

3-23-2018

A Tale of Two Birds: Lighting Design and Implementation of Anton Chekhov's The Seagull and Aaron Posner's Stupid Fucking Bird Running in Repertory at Swine Palace Theatre

Chelsea G. Touchet

Louisiana State University and Agricultural and Mechanical College

Follow this and additional works at: https://digitalcommons.lsu.edu/gradschool_theses



Part of the [Theatre and Performance Studies Commons](#)

Recommended Citation

Touchet, Chelsea G., "A Tale of Two Birds: Lighting Design and Implementation of Anton Chekhov's The Seagull and Aaron Posner's Stupid Fucking Bird Running in Repertory at Swine Palace Theatre" (2018). *LSU Master's Theses*. 4632.
https://digitalcommons.lsu.edu/gradschool_theses/4632

This Thesis is brought to you for free and open access by the Graduate School at LSU Digital Commons. It has been accepted for inclusion in LSU Master's Theses by an authorized graduate school editor of LSU Digital Commons. For more information, please contact gradetd@lsu.edu.

A TALE OF TWO BIRDS: LIGHTING DESIGN
AND IMPLEMENTATION OF ANTON CHEKHOV'S *THE SEAGULL*
AND AARON POSNER'S *STUPID FUCKING BIRD* RUNNING IN
REPERTORY AT SWINE PALACE THEATRE

A Thesis

Submitted to the Graduate Faculty of the
Louisiana State University and
College of Music and Dramatic Arts
in partial fulfillment of the
requirements for the degree of
Master of Fine Arts

in

The School of Theatre

by
Chelsea Gabrielle Touchet
B.S., University of Evansville, 2011
May 2018

ACKNOWLEDGMENTS

Many people contributed to the success and completion of these two productions. I am grateful to Jim Murphy for providing guidance and advice through the design and implementation of both *The Seagull* and *Stupid Fucking Bird*. I am also grateful for his unyielding mentorship and support. Kristin Sosnowsky, Adam Parboosingh, and Jim Murphy helped acquire the new technology implemented in the design. I am thankful for their trust and willingness to take risks.

I want to thank *The Seagull* and *Stupid Fucking Bird* design teams: Gavin Cameron-Webb, Shannon Marie O'Neill, Grace Mimbs, Ronald Keller, Risa Brainin, Devin Painter, and Courtney Burton. Thank you all for your beautiful insights and collaboration.

It would be impossible to make it through such a rigorous program and industry without the support from my colleague Nathan Ynacay and my partner Sarah Mercer. Thank you both for your encouragement and advice. Sarah, thank you for always believing in me and cheering me on. Finally, I would like to thank my family for their support, encouragement, and love.

TABLE OF CONTENTS

ACKNOWLEDGMENTS	ii
ABSTRACT	v
CHAPTER 1: THE DESIGN PROCESS	1
OVERVIEW	1
<i>THE SEAGULL</i>	4
<i>STUPID FUCKING BIRD</i>	9
THE DESIGN TEAM	16
CHAPTER 2: ANALYSIS AND RESEARCH	20
DRAMATURGICAL RESEARCH AND ANALYSIS	20
DESIGN CONCEPT	22
<i>STUPID FUCKING BIRD</i>	23
<i>THE SEAGULL</i>	30
SPECIAL EFFECTS, PRACTICALS, AND SET MOUNTS	35
CHAPTER 3: IMPLEMENTATION	45
DRAFTING PACKAGE	45
HANG	48
CIRCUIT	49
FOCUS	51
POWER PROBLEMS	54
SPECIAL EFFECTS, PRACTICALS, AND SET MOUNTS	56
CHAPTER 4: EXECUTION	64
<i>THE SEAGULL</i>	64
<i>STUPID FUCKING BIRD</i>	70
CHAPTER 5: THE CHANGEOVER	76
TRAINING THE CREW	77
CHANNEL AND PRACTICAL CHECK	78
TROUBLESHOOTING	79
CHAPTER 6: REFLECTIONS	82
THE DESIGN PROCESS	82
SUCCESS AND FAILURE OF LIGHTING DESIGN ELEMENTS	84
FURTHER INVESTIGATION	87
MOVING FORWARD	88
CONCLUSION	92
REFERENCES	94

APPENDIX A: <i>THE SEAGULL</i> PRODUCTION PHOTOGRAPHY BY CHELSEA TOUCHET	96
APPENDIX B: <i>STUPID FUCKING BIRD</i> PRODUCTION PHOTOGRAPHY BY CHELSEA TOUCHET	98
VITA.....	101

ABSTRACT

The course of creation never did run smooth. Every act of creation is a process of creation. While theatrical creation and execution may follow the same basic steps each time, the process will always be evolving. One may take many paths to reach the same destination.

This project is a study of the process of creation and execution of a repertory theatrical lighting design for a professional company in an academic setting. In the spring of 2017, Swine Palace Theatre, the professional company associated with Louisiana State University's (LSU) School of Theatre, produced Anton Chekhov's *The Seagull* in full rotating repertory with Aaron Posner's modern adaptation *Stupid Fucking Bird*. Different design teams were chosen for each piece but the scenic designer and the lighting designer would work on both. I served as the lighting designer. This project will track the design from inception to implementation, covering initial meetings, research, execution, and the changeover process. The final chapter will reflect on the success and failure of concepts and implementation methods and address areas that need further investigation. Finally, connections will be drawn between this process and the industry at large.

Although repertory productions are not uncommon, very little of the repertory design and implementation process has been presented in a detailed written format. The goal of this work is to provide a case study of repertory design and execution through the documentation of the lighting design and implementation of *The Seagull* and *Stupid Fucking Bird* at Swine Palace Theatre. This work also bridges the gap between training and industry, illustrating how the presence of a professional company in an academic setting challenges professionals and students alike.

CHAPTER 1: THE DESIGN PROCESS

OVERVIEW

Theatrical design is a process with no set path that leads to the perfect concept for a theatrical production. Still, many educators have attempted to create a roadmap for students embarking upon their first designs or for artists who become lost in the process of conceptualization. In much the same way that the scientific method explores problems through experimentation and detailed observation, the design process helps to answer visual and artistic questions concerning a show through experimentation, observation, and evaluation. The design process with which I most closely identify and which guided my work on *The Seagull* and *Stupid Fucking Bird* is described by J. Michael Gillette and Michael McNamara in *Designing with Light: An Introduction to Stage Lighting*.

Gillette and McNamara propose a method to “discover an appropriate and creative solution to almost any design problem” in seven steps: commitment, analysis, research, incubation, selection, implementation, and evaluation (179). While this may appear to be a linear progression, it is not. Designers should revisit steps frequently to make sure they are producing a cohesive design. They may also have to revisit these steps during revision phases with the director and/or shop heads to ensure that a design is not only conceptually sound but can be engineered by the shop within their labor, monetary, and time limitations. It’s important to address these steps up front to observe the way my lighting design process adhered to, modified, or diverged from this guide. I’ll provide a summary of each step before moving into the design process for *The Seagull* and *Stupid Fucking Bird*.

Step one: commit. Gillette and McNamara list this as the most critical step in the process. They state that, “Your quality of effort is a direct reflection of your level of commitment” (180).

Wholeheartedly committing to a project ensures that the designers are focused on meeting any challenge to produce the best work possible. Gillette and McNamara also discuss shifting language to maintain commitment. A problem can become more manageable when it is seen instead as a challenge (Gillette and McNamara 180). I take this one step further. Problems are not only challenges but opportunities for excellence. The application of this language hugely influences my work and ability to problem solve. In an ever-shifting design process and throughout the implementation phase the opportunity for excellence is around every corner.

Step two: analysis. This phase has two objectives: gathering information that will help clarify design challenges and identifying areas that will need more research (Gillette and McNamara 181). It is important to ask as many questions as possible during this phase. Questions regarding production style, concept, budget, deadlines, location, space limitations, and inventory are all necessary to help define the parameters in which a design must be produced. Dramaturgical analysis is also key in this phase. Multiple readings of the script are essential and all questions should be noted. Analysis of the script in conjunction with conversations with the director and fellow designers allow a wealth of knowledge to inform the creation of the design.

Step three: research. Research has a broad application in theatrical design and production. During the design phase, designers conduct period research about the historical setting of the piece. They also conduct conceptual research, finding images or sketching ideas that explore the style and conceptual direction of the play as discussed with the artistic team. During the implementation phase, or technical design phase, research can apply to gathering quotes for rentals or purchases. Research may be needed to collect specifications of similar products to choose the best one for the job or simply to better understand the operation of technology.

Research is a step I will revisit over and over throughout the course of *The Seagull* and *Stupid Fucking Bird*.

Step four: incubation. This phase can be considered the set it and forget it phase. It allows the designers to free their minds to let their subconscious process design problems. At this stage, part of the design may have been determined, but some challenges remain. By taking time away from working directly on the problems, the subconscious is free to wander down other paths which may lead to possible solutions. Most questions can have more than one answer, and the incubation phase is important to allow the designers time to arrive at various answers.

Step five: selection. During this phase, designers sift through all the data collected to select items that will create a cohesive design concept. The lighting designer may choose to demonstrate these ideas to the design team through sketches, the use of previsualization software, or through collages or paintings. Whatever the method, the key is to communicate clearly with the entire artistic team during design meetings. During the technical design phase, decisions on what gear to rent or purchase as well as solutions to specific technical challenges will be selected and documented.

Step six: implementation. This phase begins when all design and conceptual ideas have been selected and the designer begins physical production of the work. The lighting designer drafts the light plot, section, and location of any practicals, set mounts, or special effects. Anything that needs to be communicated to the master electrician will be noted on a plate in the drafting packet. The master electrician and lighting designer may collaborate on how to execute a unique technical element or it may be designed solely by either individual. The master electrician is responsible for reading, interpreting, and technically implementing the lighting design. They must create a plan to efficiently accomplish the design, including circuiting the

plot, purchasing or renting fixtures from vendors, and designing how any practicals or set mounts will be wired, attached to scenery, and stored. The implementation phase of the technical design begins when the master electrician begins to draft, sketch, and organize the selected methods for executing the conceptual lighting design.

Step seven: Evaluation. Though it is the last step, evaluation should occur continually throughout the process. Concepts are evaluated for their efficacy, success in supporting the production, and cohesion with other design elements. Methods for execution are evaluated along with their monetary cost. Both the lighting designer and the master electrician should evaluate their efficiency and communication skills. At the end of the production, the lighting designer should evaluate the “methods and materials used to reach the final design goal” (Gillette and McNamara 186). Evaluation of the selected ideas and materials is necessary to critically examine the success of a design and determine their viability in different contexts and future designs. The same process applies for the master electrician. Reflection on the methods, materials, and means of execution is important to carry over skills acquired and lessons learned from one project to the next.

It is important to note that the design process for both *The Seagull* and *Stupid Fucking Bird* ran concurrently.

THE SEAGULL

The Seagull: A Comedy in Four Acts was written in 1895 by Russian dramatist Anton Chekhov. Ryan McKittrick and Julia Smeliansky’s translation was used in the Swine Palace production. This translation of *The Seagull* premiered at Brandeis Theatre Company in 2013. Ryan McKittrick notes that “the dialogue of the play ‘is not so contemporary that it sounds like it

happened yesterday, but it's not antiquated'" (Fileman, par.7). The updated language offers a fresh perspective on a classic while maintaining the integrity of the original text.

The play takes place on Sorin's estate and farmhouse in rural Russia. The play follows the lives of Sorin's family and employees. It is ultimately a story about the trials of love and life across socio-economic divisions on a rural Russian estate. The characters struggle with longing for another and, in many cases, that love goes unrequited. The play also contends with the challenges of being an artist as Arkadina is an actress, her son Konstantin is a playwright, Trigorin is a writer, and Nina is an aspiring actress. These characters reflect on what it means to be an artist as well as the ways art may reflect or obscure its connections to life. Because of this examination of art and life there is a heightened theatrically mixed in with realism. For example, characters will address the audience to impart information or comment on the action. The characters frequently do not reveal exactly what they mean to say and the text relies heavily on subtext to communicate how the characters think and feel towards others.

Initial Meeting

In May of 2016 the following artistic team for *The Seagull* was announced: director Gavin Cameron-Webb, scenic designer Ronald Keller, lighting designer Chelsea Touchet, costume designer Grace Mimbs, and sound designer Shannon Marie O'Neill. The director and scenic designer were visiting artists. Grace Mimbs was a fellow graduate student and Shannon Marie O'Neill is a faculty member at Louisiana State University.

Prior to the first formal meeting, Gavin Cameron-Webb reached out to me via email in August of 2016 with an introduction and some initial thoughts on the production, stating:

I'd like to emphasize the overtly theatrical nature of the play in production and design. Not only because Arkadina is a diva in her own right but because the theatre is such a central metaphor in the play - from the beginning with Konstantin's theatre and his play to

the end with Nina's declaration about having found her feet onstage. And then there are the moments when characters are alone onstage and speak [perhaps to the audience]. It seems to me that Chekhov's play is on the same continuum as the many Shakespeare soliloquies about life being a performance.... (Cameron-Webb, par. 2)

He goes on to describe how he envisions the space as open as possible with minimal masking. He also desired Konstantin's theatre present and visible throughout the entire play. In addition to this he discusses wanting to see a glimmer of the meal taking place upstage while Nina and Konstantin have their climactic discussion in the final act. Lastly, he mentions that the intermission will occur between Acts III and IV. I noted the contents of the email on a legal pad and revisited the script. I had conducted initial readings of *The Seagull* over the summer and made my own preliminary list of notes and questions. Upon Gavin's email, I revisited the script as well and my notes and continued to note questions and do preliminary dramaturgical analysis. Part of my approach is to avoid heavy research and dramaturgical analysis until after the initial meeting with the director. This is meant to avoid becoming too attached to one idea or concept before having heard the director's thoughts on the script or their production concept.

The initial meeting for *The Seagull* took place on November 14, 2016, on the LSU campus. The entire artistic team was in attendance and formal introductions were made. Gavin started the meeting with his overall thoughts and impressions of the play. The style of the production would be realism with a touch of theatricalism as the script called for it. Gavin mentioned that he envisioned the space to be open with little masking to hide what was in the wings or upstage. He also listed some special effects for consideration by the scenery and lighting designers, including glowing red eyes, smoke at the edge of Konstantin's stage, and candles and lanterns for the final interior night act, which could be live flame or controlled electrically. Following a brief silence, the designers began to ask questions. The scenic designer

had questions about space and visibility while the costume designer brought up the time period. Preliminary discussion set the time period in the 1880s. I asked technical director Jim Murphy about using live flame on stage. I was interested in any fire code regulations or equity rules that may be associated with live flame while Jim was more concerned about the ability to control the air flow in the room so that the candles could be lit and stay lit. Following this discussion, we decided to use mostly electrical candles and lanterns with a small number of live flame candles. Gavin initially wanted 20 candles or lanterns for this scene, so props master John Eddy and I made a plan to visit stock and check wiring supplies before getting back in touch with Gavin.

As the *Seagull* artistic team was eager to address the practical and visual challenges of the script, very little in depth dramaturgical work was completed by the artistic team as a unit in this initial meeting. While a few broad dramaturgical questions came up in conversation around certain design challenges, each designer generally kept to discussion of issues specific to their respective area. I made sure to take careful notes even when the conversation did not appear to be directly related to my own area, lighting. In my view, notes from the first critical meetings are especially important. Each component of the design must work together to create the whole, and visually uniting those components is a key function of the lighting design. Taking these notes helps me gain a broader picture of the production and allows me to reference details I may need later as I pursue more in-depth research.

Ongoing Collaboration

Following the initial design meeting, ongoing collaboration continued mostly as contained design areas. I maintained contact with Gavin via email as I immersed myself in the script and my analysis of the show. I also drew Ron into discussions with Gavin frequently to discuss my research on possible solutions for the glowing red eyes and smoke effect.

Gavin arrived on the LSU campus in mid-January and began rehearsal on January 23rd. It is Swine Palace's operating procedure, and a common practice across the industry, to conduct designer presentations on the first night of rehearsal. Each designer presents their design concept and supporting visual or aural elements to give the cast a sense of the world they will inhabit. However, the artistic team had not met as a group since the first design meeting in November and felt that it would be best to postpone the presentation until we could meet and touch base with one another at the production meeting scheduled for January 24th. The design presentation was therefore pushed to the following Monday.

Production meetings bring together the artistic team and the technical leaders to address challenges that arise during the implementation phase as well as discuss shop progress on the show. Because much of each designer's work was conducted through isolated conversations with Gavin, there were a lot of questions to be answered. Those questions ranged from the technical to the conceptual and, ultimately, the meeting became more of a design meeting than a production meeting. To make matters worse, the meeting was only thirty minutes long. Designers had to prioritize what information to share with the group and what to address at a separate meeting. While having separate meetings would be easier now that Gavin was on the premises, involving Ron would require video chat coordination as he wouldn't be visiting until the first designer run in a couple of weeks. The first meeting came to a close with many unresolved questions. A second hour-long meeting was scheduled for the next day, Wednesday the 25th.

