating these helped me understand where the Argonauts were at any given time throughout the show. I created a table at the bottom of my cue sheet, which listed the base location, which cues it was used in, and what fixtures I wanted to use. This was intended to make cueing the show as fast as possible and to be clear with my intentions. All this work was based on my photos of each location.

I also had a few overarching goals in my design that I wanted to achieve: speed and fluidity, focus, visual effects, and status.

I wanted to focus on how the lights moved throughout the show either with the characters or against them. The show speedily changes locations without much time for audiences to understand that things have changed. I wanted to use the lighting to help, to feel a sense of movement that aligned with the script. Specifically in

changing locations, I wanted the lights to change in tandem with the characters' language rather than before. The lines helped provide context to the locations and emphasized the feeling of the new locale. Since fluidity was such a strong motif that I used throughout the show, it made moments of sudden change more impactful.

Additionally, I wanted to emphasize focus through lighting. This is a very traditional and typical part of lighting design, but I wanted to create specific looks that used this technique. I particularly wanted to explore emphasizing the unknown, focusing on the foreshadowing. There were multiple moments of this: when Pelias told Jason the tale of Phrixus and Helle, when Idmon had visions, when the characters died, etc. These moments required a specific focus on the people who were guiding the story and how their words would shape the overall narrative. Furthermore, I wanted to give specific focus to Medea and her journey through the second act. There were multiple moments for Medea where I wanted to fully focus on her and almost nothing else. To me, these moments were Medea's turning points, the areas of her character arc that changed how she viewed her companions and her status. This was when Medea is hit with the arrow, when the Argonauts plan to get rid of her and when Jason tells her the crown is more important than her. All these moments are points in the story that carry significant weight for Medea, and I felt it would be a disservice not to emphasize them in focus.



tim nguyen



tim nguyen

Figure 13: Focus on Medea (Photographed by Tim Nguyen)

In these moments of focused isolation, I was also able to specifically examine the actor's skin tone; choosing colours that would complement them and bring out their undertone. I often lit Medea in colder colours, both for the tonality of the scenes but also because the actor had cool undertone.

Another overarching motif was visual effects of water which I wanted to use in a warm and cool colour. Since the show discusses travel and the open ocean extensively, I wanted to reflect that in the design. I wanted to use warm water when different characters were imagining a journey on the open seas, almost as a part of their vision. The cool water was to represent the journey once the Argonauts were on the ship, the feeling of the open ocean. I wanted to use both effects to provide interesting texture and to create an atmosphere of the open ocean. The other visual effect that I intended to use was glitter on stage. There is a moment at the end of act two when Athena says, "the glittering Golden Fleece," which to me called for the lighting to reflect that; I wanted to create a look that made the fleece feel like it was glittering (88).

The last area I set a motif for, was the status of the characters. In this specific show I was interested in differentiating between the gods and the Argonauts. Oftentimes the gods are on stage with everyone, and I wanted to make it clear that they lived in a different world. I wanted to use spotlights focused on the gods so that their status was evident amongst the rest of the people. I also set a colour for the gods which was R355 (Pale Violet). This colour was chosen for a few reasons. I wanted to choose a colour that was cool, since most of my lighting choices for the Argonauts were warm. I also knew that the two actors who played our main gods, Hera and Athena, had cool undertones. For those reasons I knew the colour would complement the actors well and make them stand out amongst the Argonauts.

Choosing warmer tones for the Argonauts was also influenced by the undertone of the actors in the core group of Argonauts (actors who only played Argonauts), as most of them had warm or neutral undertone. This meant that it would complement most of the actors on stage.

I also used status for moments where the gods would intervene in the other characters' lives. I wanted to make it clear when the characters were acting of their own volition and when the gods were influencing them.

4.4 Lighting Plot

When creating my plot, I had to keep in mind the installation and restore time that we had available. I knew that for this show it would be best for me to keep most of the house plot the same. However, because there were a large amount of LED and moving lights, I could still make creative choices without changing the plot.

