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LUMENS

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF FINE ARTS
IMAGING ARTS/COMPUTER ANIMATION

SCHOOL OF FILM AND ANIMATION
COLLEGE OF IMAGING ARTS AND SCIENCES

ROCHESTER INSTITUTE OF TECHNOLOGY
ROCHESTER, NEW YORK

December 2018

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Abstract

This paper is about the process and creation of my final MFA thesis assignment, a 5 minute and 30 second short animated film titled “*Lumens*”. This film was primarily animated in 3D and created over the course of two semesters. *Lumens* is about the journey of an unnamed heroine hunting a creature that swallowed the sun, bringing perpetual darkness into the world. As the heroine travels the dark landscape, she lights up old forgotten lampposts, bringing light back into the world. In the end, the heroine is unable to complete her task and dies in the end, failing to reach her ultimate goal. However, although the heroine had failed, her journey succeeded in bringing light back into the world.

The film is a culmination of skills that I’ve learned as a student at RIT, exploring new methods and technical knowledge on my own and pushing what I could do with the format of digital animation. One of the goals that I set for myself was embracing as many tools as I could to create a project that would help me push myself as a filmmaker. Another major goal I wanted to accomplish was to create a film that would stand out in contrast to the other two I had made previously as a student at RIT, “ILLUSION” and “PRIORITY”, by trying to produce a more experimental film instead of the more narrative driven ones.

The film’s main character and environments were created and animated in Autodesk Maya, while most of the textures were painted digitally in Photoshop and then composed together in After Effects. The sound and music was developed to create a sense of somber reflection and to highlight the loneliness of the Heroine as she travels the barren landscape.

Just like the theme of failure of the film, I do not believe that I reached most of the goals that I had originally set out to accomplish. As time began to run out, I had to abandon the idea of creating an experimental film and embraced a narrative driven story. I had also failed to use a lot of techniques I had learned and tweaked such as the dynamically driven hair and had to remove certain shots to ensure that I could complete the film on time. However, even as I look past all my failures I do see myself growing as a filmmaker as I set out to the next stage of my career as an artist.

Introduction

Lumens is a 5 minute and 30 seconds short animated film comprised of a 3D character and 3D backgrounds. When I came up with the story of *Lumens* as an assignment for a Preproduction course, it was to explore the idea of a character living in a world that is pitch black as he/she explores the world hidden behind the darkness.

Filmmaking is just one way that an artist can tell a story, and for me, animation specifically, allows me to tell a compelling story without the assistance of others, which is the case in live action films. To be able to tell a story on my own allows me the freedom to tell my stories, in any way that I wish to tell them. However, it is not enough to just come up with a story, something that anyone can do, but to use technical skills to bring stories to life and by crafting the story and its characters to enhance its quality and hopefully bring something special to life.

Lumens was a story that I wanted to tell, not so much because of its theme about failure or because of its technical challenges, but because I personally find the absence of light as a beautiful aesthetic that I felt is underrepresented in animated films. In the world of animation, brightly colored and fully lit scenes are the norm, and there is almost a determination to avoid the pure absence of light. When I decided to go with the story of *Lumens* for my thesis, I hoped to create something for myself, a film that would explore the beauty found in the contrasting nature of light and dark, and the mystery found hidden in the night.

The central theme of this film is about failure and its unexpected consequences. Although in the end the heroine fails to complete her goal to hunt down the monster, in her

journeys she brings light back into her world, a consequence that she never intended. This intrinsic nature of failure became an integral part in the making of this film.

Preproduction

Story Development

The Birth of Lumens

The first version of the story "Lumens" was created for one of my first assignments at RIT for the Pre-Production class by Alex Montoya, which was based on some older ideas I personally had for several projects that took place in a world where the sun had ceased to exist. This first incarnation of the story was only meant to be used as a template for the rest of the assignments for the class and although I found the concept interesting, I was not sure if it would be an idea that was worth exploring for a larger project.