The collaboration after this point continued in much the same way. The artistic team spent the next two weeks hashing out both conceptual and technical challenges during multiple production meetings. Any matters that required more attention but did not require the full group

presence continued as separate meetings with Gavin and other necessary individuals. Any major updates were mentioned at the following production meeting.

In addition to ongoing production and design meetings there was a designer run on Saturday, February 11th. The designer run is an early run of the production for designers to see how the actors have been blocked, how the space is used, how transitions between scenes flow, and to get an early sense of timing. As the lighting designer, I made notes of actor blocking, large transitions, and moments that may need additional lighting support. I also wrote down new lighting ideas that were inspired by seeing the show. I made sure to note any questions that arose. After the designer run a short meeting with the artistic team and Gavin occurred. The team discussed any questions that pertained to the group and made appointments to meet with Gavin to discuss new ideas and challenges. In many ways, the designer run allows designers to revisit the analysis and research phase of the design process while simultaneously asking designers to evaluate the effectiveness of their selections so far. For the month following, production meetings were held weekly and technical rehearsals (tech) began on March 9th.

STUPID FUCKING BIRD

Stupid Fucking Bird by Aaron Posner is a modern adaptation of *The Seagull*. The plot structure remains the same, but the locations are more fluid and some characters have been combined or eliminated altogether. Diep Tran notes that “the plot of the original drama is blended together with direct audience addresses, rants about the uselessness of contemporary theatre, and a healthy spoonful of modern slang...” (Tran, par.2). In contrast to the heavily laden subtext of *The Seagull*, *Stupid Fucking Bird* lays it all out there for every character and audience member to see. The subtle audience/actor interactions of *Seagull* transitions to forthright communication becoming a main component of *Bird* from the start of the play. In fact, the play

cannot start until an audience member follows Con's instructions and says, "Start the fucking play."

The characters of *Stupid Fucking Bird* are aware that there is an audience but they are also "real" people. Aaron Posner includes a note at the beginning of the script addressing the theatrics and meta-theatrics of the piece. He states, "The characters are 'real' people living the story of the play. They are also characters in the play. Both things are true at the same time" (Posner 7). Because the characters are aware of their simultaneous existence they reference Chekhov and some even challenge the fate he dictated for his characters... for them. Character names are modernized, for example Konstantin is now Con and Medvedenko is now Dev. All periphery characters are removed except for Dr. Dorn, who has been combined with Sorin to produce Dr. Sorn. The movement of the play is much more fluid with scenes bleeding into one another. Four acts are condensed to three with twenty-nine scenes. Overall, the pace is much faster than *The Seagull*.

Stupid Fucking Bird loosely maintains the story of *The Seagull* with a few plot changes. One significant change occurs at the very end. In the final act of *The Seagull*, Konstantin commits suicide. In *Stupid Fucking Bird*, when the time comes for him to execute his final actions, Con rebels. He instead shoots out a stage light in frustration and questions Chekhov's decision to kill his character. The play ends when Con says, "Stop the fucking play" (Posner 77).

Initial Meeting

The announcement of the *Stupid Fucking Bird* artistic team was released concurrently with the announcement for *The Seagull*. The artistic team consisted of: director Risa Brainin, scenic designer Ronald Keller, lighting designer Chelsea Touchet, costume designer Devon Painter, and sound designer Courtney Burton. The director, scenic designer, and costume

designer were visiting artists. Courtney Burton was an undergraduate student at Louisiana State University.

On August 10, 2017, Risa Brainin reached out to the design team with an introduction and a brief description of what she expected at our first design meetings on August 26th and 27th. Risa scheduled two days to meet to make sure we had enough time together to explore the script and initial design ideas before the team had to disperse to their home locations. A read of the script aloud as a group was the first item on the list. Risa explained that she likes to do this as a way for the team to experience the play together in the moment (Brainin, par. 3). Following the reading the remainder of the time would be spent “talking about ‘why this play, at this time, for this audience.’” Risa goes on to state, “In the first meeting, I’m less interested in the logistics of what we’ll need and more interested in really exploring those questions. We’ll also be going through the play in a dramaturgical way which will frame the discussion” (Brainin, par. 3). In addition to this, Risa asked that we all bring something in that reminds us of the play and research materials for our design area.

The initial design meetings went as planned. Risa asked that each designer read for the character with which they least identified. I read for Emma, Con’s mother. This proved to be an illuminating experience as I connected to her more during the read through than I could in my previous reads of the script. Other designers had similar reactions or revelations about characters. We moved through the script methodically. We discussed in depth the desires of the characters, how old we thought they were, their relationships to one another and who we would cast in the role if we could cast anyone. We also discussed why it was important for us to do this piece, right now, for this audience. This was a particularly lively discussion. With the next presidential election on the horizon, each of the designers voiced a connection with Con’s desires to create

newer, better art, art that means something and brings people together. In addition, I felt that it was important to tell this story now because it is about connection, both between the characters on stage and between the characters and the audience. Others elaborated on this, noting that in many ways we are also living in a world of no subtext where individuals are free to say whatever they like through popular social media sites. People choose to share incredibly personal and painful moments alongside the joyous. In many ways, the characters do the same, but without the use of screens. These discussions continued for the entirety of the four-hour block set aside for day one.

The next day we reconvened and tied a few loose ends up from the day before. We immediately dove into the items we brought that reminded us of the play. I shared a song by Cursive titled, “Art is Hard.” The song is a loud, discordant, and cacophonous reflection on producing art in the music industry. This was the first thing that popped into my head when I finished reading the play, even before Risa’s prompt to bring something related. Specifically, the way that the music is in your face, or rather your ears, and is a poetic but searing reflection on the production art. The lyrics that stayed with me were,

Cut it out/ Your self-inflicted pain/ Is getting too routine/ The
crowds are catching on/ To the self-inflicted song/ Well here we go
again/ The art of acting weak/ Fall in love to fail... If at first you
don’t succeed/ You gotta recreate your misery/ Cause we all know
art is hard. (Cursive)

I immediately thought of Con. I thought of his own reflections on art and attempts at love. I also imagined that this is the kind of song his mother would hate, and producing things his mother would hate or not understand is one of his favorite past times. The entire team shared their own reflections about the item they brought in and the items others brought in. No one item was sacred to anyone and everyone’s contribution was valued. As a team, we snowballed from

one item to the next creating connections and finding contradictions simultaneously. The process was organic and naturally led into the next phase of the meeting, which was presenting research materials pertaining to our own design areas.

I start research for a design by finding images that are visual representations of the overall feel of a play or that speak to themes, motifs, or feelings evoked by the play. From my analysis of the play I look for images of light, shadow, color palette and textures that speak to the feel of the play as a whole or specific moments. These serve primarily as inspirational images. Images that help me forge the first tenuous connections with the play. Sometimes they are discarded after the first few weeks but frequently they go on to influence my concept for the lighting design. For *Stupid Fucking Bird*, I brought in a handful of images that primarily dealt with the subject of art and reflection. The two following images spoke to me the most.

In both *The Seagull* and *Stupid Fucking Bird*, Sorin/ Dr. Sorn's estate is by a lake. I was interested in finding images that took that natural location and abstracted them much the same way the *Stupid Fucking Bird* takes *The Seagull* and adapts and abstracts. In both the play and the images, there are familiar elements mixed with the strange. Both images in Figure 1 and 2 below evoke not only a sense of abstraction but also fragmentation. Aaron Posner deconstructs and compresses the action into twenty-nine scenes. The concept of fragmentation also applies to Con, who becomes more and more distraught as the play goes on, frequently retreating into himself and disconnecting with the world around him. The abstracted pattern created by the shattered mirror in Figure 1 and the reflecting light in Figure 2 will go on to influence the templates picked for the moments we witness Con's deterioration and retreat into himself.

Once the team laid out all their research materials, we made a collage on the table and reflected on connections, contradictions, and parallels presented visually. We explored possible combinations of these ideas and how they might interact to create the world of the show. We



Figure 1. *Stupid Fucking Bird* inspiration. “Impact” by Erik Johansson.



Figure 2. *Stupid Fucking Bird* inspiration. “Mirror Labyrinth Kraus Residence” by Jeppe Hein.

continued to ask questions of the play, each other, and the images. As the end of the meeting drew near, the whole group was excited by the prospects ahead. With a strong foundation established dramaturgically and collaboratively, the artistic team felt confident and connected. Risa had no expectations of finding solid answers by the end of the day. She encouraged us to let what had transpired over the weekend incubate and allow space for answers to reveal themselves or for new questions to guide us. We made a plan to touch base via Skype the following month.

Ongoing Collaboration

Over the next few months, the artistic team stayed in regular contact via email. Group Skype meetings occurred at least once a month, and Risa collaborated with the designers to set dates for preliminary and final designs. At each point in the process, communication was open and feedback from all designers was encouraged. If any designer was feeling stuck or brought multiple versions of an idea to the table, Risa encouraged everyone's input. The strong foundation of trust forged on the first day of design meetings affected our collaboration for the rest of the process. Because of that trust, I knew that I could be open to the group, throw out ideas that I was unsure about, and we as a group came to rely on the support of one another to create a cohesive design. This dynamic continued past the design phase and into the implementation phase.

By the time that *Stupid Fucking Bird* went into production meetings in the Spring of 2017, most of the design had been finalized. Ron had completed a white card model in November and completed revisions prior to the next Skype meeting on December 20th. Devin had also completed and revised costume sketches by the same meeting. With the scenic and costume designs established by the end of December, I could begin my process earlier than I could with *The Seagull*. When production meetings started in early January, I felt that the

lighting design was ahead of schedule. With the design of the production on pace, production meetings ran smoothly and the designers began collaborating with department heads. The design presentation for *Stupid Fucking Bird* took place during the first rehearsal on February 13th.

Following the designer presentations, the artistic team remained in close contact. We continued to schedule Skype meetings when necessary and followed up with emails to one another. There was a designer run on February 25th. I took that opportunity to notate blocking and earmark any places that I would need to address with lighting. For example, Risa blocked the actors to enter the house. I was prepared to address this in the design because we had previously discussed it in a design meeting, but the run gave me the opportunity to see how far, and at what instant, the actor would travel into the audience aisle. We had also discussed individually highlighting each character for the last scene and the designer run gave me the opportunity to notate their position. Following the run, the designers touched base with Risa and each other about the show generally and in regards to the individual design areas.

Collaboration continued between the artistic team. Sometimes choices we made did not work in rehearsal and each of us worked to resolve those issues while maintaining the integrity of the design. Production meetings continued on a weekly basis with the first day of technical rehearsals occurring on March 16th.

THE DESIGN TEAM

Pros and Cons of Two Teams

Working with two design teams opened the door to numerous creative opportunities and numerous challenges. It was a wonderful opportunity to work with professional directors and designers from across the country. Working with two different teams allowed me to experience different creative processes and communication styles. The most severe example of differing

design process and style occurred between Risa and Gavin. Risa's approach started with the team doing dramaturgical and conceptual research together while Gavin had a more restrained process that involved the team conducting their own dramaturgical and conceptual work separate from one another until much later in the process. I personally preferred Risa's approach to the creation of the world, but that is not to say that either method is innately better than the other. I do think that because Risa was so invested in the initial meetings and binding of the artistic team it had a positive influence throughout the process. I felt more connected to the *Stupid Fucking Bird* design team as a whole. I also feel that the artistic product of *Stupid Fucking Bird* was more polished and cohesive.

Initially, I believed that the *Stupid Fucking Bird* artistic team would have the greater challenge in terms of communication. Most of the artistic team lived out of state and nowhere near one another. Ultimately, this turned out to not be true. The team met frequently via Skype conference and Risa not only made sure to check in with us individually but also inquired as to whether we reached out to our fellow collaborators with updates. Gavin on the other hand operated under the assumption that each design area was doing their job and communicating changes with one another. While there is nothing wrong with this expectation and it is certainly in the realm of realistic expectation that each designer does their job and ensures that they are communicating with one another, those expectations are not always met. I reached out to Gavin with dramaturgical and logistical questions and I maintained communication with Ron on a semi-regular basis but had little contact with the costume designer. At the same time other members of *The Seagull* artistic team rarely reached out to me. Both design teams used Dropbox to post renderings, drawings, collages, and updates. However, for *The Seagull*, that was the main avenue of communication and collaboration between the designers. There were few meetings for

designers to verbally discuss their ideas and designs. I referenced Dropbox for *The Seagull* costume color palette and made an appointment to walk the costume racks. However, that was the extent of my collaboration with the costume designer.

Including Ron in both design teams streamlined not only the repertory scenic design process but my process as well. Using one scenic designer for both shows allowed for Ron to gain an intimate understanding of the Reilly theatre and be able to negotiate where scenic elements could be used for both shows. Using scenic elements in both shows served a conceptual desire and a technical challenge of where scenery would be stored when that show was not running. This was a particular challenge in *The Seagull* where three quarters of the Reilly floor space would be used in the production. Ron's involvement in both shows also streamlined our communication. Because Ron and I were the only two designers working on both productions, we developed a short hand for communication and a stronger collaborative bond.

Ultimately working with both teams taught me valuable lessons about collaboration and communication. First, distance between collaborators does not dictate how successful your communication and collaboration will be, especially now with increasingly reliable technology. Second, be proactive. Reach out early and often. Do not wait for stage managers and directors to schedule meetings or discussions. Third, it is important to trust your fellow designers and work as a team to meet the goal of a conceptually sound and cohesive design.

Undergraduate Assistant Lighting Designer

In mid-January, right in the middle of the design process, an undergraduate student approached me inquiring about the possibility of working as an assistant on both shows. His name was Joe Carleton and he was currently enrolled in the lighting design course I was teaching. We met after class one day and I explained what I expected him to do as an assistant.

Some of these responsibilities included, research for special effects, drafting a portion of the light plot, channeling the plot, attending design meetings when possible and all production meetings. In addition to that he would be expected to attend focus and technical rehearsals for both shows, take notes, and run the changeover. I made it clear that I would work to mentor and train him as an assistant just as I have done with others on professional shows. Joe was thrilled at the opportunity to participate in both shows and accepted the position.

Following this initial meeting I integrated Joe into the design process. I shared with him where I was at in the process of the lighting design and caught him up on where the other designers were in their process. Joe's eagerness to learn was refreshing and I attempted to pull him into the work as much as possible. I also attempted to model professional behavior and industry practices. However, taking on an undergraduate assistant lighting designer with such limited experience was a challenge. He jumped right into the middle of the process and required extensive training which had to occur during a small window of time and on the fly. This placed an even greater demand on my time especially as the shows approached tech and I was increasingly needed in the electrics shop to facilitate the technical execution of the design. Despite this, Joe's participation and contribution were incredibly valuable to both productions and to myself.

CHAPTER 2: ANALYSIS AND RESEARCH

The analysis and research phase of the lighting design process happened concurrently for this project. As Michael Gillette and Michael McNamara suggest, I primarily asked questions the first few weeks after committing to the project. I questioned what period, theatrical style, and location the shows would be in. These questions would be resolved in initial design meetings. I also had questions regarding deadlines, shop labor, and crew support. I looked to Jim Murphy, Professor of Technology at LSU, and the technical director for both productions for answers to those questions. I also requested the lighting fixture inventory for the Reilly from Adam Parboosingh, the Assistant Professor of Theatre in Lighting and Projection Design and the master electrician for the repertory shows. These questions allowed for a basic understanding of what *The Seagull* and *Stupid Fucking Bird* would be conceptually and defined the parameters in which I would have to design.

I continued to ask questions throughout the design process. Questions frequently gave way to more questions which led to more research. Sometimes the research led to a conceivable solution and other times it led back to the drawing board. The first item to receive my attention after the initial questions were answered was the script.

DRAMATURGICAL RESEARCH AND ANALYSIS

I conducted multiple reads of both scripts. On the first read, I read for enjoyment. I took in the story and familiarized myself with the characters. In the subsequent reads, I began to pull apart the script. I looked for connections between characters, the character and their location, and between locations. I also looked for any symbolism within the text or repeated motifs. I analyzed the tempo and rhythm of the script and made notes as to how that might affect how I cue the show. If the script mentioned any historic figure, work or art, literature, or a specific place, I

conducted research on those items. For example, in *The Seagull*, Trigorin mentions Tolstoy and Turgenev's *Fathers and Sons* (Chekhov 27). I researched these authors, their works, and publication dates. I also noted how each was received by the public and the impact their writing had on the culture. In addition to this dramaturgical analysis and research, I also conducted research and analysis that was geared specifically to understanding the world through lighting.

As part of the lighting specific research I took note of the location, time of day, comments about the light made in the stage directions or spoken by the characters, and the general mood of the scene and/or specific moments. I also made note of the page location of those comments. Even if there were no notes on the lighting in the script, I made note of what page a scene started on and wrote personal observations of the scene and recorded the mood. I placed all that information in an Excel document titled "Lighting Breakdown". During this project, I experimented with the form of the document. I created a table, following a format that I had previously used, with the column headings: Scene, Text Reference, Notes/ Ideas/ Mood, and Page. However, I also entered in an "Image" heading and included visual research in the table. The placement of images into the lighting breakdown allowed me to visually track what was happening in the script. I could see the progression of time and visually note interior and exterior scenes. It became a visual shortcut to find the information I needed.