Beyond the house plot, there were several other areas where I wanted to add specials: shin busters behind drop three to light creature entrances; cyclorama LED units to light the drops; Fresnels above the platform to provide isolation; an LED in the trap to light from below; a star light to project stars on the floor; lights focused on the aisles to provide actors in aisles with more light; an LED in the vomitorium to light people entering and exiting; and two lights focused on the fleece above the vomitorium. Each of these lights were used during moments where I felt the house plot would not provide enough. I was able to talk through the plot with Jason Schwarz (University Theatre stage lighting technician) and Reid, who were both able to give great insight into achieving my goals.

CHAPTER 5: EXECUTION

5.1 Set

The beginning stage of installing the set was to test the three drops prior to their installation in the University Theatre. Once hung I needed to decide how they would be finished.



Figure 14: Drop test

In conversation with Trevor McDonald (Technical Supervisor) and Reid, I decided that I would texture the drops, to create an interesting visual picture. I felt that the flat version, although closer to my original design, would not be as visually satisfying. I also knew that the drops they were assembled in the Reeve Theatre and would have to be transported to the University Theatre. This meant that they would get wrinkled or textured in some fashion as this material is not forgiving and will take the shape of any pressure put on it. The type of texture I wanted to achieve was sporadic and random, mimicking the feeling of the paint scumble on the platform.

The gold around the edge of the drop was an aspect I was still questioning. I had originally based my design on the astrolabe of Ptolemy which was made up of rings of gold. I was not sure if it was needed any longer. If it was needed, I was not sure how we would get the desired effect on the new material. I decided I would wait and see it in the theatre before I made a final decision.

5.2 Paint

As discussed, I was the head of paint on this production; I oversaw creating recipes, mixing paint, and supervising students' painting. At the end of December, I made some small samples of paint to then test on my painted model. In the new year, I was tasked with converting those recipes to the amount required on stage. After an afternoon of calculating the square footage (which in hindsight I overestimated) and converting my recipe to a larger batch I was able to begin paint mixing.