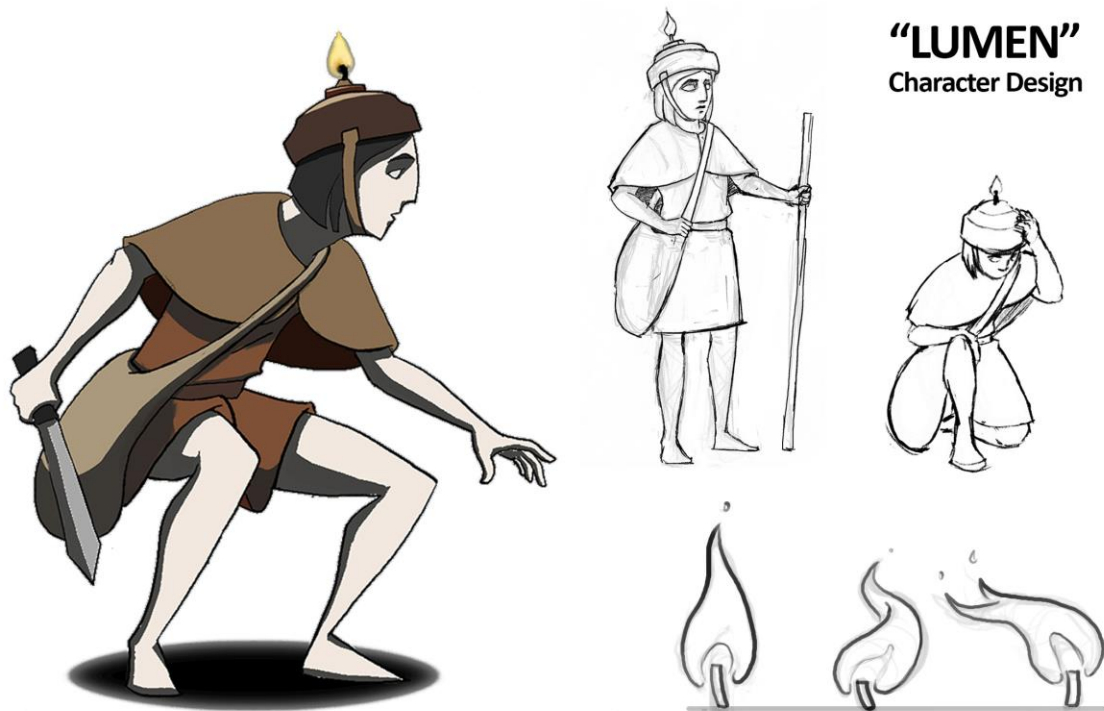


Figure 1 Original design of Lumen

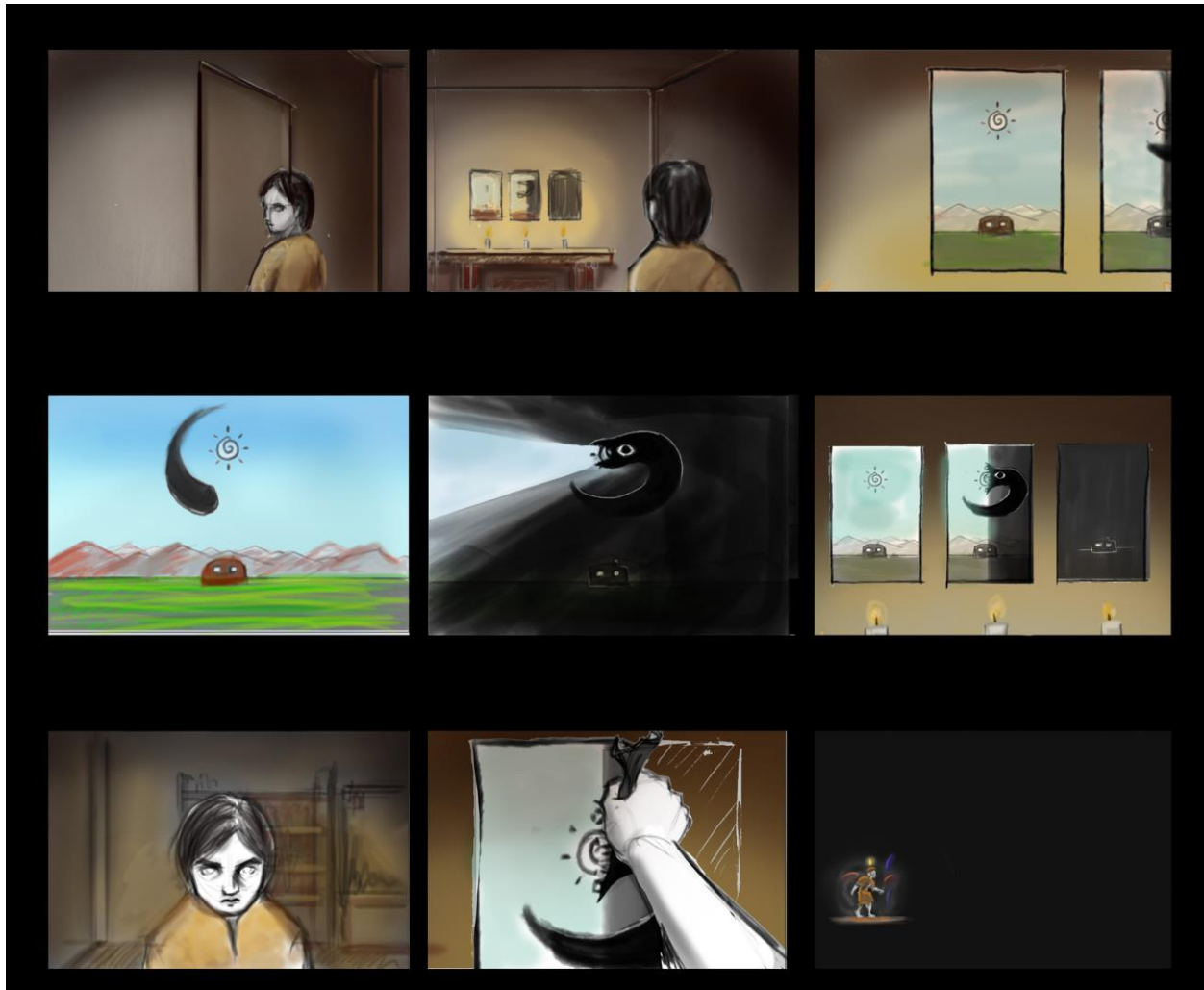


Figure 2 First Color Script of Lumens

However, as I kept working on the various design concepts and storyboards, I wondered if this would be a good story to animate in a future project for the completion of an assignment at RIT, or even as a personal project. By the end of the class, I decided that I would try to pursue other stories to animate in any future projects, unless the right assignment would allow me to fully explore the world of 'Lumens'.

The second time that I brought up this story as a basis for an assignment was for the *Animation Workshop* class during my second year at RIT. The year before, our class had been told that the Animation Workshop class should be ideally be used to push ourselves as

animators, so that we could better understand our limits while trying to complete a large project within the timeframe of one semester. For this assignment I felt that "Lumens" was an idea that would be adequate for this project, so I chose it as one of my pitches along with the story of "Priority", an epic science fiction short film about a team rising their lives to deliver a package in a hostile world. I personally felt that "Lumens" was a much simpler and interesting story compared to "Priority", but after talking to my instructor, he warned me that Lumens was in fact far more complex to develop and would be quite difficult to complete, compared to my other story.

When it became time to decide on what film I wanted to animate for my thesis project, I felt that "Lumens" would be a great way to compliment my two other films at RIT, not only because it was different, but because I wanted it to be work on a more experimental film compared to the more narrative driven ones I had previously made. The possibilities of using light as a storytelling element also made Lumens an appealing choice for this project. Although I had explored other ideas as potential concepts for my thesis, I loved the world of Lumens and felt that I had a pretty close idea on how I wanted to tell it.