The lighting breakdown is the springboard for visual research. I used the lighting breakdown to guide me as I began to sift through hundreds of images to find those that represented location, time of day, mood, and quality of light. I sorted these images into folders based on act and scene. From there, I went on to create a collage that served as a tool to communicate the conceptual lighting design with the director and the cast during design presentations.

DESIGN CONCEPT

Design Characteristics of Light

Throughout the research and design meeting phase, the production concept is discussed with the director. The production concept or directorial concept is, “the controlling idea, vision, or point of view that the director feels is appropriate for the play” (“Director” 131). The production concept may come solely from the director or may be collaboratively decided upon by the design team during initial meetings. Ultimately, all final conceptual decisions will fall to the director. The production concept will usually detail the style of the show, time period, and location if it is not specified already. In addition to this, the production concept will include the point of view the director has on the play and how that point of view will be communicated visually through the unification of acting, design, and technical execution.

The lighting designer uses the controllable qualities of light to achieve a design that fits within the production concept and accomplish the functions of stage lighting. The controllable qualities of stage light are: distribution, intensity, movement, and color (Gillette and McNamara 7). Distribution refers to the direction from which a light approaches an actor or object, the shape and size of the area of light, and its texture and clarity. The distribution of a light determines the pattern and position of the highlights and shadows cast. Intensity is the actual amount of light striking the actor or the stage, which can be controlled through dimmers and the lighting console as well as fixture, lamp, and color choice. Movement can refer to the actual movement of light onstage through candles, lanterns, follow spots, or automated fixtures. It also refers to the timed duration of a light cue. Finally, color is the color of the light controlled through the selection of lamps and the application of color media.

The controllable qualities of light help accomplish the four primary functions of stage lighting which are: visibility, selective focus, modeling, and mood (Gillette and McNamara 8-10). The most fundamental function of lighting is to illuminate the stage. However, the actors, costumes, and scenery should only be seen by members of the audience as the production design team wants them to be seen. The intensity, direction, and color of a light will affect visibility. While visibility is necessary, the lighting should also function as a visual guide providing selective focus so that the audience is focusing on the most important aspects of that moment. Instinctively the eye will be drawn to the brightest areas on stage. Modeling uses highlight and shadow to reveal form. Distribution is the primary controllable quality of light used to reveal form. The final function of stage lighting is mood. Mood creates the feeling of a moment. It's important that each controllable quality of light is implemented in a way that supports the mood and atmosphere of the production and the design concept. Stunning visual effects and abrupt movement of light should be restrained so that the effects of the lighting design are felt and not seen unless specifically dictated by the script or as part of the conceptual design.

Each of these functions helps to accomplish the five goals of stage lighting which are:

(1) to influence the audience's perception and understanding of what they are seeing; (2) to selectively illuminate the stage; (3) to sculpt, mold and model actors, set pieces, and costumes; (4) to create an atmosphere that is supportive of the play's production concept; and (5) to convey the environmental circumstances of the scene.... (Gillette and McNamara 4)

The quality of the light supports the function of stage lighting, which influences how the goals of the lighting design are achieved.

STUPID FUCKING BIRD

The design concept for *Stupid Fucking Bird* developed organically during design meetings. The team decided that the play would take place in the present day. We discussed

possible options for the geographic location of the play, which was not specified by Aaron Posner. *The Seagull* takes place in rural Russia and Risa wanted to parallel that in *Stupid Fucking Bird*. The play does not have a regional dialect written into the text that might suggest where Aaron Posner envisioned these characters living. Based on the occupations of the characters, the manner in which they speak, and the few details of the location presented in the stage directions, the team settled on rural New York. The style of the production would be presentational, with the design elements enforcing the reality of the characters in the play while also acknowledging the reality of the production of the play itself. As mentioned previously, Aaron Posner makes clear that the characters are “real” people living in the world of the play while also being fully aware that they are in a play (Posner 7). The design style would mimic this representational and presentational relationship with some elements and moments functioning in the more representational or “real” and others highlighting the presentational aspect of the play and the theatre itself.

Armed with this information, the design team dispersed to conduct area specific conceptual research. We met a few weeks later to discuss what we found. I presented my dramaturgical research and the visual images I gathered to the group. The majority of *Stupid Fucking Bird* follows a linear time line. Sometimes the time of day is mentioned in the stage directions, other times the characters reference the time of day or how much time has passed in the dialogue.

There were, however, a few moments that appeared to be slightly removed from the rest of the play which we addressed as an artistic team during design meetings. These moments specifically involved Con. The first is during scene twelve, “Stupid Fucking Bird.” Moments before the end of the scene after Con presents Nina with a dead seagull, Aaron Posner writes the

following in the stage directions, “Perhaps at this moment there is a shift in reality. Lights. Sound. Either abruptly or perhaps slowly creeping in bit by bit...” (Posner 36). In the following moment, Con retreats into himself. The audience witnesses a mental rupture as Con questions why Nina no longer loves him. The second moment occurs during scene twenty-eight, “What Now.” While Aaron Posner does not indicate a shift in the stage directions, this single page scene feels very similar to Con’s break in scene twelve. He is alone, distraught, and desperate. The design team felt that this was another moment where Con’s mental state ruptures. We discussed as group what these scenes may look and sound like. The design team kept using words like “cracked,” “broken,” and “shattered.” I immediately thought of the initial conceptual research that I presented to the group and proposed creating a texture on the ground during these moments to reflect the shapes seen in those initial images. The team was excited by this suggestion, so I began to research what templates could produce such an effect.

Once the conceptual images had been organized into the breakdown and visual collages, I discussed them with Risa. The collage allowed Risa to visualize the color palette and overarching feel of each act while the breakdown allowed for a scene to scene examination of the conceptual lighting design. Once the images were approved, they needed to be analyzed to create a list of the systems of light needed. A system of light is a group of lights with the same purpose which work together to achieve a desired effect – for example afternoon sunlight. The systems needed for *Stupid Fucking Bird* were: warm and cool side texture, front warm and cool fill, side warm and cool fill, top light, Con’s abstract texture, hallway fill, audience aisle accents, warm and cool scenic tree fill, final scene specials, and follow spots. A moving profile system was also added to provide added support where needed. Once the systems of light were detailed, I

revisited the visual research and began to analyze it in terms of the four controllable qualities of light.

Quality of Light

The warm and cool side textures would simulate light falling through trees in an exterior environment during fall. A leaf template would create projected shadows across the stage floor. The warm and cool systems would be opposite one another so that it appeared that the sun was setting and the moon was rising. This would be accomplished through shifting the intensity between the two systems during the cueing process. The warm textured system would also have to function as sunlight through trees around noon time. There were not enough fixtures to hang two separate systems to accomplish this, so one system would have to suffice even though the sun would be in different places in the sky and the color temperature would be different at these times. Because *The Seagull* would also need to use these systems and there was a scenic obstruction upstage that would prevent light from reaching the stage at a low hanging position, a steeper angle was selected. The color of each system needed to be a tint of a warm hue and a tone of a cool hue. A warm tint would shift more amber when dimmed, allowing it to be used for late afternoon scenes. Running the same system at a higher intensity would allow it to be used for early afternoon scenes when the color temperature of the light would be cooler. The cool tone would visually balance out the amber shifted warm and could be intensified to suggest moonlight. Based on those needs, Roscolux (R)305 and Lee (L)201 were selected. I wanted the leaf pattern projected to have a soft edge as the visual research demonstrated organic leaf textures with a soft and diffused edge. The soft edge not only would remain true to the research but it fit the atmosphere of the play and worked with the color selection to create an atmosphere that would not only suggest time of day but also happiness and conflict without being too overt.

Again, keeping in mind the need to reuse these systems in *The Seagull*, which would use twice the stage space, R77797 “Thicket” was selected because there were enough in stock to use for both systems and ordering new templates would prove too costly for the budget to bear.

Side warm and cool fill was used to help model the actor’s body and suggest reflected warm and cool light. The side fill would also be used as key lighting during the interior scenes, where, depending on the time of day, it would suggest sunlight or moonlight entering the house. Because of the dual purpose of these systems, a slightly less saturate warm hue and a more saturate cool hue than those found in the texture systems was desirable. R08 and L200 were chosen. R08 has more red and amber in it with a high transmission rate. When used in conjunction with R305, it would create an environment that suggested midafternoon. This system was placed at a lower angle than the texture system to assist with filling in the shadows created by those systems and to suggest ambient daylight coming through a window for the interior scenes. The L200 could be combined with the L201 to suggest evening or used in conjunction with the R08 to provide a cool fill for the afternoon interior scene. In Act IV, the L200 would be used to provide a cool fill in conjunction with warm key lights to suggest candlelight in the evening.

The front warm and cool systems are necessary to help fill in shadows cast across the actors’ face by the side texture and fill systems. For this reason, the systems were placed downstage of the playing space to illuminate the actors’ face from the viewpoint of the majority of the audience. These systems use a tint of a warm and cool hue to increase visibility but maintain the intended time of day and mood. Based on these requirements R09 and R60 were chosen. The two colors are similar in transmission rate and saturation, which means that they

could also be combined to create white if added visibility is needed or to suggest the bright, cool sunlight of early afternoon.

Top light is necessary to help create separation between actor and scenery. Using a more saturate hue in the top light separates the actor from the background scenic elements or playing space. Adding top light color would help sell the atmosphere and time of day without sacrificing facial visibility when used in conjunction with the other systems. Two top light systems were utilized. A light emitting diode (LED) par system and an incandescent wash system outfitted with a scroller accessory. Specifically using LED pars and scrollers on incandescent fixtures would allow for seamless color transitions and a broader range of color use in the top light systems.

Finally, smaller systems were necessary to achieve special purposes. A system was necessary to suggest a hallway outside the kitchen in Act II. The scene “A Little Cap” would utilize defined squares of light to highlight each character as they presented the audience with the epilogue. Spotlights were to be used during musical interludes and for moments that required the environment to feel moodier. Using spotlights would allow for a more dramatic and dynamic stage picture without sacrificing visibility. The two most crucial show specific systems would be Con’s abstract texture and the warm and cool scenic tree accent. I refer to these as show specific systems because they were only to be used in *Stupid Fucking Bird* while other unique systems would only be used in *The Seagull*.

Con’s abstract texture would have to make the world feel as though Con was cracking open, physically, emotionally, and psychologically. The world around him, especially the character Nina, was a rock that cracked the glass window of his existence. These moments needed to be a big shift away from every other look in the show. Risa and I discussed them being

darker and moodier. I decided to place the texture in a downlight system. This would allow Con to walk through the pattern and for it to be clearly visible on the floor. A spotlight would be used to highlight Con during these scenes so that there was a sense of isolation from the world around him. The system would be “no color” so that it could cut through the color added with the down light system.

In addition to Con’s texture, a system was needed to illuminate the hollow steel tree columns designed by Ron to frame the playing space. The columns were a sculptural representation of trees that would be moveable to create a dynamic playing space. Ron brought in research material of an abstracted box sculpture created by using wine crates. The crates were stacked and sections of material were cut away to suggest branches. Additionally, light sources were placed in the lower section of the crates and illuminated the interior of the sculpture. Risa and I were both inspired by the images. The trees in *Stupid Fucking Bird* would be sculpted from the exterior by the warm and cool texture but we as a design team also discussed lighting them from the interior as pictured in Ron’s research. We decided that a warm and cool fixture installed in the base of the trees would be desirable. The different color temperatures would be necessary primarily to set the tone and atmosphere for the moments they were used. The source would also need to be able to light the full height inside of the trees which were designed as twenty foot tall columns, be dimmable, and able to be hidden from audience view. In addition to these specifications, the source used would need to be wired with small but sturdy cables or be controlled wirelessly so that the trees could easily change position on the stage while minimizing safety concerns of movement and actor traffic paths.

THE SEAGULL

In contrast to the *Stupid Fucking Bird* conceptual development, *The Seagull* lighting concept developed mostly through individual discussions with Gavin and sometimes Ron. The initial design meetings specified the time period as the late 1800s. The play would take place in rural Russia. The style of the production would be heightened realism. The acting and costumes would be realistic with the scenery being more stylized. The lighting would be realistic but there would be no hiding lighting fixtures. Because *The Seagull* has so many references to the theatre, Gavin didn't want to mask any of the elements of the theatre. To expose the theatrical architecture, actors would pick up props from exposed prop tables, lighting fixtures would be seen, and the upstage storage area would also be visible. Much of what is communicated between the characters in the play is found in the subtext. In much the same way, the commentary on theatricality is not overtly stated. The production design would subtly acknowledge the theatre and its workings while the characters mostly remained confined to the world in which Chekhov wrote. In this way, the audience was reminded of their presence in the theatre.

After the initial meeting, the team dispersed and conducted research independently. Each team member shared their research with Gavin separately. In response to Gavin's desire to feature the theatre as part of the design concept, the playing space was extended so that it totaled more than sixty feet in length and reached to the edge of the stage floor of the Reilly Theatre. Ron created a stylized half circle of sheer gauze which produced a hybrid cyclorama and scrim. When it was lit from the front, an opaque surface similar to a cyclorama was produced, but, when lit from behind, it would become transparent, revealing the storage areas upstage.

With this knowledge, I began the conceptual research phase. I gathered images and organized them into a lighting breakdown and collage similar to what was done for *Stupid Fucking Bird*. I presented that information to Gavin. The play is divided into four acts. Each act has a time of day and location listed in the stage directions and the characters also discuss the location, time of day, and weather. Any mention of the lighting, location, time of day, weather, or year was noted in the lighting breakdown.

A few moments did need further clarification. Act IV is inside Sorin's house and there is a storm approaching. In the time period the of play, there is no electricity so candles and/or oil lamps would be used to illuminate the interior. Initially, Gavin desired twenty live flame sources on stage. Further discussion with the John Eddy, Jim Murphy, Ron, and myself led to the conclusion that twenty live flame sources would be unsafe and hard to control. Gavin agreed that a combination of live and electric lantern sources would be acceptable and left it to Ron, John, and myself to present what could be accomplished. I proposed that four of the hand-held oil lamps have an electrical source that could be wirelessly controlled. In addition to these, two more live flame oil lamps were used. Additionally, a large candelabra with real candles would be used upstage during dinner.

Two years pass between Act III and Act IV. Gavin wanted to display the passage of time through lighting while the scene shift was taking place. Gavin offered little direction in terms of what that four years of passing time would look like on stage. I suggested that most of the changes take place on the gauze cyclorama with color and texture changes primarily executed by using the cyc lights, ground row, and profile moving lights installed to light the material. The stage space would be lit in a blue transition light allowing for the focus of the audience to be pulled towards the passage of time visually being represented on the gauze.

In Act I, Konstantin has some special effects occur during his play-within-a-play. They include smoke and “red eyes” that need to appear through the smoke. Also during the play, it is written that will-o-the-wisps appear on the lake. I asked Gavin if he envisioned these effects looking any specific way. He said that he had no specifics in mind, leaving me to define how these effects would occur. In an effort to reflect the reality of the time in the play, I had Joe Carleton research how smoke was produced on stage in the late 1800s and early 1900s. I was also interested in producing red flames in an oil lamp to serve as the “red eyes.” Joe also assisted in researching how to chemically change the color of flame to support this idea. Finally, we both researched the various manifestations of will-o’-the-whisps. We presented our research to Gavin, Ron, and Jim who were supportive of our investigations and encouraged further experimentation on these topics.

Once Gavin approved the conceptual images, they were assessed in terms of the systems needed to execute the show. Because *Stupid Fucking Bird* is an adaptation of *The Seagull* many of the same systems of light were needed. Some conceptual images even appeared in both breakdowns and collages. The systems of light that would be used in both shows, hence- forth the repertory systems, were: warm and cool side texture, front warm and cool fill, side warm and cool fill, top light, and the moving profile system. The moving profile system would be used to provide additional support where needed but would also be used specifically in *The Seagull* to texture the gauze cyc. Additionally, the following systems would be needed: oil lamp support, moon texture, gauze (cyc) light, and a ground row. With the systems detailed. I returned to the conceptual images to analyze them in terms of the controllable qualities of light.

Quality of Light

The repertory systems maintained the same distribution and color but would vary in intensity and movement. *The Seagull* has a slower pace so fewer sweeping changes would be necessary. The intensity of the repertory systems utilized in exterior scenes of Act I and II would be similar to those in the adaptation. Acts III and IV of *The Seagull* are significantly different from their adaptation in *Stupid Fucking Bird* as the adaptation changes the time of day and location of these acts. However, the colors chosen for the side warm and cool fill and the front warm and cool could be used at different intensities to suggest an early morning interior environment for Act III. More intensity in the cool fill system with the warm fill system at a glow would suggest an interior evening for Act IV. In addition to the repertory systems, this act would require a candle support system.

Act IV takes place in the evening with a storm approaching. Thus, the main source of light in the house would be from candles and oil lamps. In addition to having practical lamps, a candle support system was needed. The oil lamps would be carried in and placed on scenery throughout the playing space. Each of those locations would need added illumination from theatrical fixtures to support the dim battery-operated source in the prop oil lamps. Two lights with different value amber gels were used. The colors chosen were R316 and R17. The different values allowed for variations in color based on how the color hues mixed in relation to their distribution and intensity. This allowed for a dynamic composition that would mimic the variations of color found in live flame.