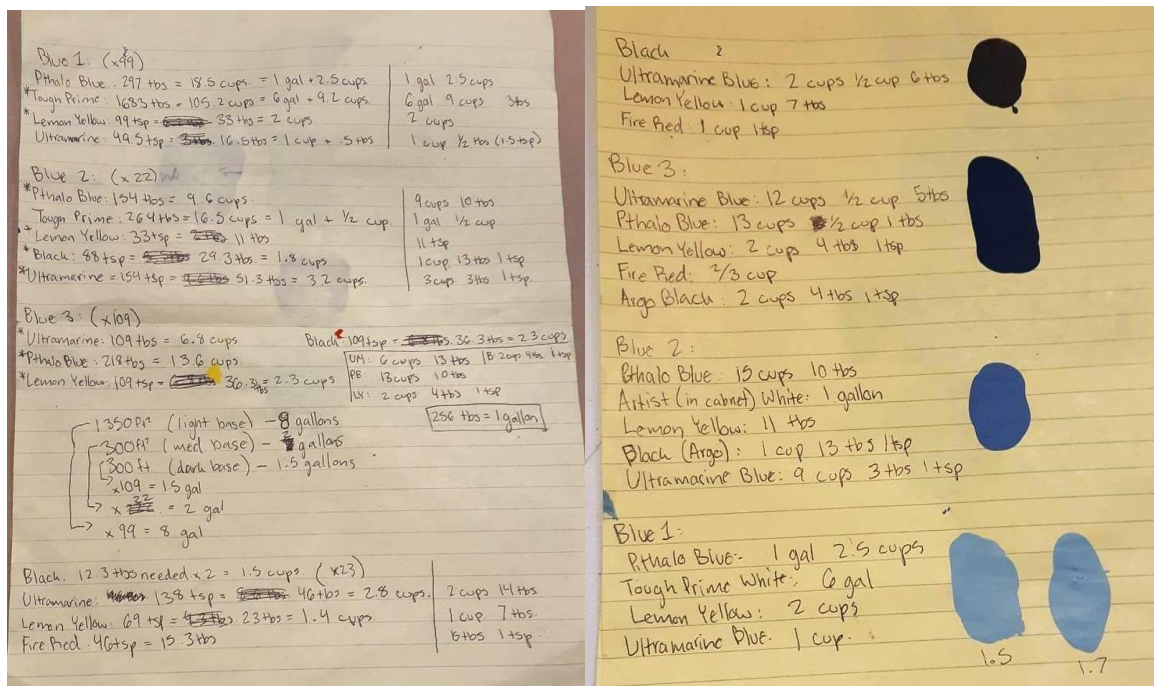


Figure 15: Paint calculations

In this design there were four different paint effects that I was hoping to achieve: the trap lid and inset, the stool, the mast, and the platform. All would use different techniques to provide varying patterns and create a visually pleasing look. I only mixed three blue colours which I wanted to use in all areas, to create an overall cohesive piece.

When painting the stools, I ran into issues with our gold paint. We did not have a gold that seemed to yield as bright as I was looking for. Celina Baharally (Props Master) was able to show me a powder that we had in stock. After a few experiments I learned that by mixing one tablespoon of the powder with one cup of clear coat it produced the desired gold effect. I would use this paint mix on multiple parts of the set that required gold lining.

The next piece we painted was the mast, which was a challenge for a few different reasons. The most obvious challenge was that we were painting a massive cylinder, which meant that we had to put it on sawhorses to reach the top, but also be sure to not let paint drip down the sides. Another challenge was the material we were painting; the mast was made from sonotubes which have ridges around the circumference. To combat the ridges, we applied cotton to the exterior of the tube to flatten them out. While this helped, it did not completely solve the problem, which meant being careful when we painted. The first base coats were fine, but it became more challenging when we started to try a wood grain effect on the mast. I learned that a dry brush would catch all the ridges but working with wet brushes helped distribute the paint better.



Figure 16: Mast paint technique

We applied a few different coats of this before I was content with the look. We then went over it all with a tinted topcoat, but I noticed that a significant amount of purple surfaced when we applied the coat. I decided to use colour theory and cover the areas with green to mitigate the issue. Little did I know this purple side-effect would cause more issues when painting the platform.

The platform was painted in stages, a base texture prior to install and then continued texturizing once it was installed. To prepare the pieces they were painted in medium blue (blue 2) and then employed a scumble technique. The scumble technique used a watered-down version of dark blue (blue 3) and a plastic bag. We would dip the plastic bag in the paint and then randomly splotch it around the pieces. We left the pieces with one completed scumble for Scott Freeman to install.



Figure 17: Platform painting technique

Once the pieces were installed, we went back over them with the same scumble technique in both the base and darker colour. This was to cover the seams in the Masonite used. Once that was complete, we went around the platform in gold. After all of that was done, I instructed one student to begin painting the clear coat over the whole platform. While the student was painting the clear coat I was focusing on the gold and monitoring that, but when I turned around the platform had almost completely gone purple.