Throughout Act I, there are multiple references to the moon rising above the lake. The lake would be represented with rotating linear templates from the automated profile fixtures projected on the curved gauze panel up center. There were no fixtures available that could

simulate the moon rising from the horizon line, so a slow fade up of intensity from a static position would signify the rising moon. A realistic moon was desired but the steel templates in stock resembled a theatrical, stylized moon. After researching other template options, a black and white glass gobo was selected which would project a more natural representation of the moon.

Finally, a means for lighting the gauze cyclorama was necessary. Because there is a lot of emphasis on the passage of time in Act I and Gavin's vision for the transition from Act III to Act IV was to visualize the passage of time through light, I knew multiple options for how the gauze would be lit would be necessary to create a plethora of dynamic and visually appealing looks. A source placed at an angle from above would be needed to provide a wash of light across the entire length of the fabric. The structure that supported the gauze was only structurally sound enough to support the gauze itself, which meant that the fixtures would need to be hung from the catwalks above. The distance from the gauze in combination with the overall length of the gauze meant that traditional cyc units could not be used. Instead, Source Four ColorSource Ellipsoidal Reflector Spotlights were used. These LED profile sources allowed for more intensity, control, and unlimited color options. In addition to this, the ColorSource units can work with any standard Source Four barrel resulting in more options for distribution angle and hanging location. In addition to these units, a ground row was needed to suggest a horizon line. The Altman Ground Cyc incandescent fixture was chosen and placed two feet upstage of the gauze panel for the entire length of the curved gauze cyc. Because of the sheer nature of the gauze, the units would be seen through the fabric. They were focused at the lower third of the gauze but tipped so that the individual sources of light could not be seen. This allowed for the fixture to light the desired area and keep lamp sources hidden, thus avoiding distracting and painful sources in audience eyes. The fixtures were wired as three separate circuits which meant that three different

colors could be utilized. The three colors selected were R67, L181, and R318. These colors were chosen for their ability to communicate bright day, deep night, and sunset, respectively.

Finally, textures were desired to break up the color gradient and transform the gauze into a dynamic composition. The Robe MMXs were placed downstage of the gauze panels so that their beams, when cross focused, would cover most of the surface area. Stock templates and effects wheels would be manipulated to create leaf textures, moving water, snow, and rolling clouds. The Robe MMX fixture's pan and tilt function allows for movement of the fixture to be controlled from the lighting console. The ability to change the distribution of the light through programming was key in the decision to use the fixtures to light the gauze. The profile unit is also equipped with cyan, magenta, and yellow color flags and a separate color wheel. The color components in the fixture would allow for limitless color mixing.

SPECIAL EFFECTS, PRACTICALS, AND SET MOUNTS

Once the major systems of light had been analyzed for their quality of light, focus shifted to the special effects, practicals, and set mounts required by each show. *Stupid Fucking Bird* needed fixtures permanently mounted in the scenic trees, a practical electrical outlet on the backsplash of the kitchen counter, a running refrigerator with a practical interior light, and removable lighting fixtures mounted to Con's stage. *The Seagull* would require the oil lamps to be practical and a series of special effects to be actor operated during Konstantin's play in Act I. Each element had to satisfy a conceptual need of the show and be safe for the actors to handle.

Stupid Fucking Bird

Scenic Tree

Illuminating the scenic tree units would require three electrical components: a means of control of the source, the source, and the power supply. Many options are available for each of

these components and extensive research was conducted to make the best choices based on conceptual fulfilment, installation requirements, and budget impact.

Wireless control of the source in the trees was the ideal option. It eliminated any cable that could become tangled or damaged from handling and repositioning of the units. The wireless solution would also make the transition between locations more seamless and eliminate the tripping hazard the cabled solution posed. Based on previous experience working with the RC4 Magic wireless DMX dimming units, I knew that it performed well in spaces similar in scale to the Reilly Theatre.

I began researching the specifications of various components of the RC4 wireless system. The RC4 Magic Series 3 DMX2dim and 4dim receivers are capable of direct current input voltage between six and thirty-five volts with a maximum power handling of sixteen amperes. They are also equipped with multiple dimming curves that can be changed with a touch of a button. The transceiver's "omnidirectional antenna works reliably up to 200'... or more inside all types of performance spaces" ("RC4 Magic"). These specifications in conjunction with positive consumer reviews and the high-profile clientele of RC4 Magic made RC4 Magic the right choice.

The next step was to provide the master electrician and the technical director with various price quotes. It became clear that the cost of renting would be only slightly less than the cost of purchase. Therefore, I proposed that the LSU School of Theatre purchase the RC4 wireless dimming starter kit. The starter kit alone would not fulfill the needs of *Stupid Fucking Bird* so an additional 2dim receiver unit would need to be added to the starter package. Every attempt was made to include components that not only satisfied the needs of this show but could also have broad application for future productions. The demand for the use of such technology in

productions has grown as the technology becomes smaller, more reliable, and more robust.

Adding a wireless dimming system to the theatre's inventory would only increase their ability to execute more complex technical effects.

The quotes were submitted and approved. Originally, I anticipated the cost of The RC4 Magic products to come out of the repertory show budget. However, I was informed that they would be purchased out of the lighting department's general budget and not out of the *Stupid Fucking Bird* and *The Seagull* production budget. The repertory budget would be maintained to purchase show specific consumables such as gel, templates, and special effect materials.

With a means of control secured, I began researching possible light sources to outfit the trees. Light emitting diode sources, specifically LED tape, seemed to be the most promising solution. Their low profile could be hidden behind the structural material of the column rendering them out of audience sightline. The LED tape could vertically line the column and provide even illumination from top to bottom. Additional benefits of this lighting source are: low power consumptions, twelve and twenty-four-volt DC input strands commonly available, tape manufactured in various color temperatures, dimmable, and bright, low cost options were available.

The LEDMO SMD2835 was chosen. At just over sixteen feet it would be able to light most of the column evenly and the light output of each LED was fifteen lumens. The strip contained 600 LEDs which gave an overall light output of 9000 lumens. The 9000 lumens would be visible even through stage lights running at a high intensity. The LEDMO SMD2835 was also manufactured in a warm white and cool white color temperature. The LED strip required an input of twelve-volts, which could also be used to power the RC4 receivers, and had a power consumption under five amperes. As a result, both the warm and cool strip could be operated at

full intensity without exceeding the power limits of the RC4 receiver. The cost per sixteen-foot length of tape was just over eleven dollars making it a cost-efficient option.

An order was placed for one warm white and one cool white strip. These units would be placed in one of the tree columns that had already been fabricated by the scene shop and be evaluated in their real-world application. The final batteries had not been selected yet and a smaller twelve-volt battery was used to facilitate the test. The LED tape was controlled through the RC4 wireless system and temporarily mounted to the steel tree construction. The tape dimmed well, was bright enough to read through stage lights, and the color temperature of both units satisfied the conceptual need. The LED tape functioned just as anticipated based on the research. Six warm white and six cool white LEDMO SMD2835 units were purchased as the source of illumination in the scenic trees.

The final component to be purchased to complete the scenic tree lighting concept were the batteries. A twelve-volt battery would be required based on the required voltage of the LED tape. A deep cycle battery would also be required due to the prolonged time the LED tape would be running during the show. Deep cycle batteries are “designed to discharge a small amount of energy over a longer period” (“What”). These batteries are best used in applications that require steady, consistent power. The battery would need to be able to power both strips of LED tape. For the calculations, it was assumed that the tape would be running at full for the two-hour duration of the show. While these circumstances were not likely it would ensure that the battery would have enough amp hours (AH) to power the LED tape at lower levels throughout the show. A battery with more amp hours would also be needed to ensure that the LED could be powered throughout the technical process which would have longer times between recharges.

The LED tape consumes 5A at full intensity. To run both strips of LED tape for two hours a battery with twenty amp hours would be needed. In order to run the tape for four hours a forty amp hour battery would be needed. I used a deep cycle battery calculator through R&J Batteries to assist in calculating cycle life and rate of discharge which added two amps and four amps respectively. Ultimately, a 35AH battery was selected because it would be able to power the LED tape at full for longer than the show duration and it was cheaper than the 55AH batteries. The 35AH batteries could also be locally sourced from a vendor that worked to lower the price from just over a hundred dollars to eighty dollars. Five batteries were purchased for the production as well as a battery charger. This was the final component needed to technically execute the internal lighting of the scenic trees concept.

The Kitchen

Aaron Posner describes Act I and Act III as “some manner of raw, practical, multi-purpose, transparently theatrical playing space” (6). Act II is “imagined to take place in a relatively realistic kitchen with a refrigerator, kitchen sink, ect.” He goes on state that the “intention is that it feel somewhat—or significantly different – from the first and third acts” (Posner 7). In addition to the notes from Aaron Posner, it is written in the stage directions that Con makes himself a smoothie.

As a team, we decided that we would use a running refrigerator and have power run to the counter so that the blender could be plugged into an electrical outlet on the backsplash. A refrigerator and a blender are meant to run on constant power which meant that they would need to be run through a theatrical circuit with a relay dimmer installed or straight from a relay outlet upstage of the midstage black. Because I did not need to control the circuit and an Edison outlet

was located just upstage of the masking, the power for the outlet and the fridge would be run from that relay location.

Con's Stage

In Act I, Con is seen setting up his stage in preparation for his play. During design meetings, Risa asked the team whether we thought Con would have some manner of lighting on his stage. It's written that he "... perhaps controls the lights, plays music, runs things off a computer or something to make it all happen" (Posner 17). The team agreed that he would have some sort of fixture on his stage and perhaps Nina would handle the light, pointing it at the audience, or focus it in a specific way.

Ron brought in some research of type A lamps in cages, like units you might find hanging in a work zone. Because the wireless dimmers were being utilized in the trees, the cage lights would have to be hard wired. Ron and Risa did not think the units needed to be controlled separately, which meant that only one circuit, and therefore one cable, would need to be run to the stage unit. A twofer would be used to provide power to separate sides of Con's stage. Con would then be able to plug the fixtures in to power strips mounted under the stage and they could be controlled by Con or through the lighting console.

The Seagull

Oil Lamps

Four of the oil lamps used in Act IV would contain the RC4 Magic wireless receivers. When the wireless units arrived, I showed them to John, who was working with Ron to acquire the oil lamps. He needed to know the size of the RC4 unit and the battery packs to ensure that all the components required to light the Rosco flicker flame source could fit in the oil reservoir of

the lamps. In addition to ensuring that the units fit in the lamp itself, they would need to be removed every night during changeover for use in *Stupid Fucking Bird*.

Smoke

Konstantin's play has the devil's red eyes appearing through smoke as a special effect concocted by Konstantin. I had Joe conduct the first portion of the research for the smoke effect. I instructed him to find out what smoke effects and pyrotechnics would have looked like in the late 1800s through the turn of the century. He found that smoke effects would have been homemade using a combination of powdered chemicals which would be compressed into a brick shape. When flame was applied, smoke was produced. We researched modern day versions of this product, the theatrical "smoke cookie." We checked numerous vendors and found that, because of the composition of the product, a pyrotechnic license would be required. Because no one at LSU is a certified pyrotechnician and the use of these products meant that the actor would not be able to handle the product, we had to redirect our research.

Joe and I continued to look at the how to produce our own smoke effects. Most of the recipes called for a combination of potassium nitrate and sugar. Smoke bomb construction involves using "3 parts potassium nitrate with 2 parts sugar" in combination with enough water to make a paste (Helmenstine, par. 3). A fuse is inserted into the paste and when the paste dries, the fuse can be lit. While this seemed relatively simple and easily produced at a low cost, Jim and I had concerns about the reliability and safety of the product. We examined the Safety Data Sheet (SDS) of Potassium Nitrate and found that it could "cause skin irritation, cause serious eye irritation, [and] may cause reparatory irritation" (Global Safety Management). Jim and I decided this was not a risk we were willing to take and opted to continue searching for certified, non-toxic, solutions.

Jim located a smoke cartridge from the vendor Theatre Effects. They describe the product as “safe to use; convenient to store; and affordably priced” (“White”). The cartridges come in white as well as various other colors and are available in durations lasting from forty-five seconds to eight minutes. Theatre Effects notes that the product is legal in all fifty states and can be shipped without HazMat fees. They do not provide a Material Safety Data Sheet or Product Specification sheet but they do say that cartridges “contain the only composition for producing safe, non-toxic colored smoke. Unlike the smoke from Flash Powder, this smoke has an acrid odor, but poses no known health or safety hazards when used responsibly” (“White”). Jim and I felt comfortable that the actor would be able to handle the product and that the smoke would pose no harm to the actors and audience members. I decided that this product was worth testing out and had Adam order the ten pack of white, forty-five second duration cartridges for just over twenty-four dollars.

“Red Eyes”

The red eyes are symbolic of the devil’s eyes as Nina says, “There: my mighty enemy, the Devil, appears” and gestures to the two red spots (Chekhov 12). Again, I had Joe consider how this effect might have been produced during this time period. He returned with research that detailed how to change the color of flame using chemical compounds. To turn flame red Strontium Chloride salts are used (“Creating”). Once again, we looked to the Safety Data Sheets to understand the risks of handling the chemical. The SDS sheet states that the chemical could “cause serious eye damage and may cause respiratory irritation” (Fisher Scientific). This information was presented to Jim who thought that if we combined the chemical with the oil of the hurricane lamp then the risk of eye exposure and inhalation would be reduced. He reached

out to the Chemistry department on campus who provided us with a small sample of powder and liquid Strontium Chloride.

When the powder was applied directly to the flame, the flame turned red. However, it would not be safe for the actor to handle the chemical onstage and it would be hard to prevent the substance from spilling. Next, we tried a mixture of half liquid Strontium Chloride and half oil. Unfortunately, only a very dim red flame was produced. We continued to try differing ratios of the chemical and oil and nothing yielded a bright enough flame or vibrant enough red.

I returned to Gavin and Ron with this information and asked if the glass of the hurricane lamp could be red instead of producing a red flame. They both agreed that the important part of the effect was to see two red glowing dots using materials they would have used during the time period so it made no difference whether it was the flame or the glass that was red. I returned to John with this information and collaborated with him on how to use a combination of Modge Podge and food coloring to create a red finish on the glass. I mocked up multiple samples on Plexiglas as pictured in Figure 7. Each sample had a different hue of red and brush application to show to Gavin and Ron. Gavin, Ron, and I preferred the technique pictured on the right. The next step was to apply this technique to the glass of the lamp.



Figure 3. “Red Eyes” Painted Plexiglas samples created by the author. Photograph taken by author.

Will-o'-the-wisp

The final effect needed for *The Seagull* was the will-o'-the-wisp. Joe and I conducted research together after a design meeting. Will-o'-the-wisp is a “flame like phosphorescence caused by gases from decaying plants in marshy areas” (“Will-o'-the-Wisp”). In past time periods, it was also personified as a sprite with a “wisp” of light “who led strangers and travelers astray” (“Will-o'-the-Wisp”). We compiled a document with visual research that included images of the gaseous reaction and the sprite manifestation. The document was presented to Gavin, and I suggested that we try to create small, round, flashes of light in a green and cyan color on the cyc. The effect’s position would be just above the surface of the projected water and have a duration of a few seconds each. With Gavin’s approval, nothing more was needed until the cueing process.

CHAPTER 3: IMPLEMENTATION

The research phase does not have a delineated finish line. However, because shops require plans, drawings, and paperwork to technically execute the design, eventually pencil must meet paper. In terms of lighting design, the pencil transforms into the mouse and the paper a digital page. A drafting packet containing the light plot, section, and plates detailing location and instrumentation of set mounts and practicals is created. Upon completion, it is handed over to the master electrician who hangs the plot, circuits the fixtures, runs focus, and executes the wiring and installation of all set mounts, practicals, and effects.

DRAFTING PACKAGE

With the conceptual research organized and the controllable qualities of light analyzed, it was time to create the drafting packet in Vectorworks. I began by importing the scenic drafting of *The Seagull* and *Stupid Fucking Bird* into a blank Reilly Theatre drawing. I then divided the playing space into areas. There were five areas across and six areas deep. Each area contained a focus point had eight feet of separation stage left and stage right as well as upstage and downstage. Dividing the space in this manner allowed for a full stage coverage while also allowing for isolation in eight-foot sections. These focus points would be the basis for the repertory systems. Any show specific systems received their own separate focus points based on the purpose of the system.

Next, I compared each system's distribution analysis with hanging locations available in the Reilly Theatre. For example, the warm and cool side textures needed to be placed on a steep angle because the gauze cyclorama would block lower hanging positions upstage. It's important to maintain the same distribution in a system so that the lights all work together to reveal the form in a similar way. However, because of the gauze cyclorama some of the texture units in the

systems had to be placed inside the gauze upstage. While these fixtures would create differing highlights and shadows on the body, the upstage area would primarily be used for entrances and exits, thus diminishing the possibility of notice by the audience.

Once I had an idea of the hanging location of each system, I broke those systems down into the individual fixtures used to execute each idea using the photometrics of stage lighting fixtures. A fixture was chosen based on beam angle, its relationship to the throw distance, and the amount of illumination it would provide. Specifically, the units needed to cover their designated focus area with enough overlap to blend between areas but not so much that excessive shuttering was needed. They also had to provide between 100 and 150 foot candles (FC) of illumination. According to Bill Williams, "...acting areas of about 100FC... will allow the 'aging eye' to see good facial detail from a distance of 75 feet (approximately row 20)" ("Lighting Mechanics"). During this phase, switching between the light plot and the section is vital to ensure that each beam is reaching its intended focus and is not being obstructed by scenery or architecture.

As each fixture was selected, it was drawn on the light plot. As a light was plotted I made note of the purpose, color, and template information in the object information palette. This information showed up graphically on the plot and would be exported to Lightwright, a program used to help organize the graphic information from Vectorworks into a spreadsheet. Anne E. McMills describes Lightwright as "a hybrid between a spreadsheet and a database, which has been tailored specifically to lighting design. Information for each light can be easily viewed, edited, and sorted" (37). Lightwright is the industry standard used to produce lighting paperwork in the United States.

When every light had been selected and placed on the drawing I pulled up a dialogue box that provided an instrument count broken down by instrument type. I then cross referenced these numbers with the inventory sheet provided to me by Adam. Different designers may choose to make fixture decisions as they go based on the inventory. I glanced at the inventory sheet and let those numbers incubate while I drafted. Doing so freed me to select the fixture that I needed while I kept in the back of my mind what may need to be changed. I find that this expedited the drafting process as I chose the fixture required and then revised where necessary.

After the repertory systems were plotted, the show specific systems were laid out the following week. The process for determining position and fixture type was the same as the repertory systems. Additionally, I changed the text of the information surrounding each fixture to blue for *Stupid Fucking Bird* and red for *The Seagull*. Visual separation of the systems on the plot would make it easier for the master electrician to locate the show specific systems. This would be useful if there were not enough circuits to give each fixture a dedicated dimmer. If a unit was only used in *The Seagull* that circuit could be swapped during changeover and used in a nearby *Stupid Fucking Bird* dedicated fixture.

With the light plot and section complete, the location and details of the set mounts and practicals were needed. Unfortunately, the final location of the oil lamps, the fixtures used on Con's stage, and the location of the party lights were undecided. Because the set mounts and practicals would be installed later I waited to produce the final plates. In lieu of the drawings I stated in the "Notes" section of the plot that these units were "to be decided" and verbally discussed what these practicals and set mounts were with the master electrician.

HANG

I completed the repertory system portion of the light plot and handed it over to Adam Parboosingh, the master electrician, on February 13. The show specific systems were added in that week and the final plot, minus the set mounts and practicals, was turned in on February 19. The final light plot was not due according to the production calendar until February 27; however, that deadline only allowed for one week to complete the hang and circuit prior to focus. Based on the scale of the two productions and the fact that LSU had not produced shows in repertory in the recent past, I knew that it would take longer to implement the plot. I hoped this unconventional method would alleviate stress on the master electrician and allow for enough time to not only implement the design but train the undergraduate labor in the shop.

The hang consists of placing each fixture in the appropriate lighting position. I spent my graduate assistantship hours in the electrics shop to assist Adam in leading the undergraduate crews that would be implementing the light plot. I accepted a leadership role in the shop but tried to distance myself from completing tasks or making decisions that should be decided by the master electrician. I worked to maintain a professional separation where possible to avoid encroaching on Adam's position. Additionally, maintaining this separation allowed the undergraduate crew to experience a work environment that more accurately represents real world circumstances.

Adam produced cardboards, which are smaller sections of the plot focusing on one specific hanging position. These cardboards are more manageable in size than a full-scale light plot for the technicians hanging the position. The hang of most of the repertory systems was completed by Friday the 17th. The only units remaining were those that hung on the toe rail of the catwalks which required the use of an aerial work platform to reach and were thus more labor

intensive. Also, during this week, we tested some older ground cyc units I hoped to use as part of the ground row for *The Seagull*.

The following week, we were scheduled to complete hang of the repertory systems and the show specific systems. Due to a conflict in scheduling on the production calendar, Adam had to return to the Shaver to load in, focus, and cue the Physical Theatre Showcase, which meant I would be stepping in as master electrician for the week. I produced new cardboards and distributed them to the crew and supervised the team responsible for hanging the remainder of the fixtures on the toe rail. Hang was completed during the first part of the work call on Friday the 24th.

CIRCUIT

In the process of implementing a light plot, once the hang is completed each fixture needs to be assigned a circuit which will provide power to the unit. While the lighting designer usually designs with the overall circuit capacity of the show in mind, they do not designate a circuit number for each fixture. This task falls to the master electrician, who is more familiar with circuit location and cable inventory. It is important to plan which circuits will be assigned to what fixture to ensure that there are enough circuits available to execute the plot as the designer has laid it out. Additionally, circuiting the plot on the drawing prior to execution in the space allows the master electrician to know how much cable will be needed at a position and where multi-cable (Socapex) may be used to expedite the process.

Because hang finished early, the logical next step would be to start circuiting on Friday. I asked Adam if he had circuiting the plot. He had not had a chance to do so as his focus was set on the completion of the Physical Theatre Showcase. I followed up and asked if he would like us to circuit what repertory systems we could on Friday and note the circuits on the cardboards. I

would leave the cardboards in the theatre at the end of the day so he had access to them over the weekend. Adam agreed that forward momentum was most important and approved of the plan. On Friday, we proceeded as discussed and circuited about a quarter of the repertory systems. The cardboards with the circuit numbers noted next to the fixtures was left in the theatre at the end of the day.

We picked up where we left off on Monday. Adam had not created a circuiting plan for the conventional fixtures over the weekend so we continued to note circuit numbers on the cardboards. When the crew was dismissed, I approached Adam and asked if he would be circuiting the plot this week. He was under the impression that I would be circuiting the plot. Faced with a big miscommunication and placed in a situation where I had to balance my position as a graduate student, lighting designer, and professional with Adam's authority as master electrician and faculty member, I offered to circuit the plot even though it was not my responsibility. I did ask that he create a plan for relay power and DMX distribution for the intelligent fixtures and accessories to which he agreed.

I input the circuit numbers noted on the cardboards and circuited the remaining conventional fixtures. Every attempt was made to assign each channel its own circuit. Unfortunately, due to facility limitations it was determined that some circuits would have to be swapped between show specific fixtures during changeovers. Those units were noted on the updated plot. Regrettably, I did not have time to note what lengths of cable were needed at each position and cross reference those numbers with the inventory. A new set of cardboards was printed and distributed to the crew on Tuesday.

By the end of the week, half the plot had been circuited and a significant portion of the cable inventory had been used. I relayed this information to Adam, who asked if we had used all

the Socapex cable as well. Unaware that the Reilly Theatre had a stock of Socapex, I replied that we had not. Adam showed me where they were stored and I made note of their length and the number available on the rack. I revisited the plot over the weekend and made note of where to use Socapex runs.

Circuiting continued the following week. Adam and I led separate crews to divide and conquer the remaining fixtures. In the second half of the week, Adam turned his focus to running relay power and DMX to the intelligent fixtures and accessories. There were not enough extension cords in stock to complete the power runs to the six Robe MMX units. However, because they were fully automated and would not need to be focused, this would not pose a major problem over the weekend when focus was scheduled to take place.

By the end of the day Friday, the conventional fixtures had been circuited and power and DMX had been run to most of the intelligent fixtures. Upon completion of circuiting, it is customary to ring out the light plot. Each lighting fixture is patched at the console and turned on. Any problems with fixtures are addressed with the goal being a fully functional lighting rig that is ready to focus when the designer arrives. We ran out of time to complete this step while the crew was present and Adam had to ring out the rig alone. He made notes of which fixtures were not turning on and we would dedicate the first hour of focus to troubleshooting these problems.

FOCUS

Lighting focus is the time when the lighting designer communicates to the technician focusing conventional fixtures which part of the stage to illuminate, how defined or soft the edge of the pool of light or template pattern is to be and makes the appropriate shutter cuts. Available scenery should be in use so that the designer can achieve the proper focus of fixtures on the first pass. The master electrician is communicating which channel is currently hot to the lighting

designer and coordinates the position of crew members so that the designer is continuously focusing fixtures. One eight-hour day is set aside to complete focus for Swine Palace productions.

During the first hour of focus, Adam worked with crew members to troubleshoot the fixtures that did not work on Friday. I took a few crew members and placed the cut color and templates into their respective frames. Joe was instructed to take one person and lay out focus points. At the end of an hour, a few fixtures were still not working but with over 250 lights to focus with an inexperienced crew I urged that we get started.

I utilize a system-style magic sheet during conventional focus. McMills describes this type of magic sheet as "... laying out channels by system in small boxes across the page. Each box represents the stage as seen from the house, and each displays a different lighting system" (172). The channels are placed in their relative location on stage and a small pictorial representation of a ground plan can be included in the system boxes. Each system has its purpose, color, and texture detailed inside its specific box. While there are many ways for designers to go about focusing a rig, I found that this method of visual organization is easier for me to read, decreases the amount of time I spend referencing paperwork, and increases the amount of time available to focus lights. Additionally, using a magic sheet during focus allows me to be familiar with the layout of systems and the location of each channel on the sheet and in space prior to tech thus allowing me to spend more time cueing and less time referencing the magic sheet.

Undergraduate Labor

The undergraduate crew, trained by Adam, had already attended one focus call earlier in the semester. I met with the crew before they headed upstairs and explained some of my personal

expectations. For example, if they were struggling with a light I wanted them to say “working” and “ready” so that I knew when they needed time to adjust the light and when they were ready to continue working. I also asked them to describe what the following focus terminology meant: pan, tilt, run the barrel, yoke bolt, pan nut, t-handle, and drop gel and template. Starting focus with this brief refresher course helped me establish that everyone was on the same page.

As the crew had only experienced one focus call prior to this one, they moved at an understandably slow pace. They frequently had questions that required extensive step by step explanations and lacked the skills and experience to troubleshoot problems. During the morning call, Joe rotated between running focus and assisting crew members in the catwalks. By noon, a little over a third of the lights had been focused. While fewer lights than I had hoped had been focused, I believed that it was still possible to complete focus by the end of the day.

I repeated the speech I gave to the morning crew to the afternoon crew and we continued focus where we left off. Shortly into the afternoon session, it came time to focus the fixtures hung on the toe rail. Adam, understanding the time constraint coupled with the inexperienced labor, offered to go up in the lift to focus. Joe continued to run focus and Adam pulled a student to assist him with moving the genie across the position. The student who was assisting Adam was initially slow to respond to direction and completed the tasks assigned to them with an irritated demeanor. Three quarters of the way down the position, the student raised their voice and communicated to Adam that they felt they were not learning anything in this position and that being at the focus was a waste of time. Adam offered his response with the same tone and volume as the student. I ultimately had to stop focusing because I could no longer communicate with Joe or the rest of the crew due to the volume of the conversation going on upstage. I approached Adam and the student and told the student that I heard what they were saying. I

asked the student to move to a different lighting position where they would be focusing conventional units in hopes that this position would satisfy the student's desire to have a more active role in the call. This diffused the situation and separated the two individuals. I asked if another crew member would like to volunteer to help move the lift and another student filled the role.

With only one and half hours remaining in the day, it became clear that we would not finish focusing. I asked that we take a break and formed a new plan with Adam and Joe. Adam would continue in the lift, I asked Joe to focus lights with me, and we would train the student on the console to read the light plot and run focus. This plan would allow Joe to gain experience focusing while also increasing productivity. It would also allow the student running the console to take on more responsibility, increase their knowledge, and hopefully increase the pride in their work. With the new plan in place, we pushed through the final hour and a half at an increased pace. At the end of the day, eighty-five percent of the plot had been focused. The remaining units would be focused on Monday during the afternoon call.

Before everyone left for the day, I gathered everyone around and thanked them for their hard work and concentration. I also reminded them of the broader application of their work and that without their efforts the productions could not take place. I hoped to cultivate an environment where these students take ownership of their work and they feel a sense of pride in their individual efforts and in their role as members of a collaborative art.

POWER PROBLEMS

Focus completed on Monday and Adam shifted his attention to finishing the relay distribution to the Robe MMXs on Tuesday. Once the runs were complete, Adam tested the intelligent fixtures. Before he could finish striking the lamps of all six Robe MMX units, a

breaker flipped and power was lost to some of the intelligent fixtures. Adam reset the breakers and began troubleshooting the problem.

The Reilly Theatre is an older space that was converted from an agricultural pavilion to a theatrical venue. As theatrical lighting technology has improved and more relay power and dedicated signal circuits are required, older spaces with infrastructure based on theatrical dimmers to power stage lighting equipment have proven inadequately equipped to serve this technology shift. It is possible to switch out the Silicone Controlled Rectifier (SCR) dimmer modules for Relay modules but the Reilly did not have any in stock and there was no documentation of purchase or location.

In addition to the lack of documentation regarding the modules in the dimmer rack and past dimmer module purchase, the Reilly Theatre lacks documentation of how the electrical outlets were divided into 20 amp circuits. Some of the Edison quad boxes did have a small piece of tape with a number on them which was assumed to correspond with the breaker number in the fuse box. Others had no such indication. Because tech was only two days away, Adam did not have time to evaluate which breaker each Edison outlet was on. It was determined that too many of the Robe MMX units were on the same circuit and exceeding the breaker capacity.

Adam attempted to solve the problem by moving from relay power outlet to relay outlet until he could maintain power and control of the intelligent fixtures. I could not help Adam during this time as I had taken the crew to assist with the installation of set mounts and the cleanup of backstage. This meant that Adam's methods were slowly executed. It also led to frustration and subsequent tries which ended in failure until Thursday, the first day of technical rehearsal for *The Seagull*. A few hours before the technical rehearsal started, the puzzle seemed to be solved. Adam had managed to provide power and maintain control of the intelligent

fixtures for an extended amount of time. Believing the problem to be solved and with a few hours remaining before tech, the units were lamped off and the console shut down.

SPECIAL EFFECTS, PRACTICALS, AND SET MOUNTS

The creation and installation of the special effects, practicals, and set mounts were placed on the backburner during the hang, circuit, and focus of the light plot. That meant that the creation and installation of these elements occurred during the week leading up to their respective technical rehearsals. Because I had accepted more technical responsibilities, I had not had time to go back and produce drawings that detailed the specifications of the practicals and set mounts. The verbal conversations about these additional needs were now a distant memory and Adam had not attended most of the weekly production meetings where we, artistic and technical staff, touched base on the progress of the show. So, while these items were constantly fresh in my mind, Adam had little understanding of what needed to be accomplished in this area.

Oil Lamps

John had purchased hurricane lamps that had an oil reservoir large enough to fit the battery pack and RC4 wireless receiver. We discussed the need to remove the RC4 wireless units after each showing of *The Seagull* so that they could be placed in the scenic trees in *Stupid Fucking Bird*. To satisfy this requirement, he elegantly cut the reservoir in half and purchased tape with the same color and finish to reseal the unit. The tape was cheap and would be easy to remove and replace at the end of every night.

Because the oil lamps were not used until Act IV, Joe and I waited to install the battery packs and RC4 wireless units. If necessary, we thought that they could be installed over a break or notes session during the technical rehearsal process over the weekend. I also hoped that the master electrician would be present at tech and it would be possible for him to complete the

project. However, he did not attend the technical rehearsal and more pressing matters kept arising. I devoted breaks and work sessions to addressing fixture challenges and cue notes. Thus, the oil lamps were not ready to view by the time we arrived at Act IV.

As part of the conceptual design the oil lamps were to give the illusion that they were the primary source of light in the scene. When we arrived at Act IV, I had to tell Gavin that they were not ready. I asked if it would be ok to cue without them, as they provided atmosphere more than illumination, but Gavin was adamant that we see them. I told him I would be able to have them working in ten to fifteen minutes. Stage management called a fifteen-minute break for cast and crew. Joe and I wired, installed the battery packs, and programmed the RC4 receivers for three of the four lanterns. Gavin was ok to proceed with three lanterns and tech resumed. The final lantern would be revisited the following week.

Smoke

The smoke cartridges were ordered in mid-February. When they arrived, Jim, John, and I tested various ways to light the material outside. Initially, we thought that forty-five seconds may be too long for the effect to run. We crushed the cartridge slightly until half of the powder could be emptied into a small aluminum foil test container. We lit the powder directly with a long stem lighter. A plume of smoke rose from the aluminum and burned for only sixteen seconds. It seems that without the container the chemical reaction occurred at an accelerated speed. Following this test, we placed a full cartridge in another small aluminum foil test container. The cartridge is meant to be used as the vessel for the powder with the powder compressed and solidified at the top. When the top of the cartridge was lit, smoke was produced for thirty-five seconds and released in a more controlled manner. Both experiments were filmed and sent to Gavin, who loved the result of both. He left the final artistic choice to me. Jim and I agreed that using the

product in the cartridge produced a more aesthetically pleasing effect and would provide more protection from inhalation and skin contact for the actor handling the product.