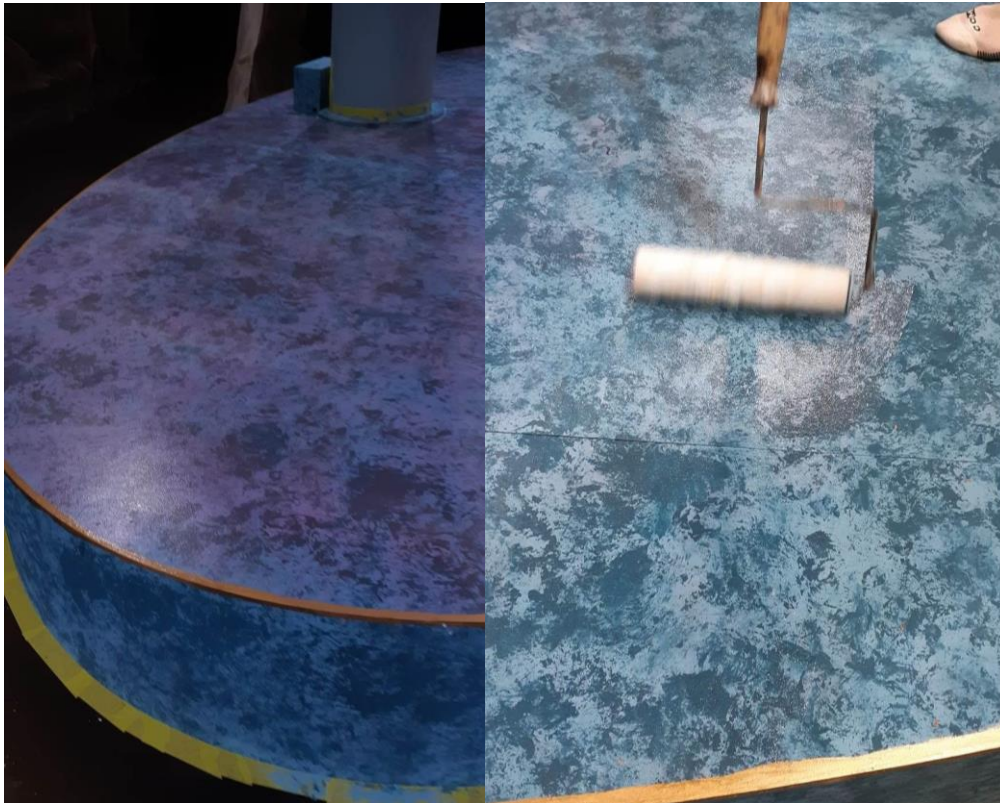


Figure 18: Purple effect on the platform

What was even more perplexing was that as can be seen in Figure 18, is when the paint went on it did not instantly become purple and instead it showed up as it dried. I called Reid to see if he had any insight, but he seemed just as confused. It was not just Reid and I who were confused, every other staff member was surprised and perplexed. Reid was able to come in the next day so that we could investigate the issue.

Unfortunately, we knew that we would have to start from scratch; I began painting over the platform in our base blue colour. While I was doing that Reid was experimenting with the paint to investigate what made the colour change and how we could avoid doing that. He realized that the colour would not just come up with clear coat, but anything wet that touched the paint, including water. This led us to

figuring out what the problem was. Realizing that it was anything wet bringing up the paint meant that it had to be the physical paint.

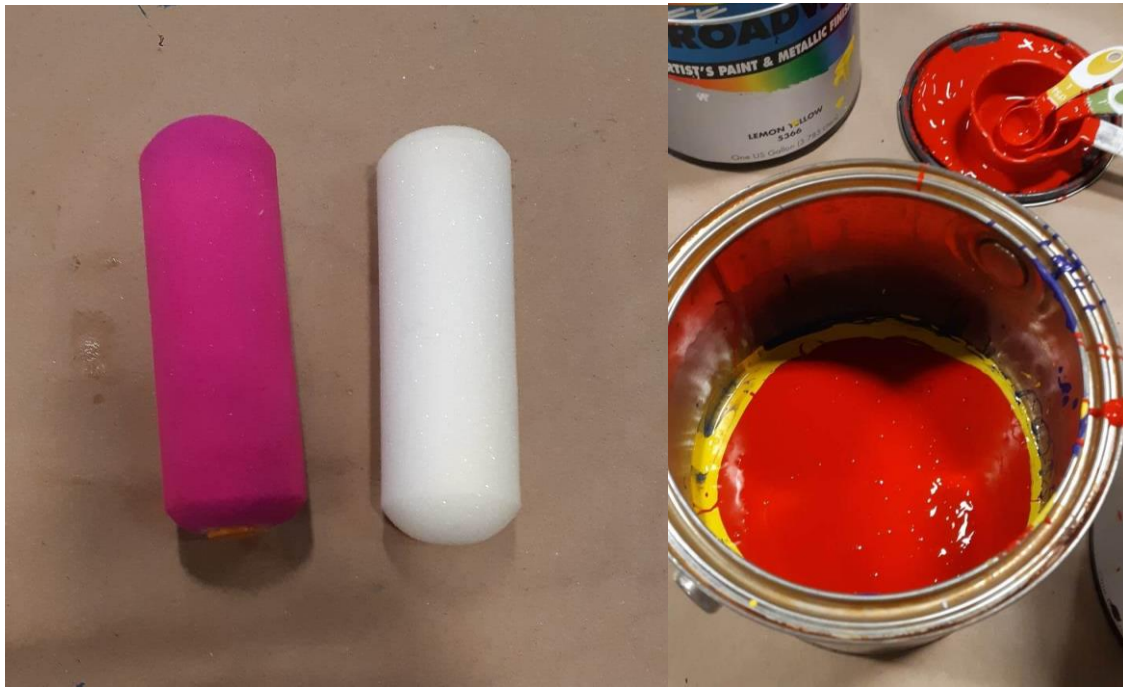


Figure 19: The purple culprit: red paint

I had mixed my own black for this production and creating black requires all the primary colours. The red I was using ended up being expired and the pigment had separated from the binder. This meant that the pigment was sitting on top of the paint and never fully mixing in. I never realized this because the paint on its own looked fine, but when it was compared to a new can it was very chalky. As seen in Figure 19, it turned a roller fuchsia from painting over the scumble. With the mystery solved we were able to adapt our technique and experimentation to specifically cater to that issue. We ended up adding the topcoat to the wet paint; the clear coat added the missing binder and made it so that the red would set properly in the paint. It worked very well, and it held throughout the run, so we did not need to touch it up. The only effect to the overall concept was that it became a matte finish rather than a semigloss. With this fixed and the gold done, we had achieved our desired effect.

5.3 Lights

Under the guidance of Schwarz, I created preset looks for all locations that were in the show. This provided me with the ability to edit the preset which would then edit all the cues that were based off that preset. I was able to also use the same technique for each of the effects used in the show.

Once the presets were complete, I was able to build the show and use the presets as bases, editing each cue as we went. My goal in levels was to get something in place for all my cues, which in the end totalled almost 240. It was important for me to have as many of the looks established as possible, even if they were only temporary. I was able to do this by not focusing on the small details at first but instead focusing on the overall idea. This method worked extremely well for me because I was able to get something in place for all my cues before Edmundson was in the room.

Edmundson and I were able to see all the cues for the show and work on them together. She provided me with her insight and her feelings on all the cues in the show. What was clear from our conversations was that she was interested in exploring the dramatic, pushing the envelope on what was expected and what we could do to subvert that narrative.



Figure 20: Amycus the boxer dynamic light (Photographed by Tim Nguyen)

I was drawn toward creating the unreal and leaning into myth and story. I wanted to play with colour and how it interacted in each location, as well as how I could make everything more dynamic. Since no area of design aligned with realism, I knew I had more freedom in exploring these locations. Something that Reid brought up to me early on was that my lighting of Amycus's boxing ring was quite strong (see Figure 20), because it moved with the action. What is not showcased in Figure 20 is that I would bump the side lights to 100% as each boxer died, signifying their knockout. I slowly began to realize what Reid meant, that he wanted me to note how the lighting played with the action, bringing strong contrast and grounding to the scene. As we moved through tech, I felt it was important to keep improving on each cue by focusing on how to align the lights with the action.



Figure 21: Focus on stage (Photographed by Tim Nguyen)

The other aspect of the design that I spent a significant amount of time working on was focus. I had many scenes where there was a large amount of light on stage and it was unnecessary, I was focused on keeping what was important to those scenes and what we needed to see. There was less of a focus from the beginning of the cueing time and so it was important that I focus on that at the end.