After a designer run we tested the smoke in the theatre with Gavin present. John and Jim located a metal pail and filled it with sand. The cartridge was placed directly in the sand and lit. The cartridge burned as it did in the initial tests and Gavin was pleased with the effect. The smoke effect was solidified. A week prior to tech Jim and I worked with the actor who would handle the product during the show. We walked through how to place the cartridge in the sand and how to light the product. We explained that the cartridge would extinguish itself but that it would be hot to the touch immediately following completion. We advised the actor to leave the expended cartridge in the pail and suggested that stage management dispose of them at the end of the night. The remainder of the cartridge packs used to test the effect were given to stage management a week before tech so that the actor could practice the effect during rehearsal.



Figure 4. Comparison of smoke cartridge test. Pictured left is the result of lighting half of the cartridge powder directly. Pictured right is the result of lighting a full, intact cartridge.
Photographs taken by author.

“Red Eyes”

After Gavin’s approval of the technique to be applied to the glass of the oil lamp, the production of the “red eyes” fell low on the priority list. They were not revisited until the week of *The Seagull* tech. The “red eyes” appear in Act I so completing them prior to the start of tech Thursday night was desirable. Adam and I were tied up at the beginning of the week and I was not able to get to them until Wednesday. I had not been scheduled to work in the shop on Wednesdays that semester but had been doing so the last few weeks in to keep the implementation of the design from falling further behind. When I entered the prop shop, Nathan Ynacay, a fellow graduate student contracted to work in the scene shop and prop shop, greeted me. He offered to execute the project. I explained to Nathan the technique and showed him the sample. Nathan was familiar with the technique and had used in previous shows. I felt confident leaving the project with him and was grateful to have a small break before crew view of *The Seagull* that evening.

The following day John brought the “red eye” oil lamps over to the Reilly Theatre in preparation for tech. The glass of the oil lamps looked exactly as the sample and I was pleased with how they read on stage. John and I trained the actor who would be handling the prop on how to remove the glass, light the wick, and adjust the wick height to allow for a larger or smaller flame. I was pleased with the overall effect of the “red eyes” despite the last-minute execution.

Scenic Trees

When the basic steel structure of the scenic trees was constructed I placed a length of warm and cool LED tape vertically along the interior. I wired the battery and the RC4 wireless receivers with insulated disconnect terminals so that the technicians handling the units could quickly, easily, and safely remove the power. The output of the RC4 units required direct wiring

into a positive and negative screw terminal. On the length of wire attached to these terminals, I added a male DC power jack which would allow for safe power removal from the LED tape. Once the system was wired up and the RC4 receiver was programmed at the console, I tested the tape.

The LED tape's color temperature matched what was desired conceptually and dimmed beautifully. One of the trees had a small portion of the wooden "branch" shapes installed. I turned both strands of LED tape on and checked the audience sightlines. The branches were thinner than I had envisioned which exposed one of the strands to audience sight. Seeing the source of illumination would tarnish the aesthetic design and be painful to audience eyes. A new solution for either the warm or cool strand was needed.



Figure 5. Temporary installation of cool LED tape, battery, and RC4 in early construction of scenic trees. Photograph taken by author.

Initially, I moved the warm LED tape into the most downstage side of the base. I turned the tape on and moved around the house checking audience sightlines. Once again, the source could be seen. I would need an entirely new solution. I began investigation of MR16 halogen lamps as we had them in stock for use with the Altman Zip Strips. A 50 watt, 12 volt, MR16 Halogen lamp requires 4 amps of current. The halogen source consumed approximately the same amount of power as the LED tape and thus would deplete the battery in a similar way. I picked up two different kinds of MR16 sockets from the local hardware store and experimented with various mounting methods. The socket was installed in the base using floral wire through mounting holes which was then gaff taped to the base. The halogen lamp has a low profile and when mounted closer to the downstage edge of the base allowed for adequate distribution along the length of the tree and for the source to be hidden from ninety percent of the audience. While this was still not one hundred percent desirable, it was the best solution considering there was little money left in the budget and tech was two weeks away.

Final installation of the electrical components occurred the week of *Stupid Fucking Bird* tech. The cool LED tape was mounted to the most downstage vertical frame member of each tree with the halogen source installed four inches downstage of center of the base. The battery was placed behind the densest section of the branch cut outs and the RC4 unit placed directly next to the battery. The branches did not completely cover some of the batteries. Ron worked with Jim and John to secure small sections of burlap which were successful in obscuring the batteries. Regardless of the changes made in the of implementation the electrical source, the scenic trees successfully resembled their conceptual imagining.

The Kitchen

The installation of the electrical outlet into the kitchen counter backsplash depended on the completion of the scenic construction. The counter was ready for the outlet to be installed a few days prior to tech. However, I devoted much of my time that week to the final installation of the electrical components in the scenic trees. In part because I had not made a set mount drawing and Adam had not attended production meetings, he had little concept of what needed to occur.

When it came time to install the outlet I verbally relayed what I needed the outlet to accomplish and that the power for the outlet would be coming from an upstage Edison outlet thus an Edison plug was needed. Adam worked with Jim to install the Edison Duplex in the kitchen counter. Once complete, it was tested and the cable running power to the outlet along the back of the scenery was dressed.

Con's Stage

After I completed the scenic tree installation, I turned my attention to Con's stage. The power for the cage lights would come from a dimmer located on the upstage wall. A stage pin cable ran from that wall dimmer to the final location of the stage onstage. A twofer was mounted on the underside of the upstage side of the stage with two short stage pin cables running to either side of the unit. Those cables were attached to the underside of the stage using screw mounted cable ties. A power strip was connected to each stage pin cable with the assistance of Edison to stage pin adapters and mounted to the scenery in the same manner. The cage lights then directly plugged into the power strips.

Prior to tech, Ron, Risa, and I played with various locations Con could place the cage lights. Risa also had Con enter with the cage lights to understand the logistical challenges of carrying them in and removing them. Ron and Risa liked the aesthetic quality of the light but

decided that the cage lights were unmanageable and asked if I was ok with trying something else. I also agreed that the cage lights were awkward and suggested that we try the small sections of track lighting that had just been removed from a display cabinet.

Each section consisted of three focusable MR16 lamps mounted to a two-foot length of track. The rigid nature of the unit made it easier for Con to carry in and strike. Also, because the MR16 sources were adjustable, it allowed for more precise illumination of Nina onstage. The only downside was that the MR16 sources would get much hotter than the 60 watt lamps and there was a greater risk of accidental skin encounter with the exposed face of the lamp. I instructed Risa and the actors handling the fixtures on where to place their hands to avoid contact with the sources. A length of black gaff tape on the track was used as a marker of where it was safe to touch. With these precautions in place, the actors tested the units onstage and everyone agreed that these were a more elegant solution.

The following day I installed a longer length of eighteen-gauge wire with an Edison plug to the fixture. Finally, I repaired one of the sockets and checked our lamp stock for replacements. Ultimately, the track lighting was an elegant solution that satisfied the conceptual and logistical needs of the play.

CHAPTER 4: EXECUTION

Ready or not, technical rehearsals will arrive. For the lighting designer, the technical process is when conceptual ideas are executed through cueing. Cueing involves bringing up the intensity of specific fixtures from lighting systems to construct a composition that creates depth, focus, and mood. The movement of automated lighting fixtures and the fade time between each lighting change will also be programmed allowing for the designer to have control over the movement of illumination. The technical process can vary in length, ranging from a few days to more than a month. Even with a longer technical period, the lighting designer must execute their ideas in a finite amount of time, therefore organization is key. *The Seagull* and *Stupid Fucking Bird* each received three days of tech, a final dress, and a preview before opening. Once each show opened it would be up to Patsy, the production stage manager (PSM) for both productions, and Joe to maintain the integrity of the show.

THE SEAGULL

Paper Tech

Tech for *The Seagull* started on Thursday March 9th at 6pm and on Monday the 6th paper tech was held. McMills describes paper tech as “a meeting before tech begins that includes the designers, the director, and the PSM to discuss the placement and coordination of cues” (110). Prior to paper tech I sent Patsy my cue list. The cue list “displays the cue number, what it does, and when it is called” (McMills 223). During paper tech, Shannon and I walked through our cues with Patsy and Gavin.

During this process, I posed a few conceptual questions to Gavin. I listed seven transitions to show passage of time between Act III and IV. I inquired whether Gavin thought that would be enough or too few. He thought that it was a good place to start but ultimately, he

would have to see the transitions with the music and the scenic shift to know. I asked a similar question regarding the will-o-the-wisps and received the same answer, he would have to see it to know. Outside of these specific questions Gavin had little to say, most of which dealt with the order in which the cues would be called during transitions.

Finally, before we adjourned we briefly revisited the weekend tech schedule. Thursday, Friday, and the first portion of the 10-out-of-12 on Saturday (if needed) would be dedicated to teching through the show. If possible two runs would be done on Saturday with the actors in costume for the second run.

Power Problems Return

Tech rehearsal for *The Seagull* began at 6pm on Thursday. Earlier that day, with the power problems related to the movers seemingly resolved, the fixtures were lamped off and the console shut down. I arrived an hour prior to the start of tech to train the light board operator. I entered the commands to lamp on the Robe MMX fixtures from the lighting console. However, as the fourth fixture was lamping on, all but one of the units lost power. In addition to the Robe MMX fixtures losing power the lighting console lost power. I frantically searched for the drawing that contained Adam's hand-written notes concerning the data and power distribution for the intelligent fixtures. I succeeded in locating the documents. Unfortunately, because there were so many changes that had to be made throughout the week, the drawing was no longer up to date. I headed upstairs into the catwalks to trace the relay power runs by hand.

I made notes on the location each relay outlet a Robe MMX fixture was plugged in to but some of the duplex and quad boxes did not have any indication as to what breaker they belonged to in the fuse box. Once I had gathered all the circuit information I headed back down to the deck to go check the fuse box. When I got down to the deck I realized that I did not know where the

fuse box was in the Reilly. Adam was not attending tech and Jim had not yet arrived at the Reilly. I called Jim who told me the breakers were in the dimmer room. He explained where the key to that room could be found. I searched for the key but could not locate it. When Jim arrived a few minutes later we located the key and I relayed all the information I had gathered. He suspected that striking the lamps in quick succession led to a power surge that exceeded the amperage rating of the relay circuit thus tripping the breaker.

With only fifteen minutes to the top of tech we had to work quickly. We moved the console power from one of the quad boxes that powered a MMX fixture to an outlet in the lobby. Jim, having worked in the space for much longer than I, knew that those circuits were wired separately from those in the theatre proper. Running the console power separate from the MMX power would ensure that if a breaker was tripped in the future we would maintain control of the lighting console and could continue with the show if necessary.

Following this we headed to the dimmer room to examine the breakers. It seemed that some of the numbers that had been written on the Edison quad boxes did not correspond to circuit breakers in the fuse box. I noted the breakers that had been tripped and reset them. Even though it was unknown which units were plugged in to what circuits at least we had a partial record of what breakers were used. Once back in the space, I booted up the lighting console and struck each MMX lamp one at a time, allowing substantial time between each lamp strike. Each fixture maintained power and in the few minutes remaining before the start of tech I attempted to provide an abbreviated console training session to the undergraduate board operator.

The Monday following *The Seagull* tech, I explained what happened to Adam and asked that he investigate the problem. Joe converted the hand drawn document into a Vectorworks file that color coded each fixture type with its corresponding power location.

Cueing

Entering the technical process in a frazzled state impacted my ability to focus and communicate during the initial hour. I struggled to clearly speak board syntax and occasionally had to stop the cueing process to assist the board operator in locating tabbed displays on the monitor screen and key locations on the console faceplate. These factors contributed to a slower cueing pace than was desirable.

A few hours into the technical rehearsal both the board operator and myself fell into a rhythm. The speed at which cues were recorded increased and the board operator was also becoming more familiar with the console. Any cues in addition to the original list that were added during the tech rehearsal were recorded by Joe, who was responsible for keeping an up to date cue sheet throughout the process. He was also responsible for keeping track of any work, focus, and cue notes that needed to be addressed on a break or during a note session.

The cuing of Act I went smoothly until the appearance of the will-o'-the-wisp. I utilized two Robe MMX fixtures to create a small, round, soft focus, cyan, area of illumination on the gauze cyc. This adhered to the plan I had previously discussed with Gavin. However, because I had to iris the beam down and added color the intensity of the fixtures was diminished. Both units were at full intensity but were not as bright as either Gavin or myself desired. I opened the iris slightly but no significant improvement in intensity occurred. Since I could not increase visibility of the effect with intensity I added motion. The fixtures would flash on independently of one another for a total of three times and would slightly tilt up the gauze cyc giving the illusion that the effect was rising out of the water. This helped increase the visibility of the effect but Gavin still wanted to see more. Conscious of the short amount of time dedicated to cueing the show, I offered to revisit the effect during a notes session so that we could continue moving

forward. Gavin was fine with this plan and we picked up just after the appearance of the will-o'-the-wisp.

Following the will-o'-the-wisp, the smoke and “red eyes” appear. These effects did not need to be programmed in the console as they would be executed by the actor on stage. The smoke and the “red eyes” were successfully carried out by the actor and read well under stage light. Both effects passed the final test of full integration into the show and achieved their desired purpose.

By Friday night we had reached the end of Act III and the second challenge in the cueing process. As planned, seven different looks were programmed for the scenic transition between Act III and IV. Initially the transitions completed too quickly with the final look establishing half way through the transition. Gavin and I both desired the looks to continue throughout the entirety of the transition. I timed the transition and divided it by seven to establish how long each cue needed to wait before the next look was executed. I programmed the cues to automatically follow one another so that the stage manager only called the initial transition cue. When we ran the transition again the sequence executed as planned. Gavin felt that having the looks execute through the length of the transition was the right idea but desired more looks. It was during this discussion that the stage manager informed us that we were out of time for the evening. I told Gavin that I would program more looks during the morning notes session and we agreed to start with the Act III to IV transition at the top of the day on Saturday.

I added five looks and programmed them to follow one another as I had done previously. We picked up with the transition and Gavin was pleased with the result but said there could be even more looks if time permitted us to return to work on this transition. I asked that we run the

transition once more before moving in to the final act so that I could fine tune the timing of the transitions. With the looks solidified for the moment, we moved into Act IV.

As previously mentioned, the oil lamps were not ready when it came time to cue Act IV. Patsy called a break and Joe and I worked to install and program the lanterns. Once the lanterns were completed we ran the transition into Act IV and continued with the cueing process. The process of cueing the final act was smooth but time consuming as every time a lit lantern changed position on stage so too did the lighting. Ultimately, the time spent to execute this dynamic final scene would be well spent.

Over a week and a half later, we returned to *The Seagull* with final dress rehearsal. Prior to the rehearsal, I attempted to refine the will-o'-the-wisp effect. An increase in the diameter of the pool of light and a drop in the color saturation improved the visibility of the effect. During the run through the effect did read better and appeared more purposeful. Gavin was pleased with the improvement but still wanted more from the effect. I continued to refine the will-o'-the-wisp but any further increase in the diameter of the light made the effect larger than the conceptual research showed, not to mention it was aesthetically displeasing. Ultimately, the dress rehearsal rendition would be the final version.

Despite the few areas mentioned above, the cueing process for *The Seagull* ran relatively smoothly. More communication from Gavin prior to the technical rehearsal and more specific direction would have helped to increase the efficiency of tech. While it was frustrating at some moments to feel without direction, I learned that it is best to make a choice and not feel overwhelmed by the variety of choices available. Even if the choice made is rejected by the director, which can be frustrating, the ability to be flexible and work quickly to create a new option that upholds the integrity of the design is vital, as not every director will be able to tell

you what they desire explicitly. Support from the master electrician could have also eased the process and allowed me to focus solely on executing the design as a designer instead of dividing my focus between design and master electrician tasks. Even with these challenges, the show was teched on schedule with final refinements occurring during the final dress and preview.

Production photographs can be found in Appendix A.

STUPID FUCKING BIRD

Paper Tech

Stupid Fucking Bird began tech the following week on Thursday the 16th. Like *The Seagull*, a paper tech was held on the Monday of tech week. Courtney and I met with Risa and Patsy to walk through our cues. There was more discussion during the paper tech for *Stupid Fucking Bird*; partly because there were double the number of lighting cues, more technical elements and more transitions that needed to be coordinated. In addition to this, Risa was generally more engaged in the entire process. During the paper tech, Courtney played some of the sound cues and we discussed timing and coordination of sound and lighting cues with text and blocking. By the end of paper tech, I felt as though we had developed a deep understanding of the rhythm of the show and had a clear picture of what needed to be accomplished during tech.

Cueing

When Thursday arrived, most of the special effects and electrical needs of the production had been completed. This meant that I could devote the thirty minutes prior to the start of tech to training the spotlight operators and informing Joe of his responsibilities during the *Stupid Fucking Bird* tech.

In larger theatres, it is the master electrician who trains the spotlight operators how to hold the fixture, change color, and how to pan and tilt the unit. Following their training the spotlight operators work with the lighting designer or an assistant lighting designer to practice the operation of the spotlight and to go over vocabulary the designer or the assistant may use when communicating with the operator during tech.