I also spent a lot of notes time focusing on the flow of lighting. Edmundson had stated that she wanted the lights to feel like they flowed throughout. There were a few more snap moments that her and I identified but other than those we wanted it to flow smoothly. I wanted to focus on moving with the actors and not anticipating their actions. I really focused on adding down times so that while the next cue was coming up the other was still slowly fading away. In turn, by focusing on the speed I was able

to make those identified snap moments feel more intentional and feel different in comparison.

I became more daring in the lighting as I was programming, which meant that my cues in the second act were more intentional, focused, and dynamic. It was important that I carry that through in all the show.

Inevitably, as in every design process, I did not feel finished by the time we were done but I felt confident that I gave it my best shot. I was interested in reflecting on my own work and process and hearing what audiences thought. I wanted to learn what worked and what aspects could use improvement in the future.

CHAPTER 6: REFLECTING ON THE PROCESS

I was able to see the show three different times in the run, which included opening and closing. I was very nervous on opening and was very keen to see how an audience would react. Our goal of spectacle and transformation was working; I heard many gasps as the trap opened for the first time. The audience was very engaged the entire time and after the show I had students and professors tell me how much they loved the lighting.

I stand by the show and all my decisions; I was balancing many aspects at one time, and the magnitude of this show did make it very difficult to slow down and make smaller, more intentional choices. All that I wanted to do differently may not have been possible given the time and monetary constraints of this project.

I also learned a tremendous amount throughout this project. I learned to not be afraid of minimalism and abstraction in set design. I am excited to keep playing with these aspects and how I can carry them with me in future projects.

I learned how to light a massive show and how to play with lighting. Programming this show was intense; I remember Reid telling me that going beyond 170 lighting cues would be difficult. This experience taught me that I can do large shows and dream big, because even when I fail in some areas, others benefit. I also learned how to have fun with lighting, how to be big, bold, and dramatic. That to do interesting lighting is not a one-size-fits-all solution, that to make it interesting it must elevate what is on stage. I want to keep exploring the dramatic and using all of what I have learned to keep pushing what is expected.

The most valuable lessons came from my research in skin tone is helpful for not only myself but for others. The lack of writing and education is astounding, and I hope that as I continue my practice, I can take what I have learned, build on it and share it, to benefit the industry. I want to start building myself a toolkit on pigment and undertone and how they interact. I am interested to explore more of how to light large groups of actors who all have a variety of undertones and pigments. I was able to explore some techniques for this production, but it would take more research to understand it better. I know that this research is interesting and necessary, I am excited to see where that will take me.

There are multiple areas that I would have liked to improve upon. As is the case with almost every production there are areas that were not finished, while this does not take away from the success of the production it does help understand my process and learnings.

In the set design, I regret choosing not to paint the edges of the drops gold. I have ruminated on whether it would have been beneficial to paint the edges or not.

Without the edging the drops could disappear under the right lighting, and I wonder if the gold would have prevented that. However, I think that by not having the edging, the cut-out shapes in the drops were lost. The lack of gold on the drops made the design less cohesive; the paint on the platform and on the stools stood out more and was not as cohesive. I also wondered what it would have been like to put gold around the edge of the trap. I think that the gold on the drops would have been even more beautiful and tied it all together, but I am not sure how the trap gold would have played.

I would have also liked to investigate the step behind the mast. The intention of the step was to create another level of playing space that would provide an additional hidden feature of the set. The issue was that when we tried it, the actor did not really use it. The reasons of it no working were a combination of things; the biggest being that the step was too small for the actor's foot. While I would have kept it there, I wish that I would have made it bigger so that it could have been more effectively used.

Those are the biggest issues I had with the set. I also have questions like: Did the asymmetrical balance on stage work? Could the fleece have been more effective in a different spot? Should I have given the floor any kind of paint treatment?

There are also multiple areas I would have liked to improve upon in lighting. I think I could have hung a few more specials to provide specific lighting. I would have liked to explore adding more cool side light to hit the mast all the way to the bottom, which would have created a more visually pleasing image.