The master electrician once again did not attend tech and the responsibility fell to me. I chose to utilize two 14 degree Source Four Ellipsoidal Reflector Spotlights with irises in the accessory slot as spotlights. These units would be smaller, brighter, and more manageable than the old stock spotlight fixtures that had fallen into disrepair at the Reilly Theatre. I introduced both operators to the fixture and walked them through the process of how to pan and tilt the unit, increase and decrease the diameter of the iris, and drop and remove color. The gels were placed into cardboard frames with holes punched in the top corner. A piece of tie line was threaded through the hole secured in a knot, and then the other end was secured to the lighting position with a clove hitch. The use of a cardboard frame was quieter than the normal metal frame and reduced the amount of heat absorbed by the frame, which allowed the operators to handle them with their hands without the risk of burning their fingers. Additionally, if a cardboard frame were to be liberated from the lighting position and dropped into the house, the risk of injury to an audience member was significantly lower due to the pliable, lightweight nature of the frame.

When I completed the introduction to the fixture, Joe worked with the spotlight operators on their aim, movement, and pickups. He would continue to work with them prior to the beginning of each night of tech and each performance. I had placed the initial spotlight cues in a master cue sheet. Joe would also be responsible for updating the master cue sheet and creating

separate spot cue sheets that he would disseminate to the spot operators so that they could look ahead at their cues.

Once spotlight training was completed, the cueing process began. Because paper tech was so detailed, I could build cues more quickly and the time spent working out timing and rhythm was exponentially decreased. The first night of tech was also the first time we as a design team could see the lit scenic trees under stage light and witness the actors moving them during scene transitions. The internal LED tape read well under stage light, the exterior of the unit took the side texture well, and they were easily manipulated by the actors. Truly a collaborative effort between Risa, Jim, Ron, and myself, the trees proved incredibly successful on stage.

The first challenge to present itself during the cueing was related to Con's stage lights. The units had just been changed to the track lighting a few days earlier, and, now that the stage had power strips mounted underneath, we needed to coordinate how the units would come on and whether Con or I would control them. We decided that they would be turned on through the lighting console but Con, in his fury at the disruption of his play, would switch the power strip off, unplug the units, and storm off with them in hand. This solution was the most aesthetically pleasing and allowed for the fixtures' removal from the scenery to be motivated by the action onstage.

The second challenge that arose during the cueing process was related to the spotlights. Their use as key illumination during some moments was working conceptually and aesthetically except that the pools of light would sometimes shake when an actor was standing still or their movements would be jerky as they moved from location to location. Occasionally an operator would miss a pick up. Joe continued to work with the spotlight operators throughout tech. On the Monday following tech, I lubricated the pan and tilt components of the fixtures to decrease the

amount of effort needed to move the position of the light. I hoped that practice and the improved performance of the fixture would decrease these problems.

The final cueing challenge occurred during scene twenty-seven “A Seagull.”

Conceptually we had discussed transitioning into an interior space with strong cool top light and cool sidelight and front light fill. The use of fixtures with a cooler color temperature served two purposes: first to convey that it was night and second to convey atmosphere and mood. However, it just so happened that most of the second and third act take place at night and utilize the same color palette. Risa was interested in exploring other options for this scene and initially suggested that we look at it in a warm color palette. I quickly programmed a new look and we both agreed that the warm palette did not fit the mood of the scene.

I struggled to create a visually interesting interpretation of the scene without using the cool lights I had intended to use in the scene. I placed Con and Nina in no color spotlights and sculpted the stage using a texture from the moving light and the cool sidelight. I added in color from the LED pars from above and eventually settled on a pale lavender. While this was the best solution so far, it was still not particularly successful aesthetically or atmospherically. Sensing my frustration, Risa called the whole design team over to talk about the moment and how it might translate into the lighting composition. As a team, we liked the spots and sculptural nature of the scene. A few members of the design team thought we should revisit a cool color and didn’t mind that a cool palette dominated the third act. Risa wasn’t sold on returning to blue, but I had one more idea.

I returned to the console and pulled out the LED top light and replaced it with the incandescent scroller system and moved the frame location to no color. This gave the entire scene a sense of starkness and loneliness without utilizing a dominating blue color palette. The

entire team agreed that this was the best solution for the scene and a striking look that differed from anything we had seen before. The transition into this stark look conceptually served the show much better than the previous idea.

Cueing completed on schedule and the first full run of the production occurred on Saturday afternoon. The show ran relatively smoothly considering the size of the show, the number of technical components, and the fact that the stage crew was comprised of undergraduate labor.

We returned to *Stupid Fucking Bird* two days later for final dress. While the spotlight operators had improved exponentially during this run, there were still a few moments where shaking spotlights were particularly noticeable. Again, these mostly occurred when a spotlight was illuminating a stationary actor. It was particularly noticeable during the few scenes when the spotlight had a hard edge focus. I decided to add R119, a diffusion, to these moments. The R119 softened the pool of light and made subtle movements much less noticeable. While Risa and I were sad to lose the theatricality of the hard edge spotlight during those moments, we agreed that softening the edge was the right choice aesthetically based on the experience of our spotlight operators.

The tech process was incredibly smooth even though *Stupid Fucking Bird* had twice the number of lighting cues and a more complex cueing structure. The design team exhibited the same collaborative nature during tech as it had during the design and implementation phase which contributed to a sense of shared accomplishment. Risa's clear vision and direction guided the process from conception to execution and created a unified production. Again, support from the master electrician would have been helpful during the cueing process, but Joe's flexibility and willingness to accept the challenge of the circumstance contributed to a smooth technical

process that adhered to its challenging timeline. Final adjustments to cues were made during the final dress and preview. Production photographs can be found in Appendix B.

CHAPTER 5: THE CHANGEOVER

After both shows completed the technical process, each show had a final dress and preview before opening night. On Monday, March 20, *The Seagull* had final dress and the following night would be the *Stupid Fucking Bird* final dress. This would be the first week for the shows to run in full rotating repertory. The shows would continue to run in rotating repertory until closing night.

The process of switching out the scenery, costumes, sound and lighting between productions is called the changeover. The lighting changeover can include but is not limited to: changing out some or all the gel and templates; swapping circuits; refocusing conventional fixtures; changing out and prepping practicals, set mounts, and atmospherics; and loading in the correct show file on the lighting console. The timeframe of changeovers varies from theatre to theatre and performance schedule to performance schedule.

The changeover between *The Seagull* and *Stupid Fucking Bird* would occur each night after the performance with the following performance occurring the next night. This would be the case throughout the run of the show with one exception; one weekend would contain a matinée of *The Seagull* and an evening performance of *Stupid Fucking Bird*. Therefore, changeover would have to occur during the few hours between each performance.

Knowing that support would be limited and labor scarce, I attempted to simplify the requirements of the changeover through design choices. Specifically, I used the same gel and template color in the repertory systems. In addition, a handful of show-specific fixtures were hung and circuit swapped to eliminate any refocusing between shows. The bulk of the changeover between *The Seagull* and *Stupid Fucking Bird* would be changing, charging, and

installing set mount and practical components. Once that was complete and the circuits swapped, standard pre-show lighting checks would complete the changeover.

TRAINING THE CREW

The changeover is usually lead by the master electrician who details what needs to be changed in what order and assigns crew members to complete tasks. Early in the process, Jim and I decided that it would be a good experience for Joe to lead the changeover. Ideally, the master electrician would have trained Joe on the process of creating a changeover checklist, conducting a channel check, and troubleshooting. However, because the master electrician did not attend either technical rehearsal process, he had little understanding of the changes made to the light plot, the organization of the set mounts and practicals, and what the show-specific conventional focus should look like for each show. It would have therefore been inappropriate for the master electrician to train Joe, so I stepped in to walk him through the changeover process.

Joe created a list of tasks that needed to be completed during changeover. We proofread the list a few times to ensure that nothing was missed. I asked Joe to think about what order tasks needed to be accomplished and if there were any tasks that could be done at the same time. Since the changeover crew was comprised of only Joe and the light board operator, being able to prioritize and multitask would be crucial for a quick and efficient changeover.

The first lighting changeover occurred after the final dress of *The Seagull* on March 20th. Joe explained the changeover checklist to the lighting console operator and they slowly worked through the list together. I supervised and stood by to answer any questions. At the end of the night we evaluated the changeover order and made small adjustments to increase efficiency. The following night they would be responsible for executing changeover without my assistance.

The ability to organize, prioritize, and manage time are all skills that have broader application in the entertainment industry and in many other job fields. Joe's training in and application of these skills in the planning and execution of the lighting changeover was a good way for him to gain professional experience in a low risk environment. His training at Swine Palace provides a good base of knowledge to build upon as he pursues more rigorous professional work.

CHANNEL AND PRACTICAL CHECK

Once the changeover checklist was complete, Joe would need to conduct a channel and practical check. The channel check involves turning on every conventional fixture used in a production to establish that it is in proper working order, has the correct color, and is focused correctly. The practicals are included in the channel check, but a visual inspection of the practical and set mounts ensures that they are safe for the actors and crew handling them. Channel checks are vital to any production but they are especially important in repertory situations where it is necessary to make sure that the correct fixtures are illuminated and still focused in the correct position.

While there are many ways to conduct a channel check, I utilize the magic sheet as a guide as the information is organized in an easy to read format and the channel's focus is laid out on a visual representation of the stage allowing for quick reference. Joe had worked with the magic sheet briefly prior to channel check and became familiar with the layout and organization of information as he continued to work with it. A channel check was necessary after changeover was complete and the following day before performance to guarantee that everything was still in working order.

In addition to the conventional channel check, a moving light check would also be conducted prior to performance. A moving light check mirrors a conventional unit check but requires more components to be checked for proper working order. The Robe MMX fixtures must be turned on, lamped on, and cycle through color wheels and flags, gobo wheels, rotating gobo wheels, and effects wheels. The Chauvet COLORado and the ETC ColorSource Spots must be turned on and cycled through their color range. Once the conventional, practical, and moving light checks are complete, a blackout check must be done. The blackout check allows the board operator and stage manager to certify that no stray light sources are on and that full blackout can be achieved. With this last step complete the lighting rig is ready to be placed in top of show condition.

TROUBLESHOOTING

In a perfect world, the changeover would run smoothly every time. In the world of theatre, however, last-minute repairs, maintenance, and problem-solving are often required. Because Joe and the light board operator would be the only two members on the electrics crew, it was vital that Joe be able to solve common electrical problems. He needed to be able to troubleshoot why a fixture was not turning on, replace lamps, visually check stage pin jumpers for wear, and be able to verify that the cable was correctly wired. He also needed to be able to troubleshoot any problems with the set mounts and practicals and verify that they were safe to be handled by the cast and crew. If there was an intelligent fixture that was behaving erratically, he needed to verify that the data was secure in the unit and that there were no gaps in the data chain. Being able to troubleshoot each of these components is vital to the success of both productions.

Training Joe to not only troubleshoot but anticipate problems began during the technical process of *The Seagull*. If a fixture was not turning on, I began to ask that Joe investigate the

problem. I mentored him through the steps of establishing whether the problem was in the fixture, in the cable, at the circuit, or at the board. When he could identify where the problem occurred, I explained the process for addressing the problem. I supervised him changing a lamp and walked through the process of wiring a stage pin and an Edison jumper cable. I guided him on what degradation of the circuit pig tail would look and smell like and instructed him on how to reference the Lightwright paperwork with the patch on the lighting console to address soft patch problems. As the technical process continued, I felt confident enough in Joe's ability to troubleshoot the conventional rig to step away from helping him directly while remaining present to answer questions.

Because Joe was included in the installation process of the set mounts and practicals, he was already familiar with how they operated and how they were organized. He also gained an intimate understanding of how the units were wired and what to do if a connection was loose during the technical rehearsals of both shows. I trained him on how to use a volt meter. The volt meter would assist him in evaluating the charge status of the batteries used in the oil lamps. With Joe's knowledge of the operation, wiring, and installation of the set mounts and practicals, all that was left was to walk him through the power location for Con's stage and the Kitchen. As we had already discussed proper wiring of stage pin and Edison jumpers, there was nothing left to discuss concerning the set mounts and practicals.

Finally, we discussed what to do if an intelligent fixture was behaving erratically or not responding. I walked him through the data run that connected every intelligent fixture in the rig. We discussed which units were five pin, which were three pin, and where the converter was located. Joe produced a drawing that detailed the data runs as a reference. We walked through the process of verifying the patch on the console with the Lightwright paperwork and checking

that the correct fixture type and mode were selected. If there was a problem that could not be solved because of a cable issue or board programming problem, I asked Joe to call me as the troubleshooting process would become more complex.

With all the bases covered, I stepped back and let Joe lead the troubleshooting process during changeover. I supervised his work the week leading up to opening and was confident in his ability to critically analyze the problem and come up with a solution. I had no doubt in Joe's abilities, but I did emphasize to him that he should call me if he felt a problem was outside of his capabilities or if he felt unsafe for any reason.

CHAPTER 6: REFLECTIONS

Reflection and evaluation is an ongoing process. Gillette and McNamara state, “Evaluation takes place within each step of the design process, and it also occurs when the project is completed” (186). From the initial design meetings through the run of a production, there should be a level of evaluation concerning the conceptual choices made and the way they were executed. The final evaluation should analyze what worked, what didn’t work, and how the lessons learned on the project can be applied to future projects (Gillette and McNamara 186). Allowing time to reflect and evaluate on a completed project increases the designer’s awareness of how they used their tools to execute a conceptual idea. Just as a scientist reflects on the data that will prove or disprove a hypothesis, so too must designers reflect on the success or failure of their conceptual hypothesis and its application. If the hypothesis did not work in this production, perhaps it can be applied and reexamined in a different context. After all, what is lighting design but the fusing of science and art?

Now that *The Seagull* and *Stupid Fucking Bird* have reached their completion, I want to reflect and evaluate the use of the design process and the success and failures of the conceptual lighting design and its execution. I will also address areas of further investigation and look forward at future possibilities in the Reilly Theatre and in the entertainment lighting field.

THE DESIGN PROCESS

The design process detailed by Gillette and McNamara guided my way through both *The Seagull* and *Stupid Fucking Bird*. From the moment I was selected to design both productions, I fully committed to the design challenge and sought to complete the task with integrity. I analyzed the design challenge and conducted research that sought to answer the questions posed by the challenge. Ultimately, more time could have been spent in the research and incubation

phase, but live theatre is always catapulting toward opening night and decisions must be made by the contracted deadlines. The selections made to fulfill the conceptual design were based on the conceptual research with the budget, labor, and time constraints taken into account. When a selected choice did not work, as with the use of two strips of LED tape in the scenic trees, I returned to the research phase and followed through the design process from that step.

The implementation phase faced its own challenges. Ultimately, time and lack of support negatively affected both the technical and conceptual implementation of the design. Time will always be a challenge in theatre but with proper planning and management, frustration and stress can be minimized.

Finally, I believe that evaluation of the work occurred throughout the process. If a choice was not working in the production, a new solution was explored keeping in mind the conceptual goals and the practical constraints of the production timeline. Final evaluation of both productions has given me insight into how the design process was used successfully and where I can improve.

Director Influence on the Design Process

While the design process serves as a guide for each designer, the director influences how the various design processes are combined to create a cohesive design concept. Gavin and Risa had drastically different communication styles and approaches to design meetings. Risa's open communication and emphasis on collaboration throughout the process produced a more cohesive product. *Stupid Fucking Bird* faced fewer challenges and surprises during the implementation and execution of the design due to the extensive communication that occurred during the design process. Gavin's more reserved approach did not nurture the same open environment that occurred during *Stupid Fucking Bird*. While this is not inherently bad, it did result in more

miscommunication and lack of understanding during the implementation and execution phase. I also believe that more frequent design meetings as a collective with Gavin would have produced a greater understanding of the scope of the design, which could have improved the visual cohesion of *The Seagull*.

SUCCESS AND FAILURE OF LIGHTING DESIGN ELEMENTS

After the opening night of both shows, I took some time to reflect on the success and failure of the lighting design elements. Overall, both shows fulfilled the conceptual design established during the design process. The lighting design successfully guided the focus of the audience, created compositions with depth and visual unity, and communicated the time of day, mood, and atmosphere to the audience. Even with the overall success of both projects, some of the lighting ideas were more successful than others, and the same can be said of the special effects, practicals, and set mounts.

There were many successful components in the lighting design. The use of L201 in the side texture combined well with the L200 side fill to suggest evening. The warm (R09) and cool (R60) front light combination worked well and allowed for smooth shifts in color temperature to occur as the time of day and location changed. The mixture and cueing of the L200 and R08 side fills with the R60 front light succeeded in suggesting an interior environment lit by bounce light from the windows.

In addition to how well the color palette selection worked, the design and execution of most of the set mounts, practicals, and special effects were also successful. The scenic trees worked incredibly well in *Stupid Fucking Bird*. The halogen modification fulfilled the conceptual requirement and allowed the source to be hidden from ninety percent of the audiences; a vast sightline improvement. Con's stage lights succeeded in their double purpose as

prop and stage illumination. The dressing of the cable to the kitchen counter and the cable swap between the stage unit and the counter was consistently executed and provided full functionality to the blender required to make Con's smoothie in the scene.