I would have been interesting in exploring more texture on the drops, potentially using more gobos. I absolutely loved the triangular gobos that I used on the drops, and I think it would have been visually interesting to add more textures in other moments.

I feel it would have been good to double hang the aisle lights. That way I could have had two different angles on the aisles and then would have hit them no matter where they stood on the staircase.

I could have chosen better gels in my aisle specials. I chose Rosco 33 (no colour pink), because that was a highly suggested colour for darker skin pigments. My issue

was that the actors using the stairs would not be classified by that skin pigment. Furthermore, I used incandescent light at such a low level that I was struggling with amber drift, which ended up not lighting the people well. I would need to research more on the uses of R33 on people. It also stood out to me because the colour was not used in other aspects of my design.

I could have better focus, intensity, and drama in the looks. As for focus, I could have built cues with less overall stage light from the beginning which would have saved me time in the long run. Similarly, for intensity, I could have brought down the spotlights so that it did not destroy all the shaping in the lighting. Lastly, I could have been more dramatic and created bolder looks. All my visually interesting looks explored the unreal and upon reflection I could have used that in more places. I think I was caught up in the hundreds of cues I was building, and I could have put more into moments throughout the show.

The final area that I wish I had spent more time on was implementing my research on skin tone. The research helped me understand the actors' skin tone and how best to light it. I could have used it more, specifically looking at what undertones were not being lit as well and shifted the colours. In *Training the Eye*, we focused on shifting the colour to create a more desired tone or mix. I wish I had done more exploration in lighting all the actors and their specific skin tones.

I can reflect forever but the biggest thing that I learned from this experience and the University of Calgary is that my voice belongs in design. I have a voice, even when others tell me I do not. I can dream but I can also execute. I leave the university having learned I have something to say, and it is something worth hearing.

Works Cited

- Coates, J.F. "Reconstructing the ancient Greek trireme warship." *Endeavour*, Volume 11, Issue 2, 1987, Pages 94-99.
- Dolgoy, Sholem; Carla Orosz, et al. "Training the Eye." Training the Eye, October 22-26, 2022, University of Saskatchewan, Saskatoon, Saskatchewan, Canada. Workshop.
- Jones, Alexander Raymond. "Ptolemy". Encyclopedia Britannica, 13 Jan. 2023, <https://www.britannica.com/biography/Ptolemy>.
- Kostas Kotsanas, Museum of Ancient Greek Technology. "The astrolabe of Ptolemy (the... G.P.S. of the ancient Greeks)." The astronomical measuring instruments of the ancient Greeks. <https://kotsanas.com/gb/exh.php?exhibit=1301005>.
- Middleton, Katie. *Color Theory for the Makeup Artist: Understanding Color and Light for Beauty and Special Effects*. First edition., Routledge, an imprint of Taylor and Francis, 2018.
- Morton, Jamie. *The Role of the Physical Environment in Ancient Greek Seafaring*. Brill, 2001.
- Pomey, Patrice, and Pierre Poveda. "Gyptis: Sailing Replica of a 6th-Century-BC Archaic Greek Sewn Boat." *The International Journal of Nautical Archaeology*, vol. 47, no. 1, 2018, pp. 45–56.
- Rodríguez-Arribas, Josefina, et al. *Astrolabes in Medieval Cultures*. Edited by Josefina Rodríguez Arribas et al., Brill, 2019.
- Tucker, Keith Robert. *Lighting the black actor: a contemporary perspective based on the pioneering work of W. Dury Cox, Jr.* The Florida State University, 1996.
- Zimmerman, Mary. *Argonautika: the Voyage of Jason and the Argonauts*. Northwestern University Press, 2013.

To: Cassie Holmes

Fri 3/24/2023 3:42 PM

[△EXTERNAL]

Hi Cassie!

No problem.

Let this email serve as my confirmation to you that you are permitted to use images taken by me in your thesis.

I wish you the very best of luck in your defense. :)

Cheers,



Photographer | Visual Artist | Arts Educator