In *The Seagull*, the "red eyes" were successful in providing two dots of red that were symbolic of the devil's eyes in a manner that was period appropriate. The smoke cartridges were eighty percent successful, as there were two performances when the cartridges failed to light. When the cartridges did light, the effect was consistent, safe, and conceptually fitting. With the cartridge hidden from audience sightline, the fact that it was a modern product was irrelevant. What was more important was that the product was safe for the actor, and the audience. Finally, the oil lamps were a successful application of the Rosco Flicker Candles and the RC4 Magic Wireless DMX. Their cueing and integration with live flame elements in the final act provided mood and atmosphere that dramatically shaped form and composition.

While evaluating the successful components of both shows is necessary, it is equally vital to explore and assess the unsuccessful lighting components. As previously mentioned, the overall color palette worked well for both shows, but, given the chance to design these pieces again, I would change the color of the warm side texture. The R305 worked great to suggest late afternoon and dusk. My initial hypothesis and research supported the idea that running this color at a higher intensity in conjunction with the use of R08 in the sidelight would suggest midafternoon. Unfortunately, the R305 cuts the transmission of blue and green wavelengths and allows for higher transmission of lavender, even running the color at full intensity on a 575W Source Four ERS does not cause the color to shift more toward amber. Instead, it simply increases the vibrancy of the hue. I had hoped that additively mixing R08 with R305 would minimize some of the saturation of the R305. Ultimately, the R08 sidelight had to be cued at a

much higher intensity than the R305 texture to decrease the influence of the R305 on the color palette. The R305 was too saturate to suggest midafternoon, so, because of the color choice, I had to settle with a less present foliage texture on the ground.

If I had an opportunity to change my decision, I would try R302 in the sidelight texture. It is much less saturate and has a higher transmission rate of blue and green wavelength, which shifts the color more toward amber while retaining a warm softness from the high transmission of lavender and dark blue. Ultimately, using one system of light to try and satisfy what conceptually are two very different looks will always lead to a compromise. In a perfect world, void of inventory, circuit and space restrictions, I would use two systems to accomplish these differing conceptual ideas.

In *The Seagull*, the execution of the will-o'-the-wisp fell short. The effect, while readable and purposeful in cueing, seemed out of place and messy in context. Much of the challenge I faced in executing the effect had to do with the tools implemented. The Robe MMX has an effect wheel that can be applied to give movement to clouds or to produce water. I had hoped to be able to manipulate the parameters of the stock effects to produce new effects, but I was unable to manipulate the stock effects. Joe and I read the manual and searched for tips online but found no information on this subject. At this stage of the process and with no other options available to produce movement in the will-o'-the-wisp, I had to use the Robes. If I were to approach this challenge again, I would spend ample time before tech examining the parameters of the moving light and the way it interfaces with the ETC Element console.

Evaluation of the successes and challenges of the conceptual design and execution of each production allows me to refine my use of the tools of the lighting designer. With each production evaluation, I gain understanding of how distribution, color, intensity and movement

can be combined to accomplish conceptual ideas, influence audience perception, and create visual compositions. Each production evaluation also increases my understanding of color theory and usage. Every production is a living, breathing, learning experience that is ultimately never finished, just opened.

FURTHER INVESTIGATION

As with most any project, there is always room for further investigation. Looking forward, I hope to further investigate the ETC Eos family lighting consoles and how moving lights might be implemented in the Reilly for future productions.

The ETC Eos family includes the Element, which was used to program *The Seagull* and *Stupid Fucking Bird*, and the Ion, which resides in The Shaver Theatre. I've worked with both consoles extensively but still feel as though I have barely scratched the surface of their functionality. In future productions, I hope to make use of the magic sheet display which allows for a digital representation of the lighting rig in a customizable layout. With this display, color palette and group information can be stored and light fixtures can be controlled directly through the monitor. From here, I hope to gain experience on the Eos model as I work in more advanced and rigorous professional settings.

I also hope to further investigate how various automated fixtures interface with the Eos family consoles. More knowledge in this area could provide helpful information in regards to how to adjust preprogrammed effects, such as those in the Robe MMX units. Finally, I hope to expand my knowledge of OSC controlled networks that would allow the lighting console and various other technologies of show control to speak to one another to increase accuracy in cue execution.

Moving away from the console and out into the theatrical space, further investigation of the relay power layout and capacity is required for continued work in the Reilly Theatre. As technology continues to advance, moving lights, LED fixtures, and intelligent accessories are becoming more affordable and reliable. Intelligent and automated fixtures are now commonplace in theatrical productions. As the LSU inventory grows, there will be a growing demand placed on the building to provide the power necessary to use these fixtures. Documentation of which Edison outlet corresponds to what circuit breaker will be needed to ensure power draw does not exceed the twenty amp maximum. It would also be useful to investigate purchasing relay modules for the ETC Sensor dimmer racks. These modules could replace the SCR dimmer module for a specified circuit and provide more localized relay power. Once these options are exhausted, the power capabilities of the building will need to be evaluated and possible renovation may be needed to keep up with the growing demands of intelligent lighting fixtures.

MOVING FORWARD

Where do we go from here? Moving forward, the production time line, student labor, and faculty/staff support for Swine Palace productions should be reevaluated for effectiveness. I have previously addressed the electrical modifications to the Reilly that may be needed depending on future moving light inventory expansion and integration, but I would also like to take a moment to examine the direction lighting technology is moving in a broader sense.

Schedule, Student Labor, Faculty/Staff Support

Future Swine Palace productions should revisit schedule, student labor, and faculty/staff support as they plan their season. While it is impossible to foresee all challenges that will arise during a production process, some are avoidable. For example, the doubling of the master electrician as the lighting designer for the Physical Theatre Showcase which took place in the

middle of the implementation phase was an avoidable problem. If moving the Physical Theatre Showcase was out of the question, then perhaps an advanced student designer could have taken on the role. If that was also not an option, then hiring a guest designer or master electrician could have been explored. Even though this conflict lasted only a week, the repercussions of the master electrician's absence from the project were felt until both productions opened.

Further, if the schedule proves to be set in stone and faculty/staff support must be drawn away from a project, adequate student labor should be available to cover the gap. While I served as the student labor to fill the gap on this project, I was given the assignment at the last minute. When this assignment was handed to me, it required me to step away from my responsibilities as a designer to fulfill the technical needs of the productions usually handled by the master electrician. This would be a role I would have to continue to step into throughout the implementation and execution phase of the process due to lack of support from the faculty member fulfilling that position.

Every effort should be made to present the opportunity to other students with advanced training with as much notice as possible. Offering the opportunity to other students will increase their practical experience and avoid overworking students who already have an assignment on a show. Preparing ahead of time for these challenges will also avoid potential power struggles between the person who temporarily fills the position and the assigned crew head. Not to mention prior planning would increase efficiency and ownership.

As mentioned before, it will always be impossible to foresee all the challenges that will arise but eliminating as many avoidable conflicts as possible will make for a smoother, less stressful, and more efficient production process.

Where Will Technology Go?

Modern lighting technology has been evolving since its electrical debut at the turn of the twentieth century. The only difference is the rate of change. Lighting technology has changed dramatically and rapidly during the last twenty years. Richard Cadena notes that “today’s automated lighting fixtures are less than half the size and weight – with more than twice as much light output – of an equivalent fixture of 20 years ago” (“Automated Lighting” 6). Not only are the fixtures increasing in efficiency but they are dropping in cost. Cadena states, “Today, you can buy an automated lighting fixture for less than half the price (adjusted for inflation), with more than twice the light output, and with many more features than you could in the late 1980s and 1990s” (“Automated Lighting” 6). With the increase in fixture functionality and the drop in cost, automated fixtures are quickly being added to theatrical inventories.

In addition to automated fixtures, the use of projectors and LEDs with pixel mapping software have revolutionized image projection. Again, Cadena reflects that “Today, the vast majority of medium – to large-scale productions, and even some smaller productions, have some element of video and make extensive use of media servers” (“Automated Lighting” 4). He goes on to state that LEDs and the use of pixel mapping software have made digital video content available for even small-scale productions (“Automated Lighting” 4). The use of digital media via projection and/or pixel mapping has created infinite possibilities for the way that video content is projected and manipulated in an entertainment environment, and, with cost low and product value high, even venues with limited budgets can afford to play.

The addition of projection and video content has also altered the way that automated fixtures are used in entertainment settings. Prior to projectors and video displays, automated fixtures were used to project image patterns and produce movement. Projectors and video

displays have now assumed that role and allow for infinite possibilities in content projection without being limited to templates in a gobo wheel. When media is incorporated into a production this frequently means that the role of the automated fixture must shift. Cadena notes that automated fixtures “can be used for beam projections, color wash, lighting a subject, or subjects, or to supplement the projection of patterns or images” (“Automated Lighting” 4). He goes on to discuss how the use of these fixtures must work in conjunction with the video content and not wash out or undermine the image. Video technology’s rapid increase in reliability and decrease in cost has made it more conceivable and desirable for use in all entertainment settings.

While these advances appear overwhelmingly positive, there is one major downside. Some entertainment venues are unable to support the use of this technology electrically. Some buildings (and budgets) have a limited number of relay sources to power these fixtures. Manufacturers have noticed the complaints from consumers and are working on solving this problem. ETC’s Source 4WRD is a non-destructive LED retrofit for the Source Four ellipsoidal. The retrofit allows for the conversion of “any full-size, tungsten Source Four ellipsoidal to LED efficiency in seconds...” (“Source 4WRD LED”). Not only does the LED retrofit increase electrical efficiency and produce as much light output as a 575W long life HPL lamp but it is also AC line dimmable. AC dimming allows theatres to upgrade to a more efficient LED source that can be used with existing conventional accessories such as gel and templates. More importantly, it allows theatres to upgrade to an LED source that can be used with standard theatrical dimmers (“Source 4WRD Installation”). No relay power is necessary! While the ETC retrofit only applies to a conventional, not automated lighting fixture, it allows theatres to begin making steps towards more advanced technology without breaking the bank or blowing a fuse.

Where exactly lighting technology will go from here is hard to say. The possibilities are infinite. Cadena notes that automated lighting “has continued to gain acceptance in every area of the industry, including areas that were initially resistant like theatre production, television production, houses of worship, corporate events, architectural installations and more” (“Automated Lighting”). The expansion of automated light technology and media servers has infiltrated almost every venue of entertainment, and, while it may not be clear where the technology will go from here, it is clear that it is here to stay.

CONCLUSION

No design process will ever be perfect, and I would argue that no show will ever be entirely complete by opening night, but that is the beauty of theatre. The design and implementation of *The Seagull* and *Stupid Fucking Bird* at Swine Palace Theatre was a period of exciting academic and professional growth, but it was not without growing pains. Ultimately, I believe that producing these shows in repertory was a valuable learning experience for me, for the faculty and staff of LSU and Swine Palace, and for the undergraduate students who cut their first repertory teeth on these shows. The experience included first class collaboration amongst faculty, professional guest artists, and students. Students were also able to witness how artistic and technical teams work together to solve production challenges while those in leadership positions were offered the opportunity to mentor up and coming theatrical professionals. This repertory training is indispensable for many of the undergraduate students who will go on to work in high stakes, demanding, repertory summer stock positions. Experiencing profession theatrical repertory while in an academic setting provides them training that will assist them as they make the next leap toward a professional career.

Personally, this experience was an invaluable look at the way professional theatre runs inside of an academic institution. While every effort to adhere to professional standards and timelines is made, it is important to not lose sight of the fact that these crews are comprised of individuals who are still in training. A delicate balance must be struck between production schedule, quality, and student training and expectations. This also applies to professional theatre productions, which employ a wide range of individuals with varied backgrounds and training. As I move forward in my theatrical career, I will hold this lesson dear and hope to cultivate an environment that respectfully balances high professional expectations with growth, risk, and opportunities for excellence.

REFERENCES

- “Automated Lighting in the Third Millennium.” *Automated Lighting: The Art and Science of Moving Light in Theatre, Live Performance and Entertainment*, by Richard Cadena, 2nd ed., Taylor & Francis, 2012, pp. 3–7, [www.sciencedirect-com.libezp.lib.lsu.edu/science/book/9780240812229](http://www.sciencedirect.com.libezp.lib.lsu.edu/science/book/9780240812229).
- Brainin, Risa. “Stupid F***King Bird Design Meeting.” Message to author. 10 Aug. 2016. Email.
- Cameron-Webb, Gavin. “THE SEAGULL.” Message to author. 12 Aug. 2016. Email.
- Chekhov, Anton. *The Seagull: A Comedy in Four Acts*. Translated by Ryan McKittrick and Julia Smeliansky, 2016. In the authors’ possession.
- “Creating Flame Colors.” *Science Company*, www.sciencecompany.com/Creating-Flame-Colors.aspx.
- Cursive. “Art Is Hard.” *The Ugly Organ*. Saddle Creek, 2003.
- “The Director and The Producer.” *Theatre: the Lively Art*, by Edwin Wilson and Alvin Goldfarb, 9th ed., McGraw-Hill Education, 2016, pp. 127–147.
- Fileman, Debra. “Brandeis Theater Company Swoops in with ‘The Seagull.’” *Brandeis NOW*, 1 Oct. 2013, www.brandeis.edu/now/2013/october/seagull.html.
- Fisher Scientific. “Safety Data Sheet Strontium Chloride, Anhydrous.” *Thermo Fisher Scientific*, 7 May 2010, www.fishersci.com/msdsproxy%3FproductName%3DAC369740050%26productDescription%3DSTRONTIUM%2BCHLORIDE%252C%2BANHY%2B5GR%26catNo%3DAC36974-0050%26vendorId%3DVN00032119%26storeId%3D10652.
- Gillette, J. Michael, and Michael J. McNamara. *Designing with Light: an Introduction to Stage Lighting*. 6th ed., McGraw-Hill Companies, 2014.
- Global Safety Management. “Safety Data Sheet Potassium Nitrate, Reagent.” *Fisher Scientific*, 29 Dec. 2014, beta-static.fishersci.com/content/dam/fishersci/en_US/documents/programs/education/regulatory-documents/sds/chemicals/chemicals-p/S25494.pdf.
- Hein, Jeppe. “Mirror Labyrinth Kraus Residence.” *Jeppe Hein*, 2008, New York, USA, www.jeppehein.net/pages/project_id.php?path=publics&id=164.
- Helmenstine, Anne Marie. “Safe No Cook Smoke Bomb Instructions.” *ThoughtCo.*, 8 Mar. 2017, www.thoughtco.com/safe-no-cook-smoke-bomb-instructions-609162.

- Johansson, Erik. "Impact, 2016." *Erik Johansson Surreal Photography*, 5 Apr. 2016, www.erikjohanssonphoto.com/impact.
- "Lighting Mechanics." *Stage Lighting Design 101*, by Bill Williams, 2nd ed., Bill Williams and Associates, 2012, billwilliams.ca/resources/sld/sld-600.htm.
- McMills, Anne E. *The Assistant Lighting Designer's Toolkit*. Focal Press, 2014.
- Posner, Aaron. *Stupid Fucking Bird*. Dramatists Play Service Inc., 2016.
- "RC4Magic S3 2.4SX DMXio-HG Data Transceiver with External Antenna." *RC4 Wireless*, www.theatrewireless.com/shop/rc4magic-s3/dmxio-hg-ext-ant/.
- "Source 4WRD HPL to LED Retrofit Installation and User Manual." Electronic Theatre Controls, July 2017.
- "Source 4WRD LED." *ETC Connect*, www.etcconnect.com/S4WRD/.
- Tran, Diep. "Aaron Posner Reimagines Chekhov in 'Stupid F-King Bird'." *American Theatre*, Theatre Communications Group, 5 June 2014, www.americantheatre.org/2014/06/05/aaron-posners-reimagines-chekhov-in-stupid-f-king-bird-2/.
- "What Is a Deep Cycle Battery?" *Marine Battery Guy*, 7 Mar. 2017, marinebatteryguy.com/deep-cycle-battery/.
- "White & Colored Smoke Cartridges." *Theatre Effects*, www.theatrefx.com/moreinfo-cs102-smoke-cartridges.html.
- "Will-o'-the-Wisp." *Merriam-Webster*, www.merriam-webster.com/dictionary/will-o'-the-wisp.

APPENDIX A:
***THE SEAGULL* PRODUCTION PHOTOGRAPHY BY**
CHELSEA TOUCHET



Act I



Act II



Act III



Act IV

APPENDIX B:
***STUPID FUCKING BIRD* PRODUCTION PHOTOGRAPHY BY**
CHELSEA TOUCHET



Act I "1. Disappointing"



Act II "15. What Could Be Harder...?"



Act III "27. A Seagull"



Act III "28. What Now?"



Act III "29. A Little Cap"

VITA

Chelsea Touchet was born in Houston, Texas in 1988. She received a Bachelor of Science in Theatre Design and Technology with a minor in Pre-Professional Social Work from the University of Evansville in May 2011. Before entering Louisiana State University, she worked as a freelance lighting designer and technician. Chelsea has been the festival lighting designer for Texas Shakespeare Festival, lighting designer for *Beatrice et Benedict* with LSU Opera, festival master electrician for Utah Festival Opera and Musical Theatre, and assistant projection designer for *The Laramie Project* at Ford's Theatre. She was also a contributing faculty member at Santa Fe University of Art and Design (SFUAD). It was her work teaching at SFUAD that inspired her to pursue a Master of Fine Arts in Theatre. In the future, Chelsea hopes to train and inspire the next generation of theatre professionals.