The Story of Lumens

At the beginning of any story I create, I always begin with a rough idea, a theme or set up, and in this case, it was a world without a sun. The next step for me is almost always to come up with the ending, which was the Hero character failing the task of bringing light back into the world. After having an interesting image of what the ending would look like, I began to develop the rest of the story, while still allowing the ending to change but only if I felt that it would an

improved the overall plot. As I began to develop the version of the story I would use for my thesis, I made a personal decision to focus on a more visual experience instead of pure narrative, which is what I was mostly comfortable with. While trying to work on a more experimental film, I felt that a story that lacked any concrete details would allow me to explore the visuals of the story better, which was the complete opposite of what I personally preferred doing, to allow story dictate the visuals of a project. My reasoning behind this was twofold:

1. I wanted to try something that I had never done before, more specifically to see if it would be possible for me to complete a hybrid film that would be both a narrative at its core, yet focused on the visuals.
2. It would diverge from other films I had made in the past.

Lumens Version 1.0

Note: This was the version developed for the Preproduction class on my first year at RIT.

On my first version of Lumens, the Hero was shown living in his home, in a world where the sun did not exist. His incentive to go out into the world to hunt the creature was because he was aware that the world had been filled with life and beauty when the sun lit the sky, and it was the "monster" that had brought death into his world. The hero then builds the hat which would carry the light, and the weapon he would use to try to kill the monster. On the second act of the film, the hero would explore the remnants of the civilization while lighting old lampposts. On the final act of the film, the hero has failed to find the creature and dies of old age. The camera then pans away from the body of the Hero to a world that has been lit by the Hero through his journey.

In this version of the film, the monster had never existed, but it was an idea that the Hero was either told about, or one he came up with to explain the circumstances on his world.

Lumens Version 2.0

Note: This second version of "Lumens" is an amalgamation of several versions that I developed while working out the beats of the story for my thesis project while taking into account any feedback from my committee.

The story begins with the Hero, already on the journey to hunt the monster. The first part of the film begins with the hero simply exploring the world and finding other survivors. The second part of the film is a montage of the locations the hero explores as he hunts the monster. On the final act of the film, just like in the first version of the film, the hero has failed to find the creature and dies of old age. The camera then pans away from the body of the Hero to a world that has been lit by the Hero through his journey.

In this version of the film, the monster is hinted at more clearly, but never really fully shown.

The primary change of this story was in the first act of the film, with the Hero already in the middle of his journey. This change had been made because the committee felt that it was simply unnecessary to show his life before the journey, and that it was simply not that interesting.

Lumens Version 3.0 - Final

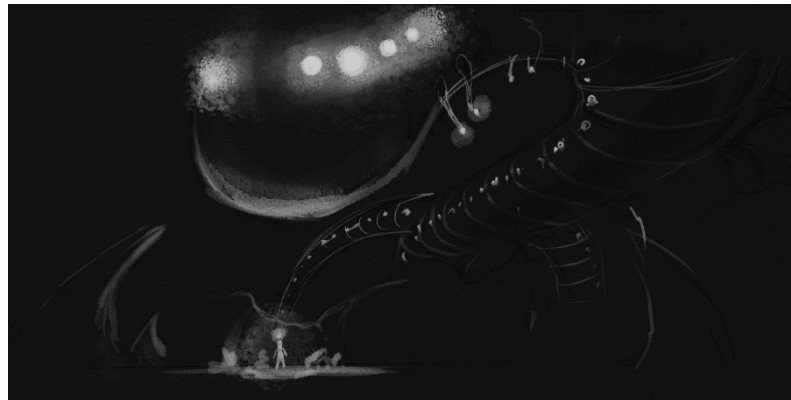
Although there were other versions between this version and version 2 there were only minor changes in them. This is the final major revision I created after giving up on making an

experimental film. The story on this version is almost identical to Version 2, however, the storyboard focused entirely on just telling the story. Focus on aesthetics, visual compositions, etc., are all given up for the sole purpose of storytelling.

The Monster

I originally never intended to show the monster, and it is this intention that became one of the major struggles I had to overcome as I worked on the film. On my first few drafts of the story, and the way in which I saw

this story in my mind, the monster eating the sun was a legend, an old story told through the generations, a myth. The heroine was aware of the story



because it was a story that had been told to her and believed as fact. However, to me this is a preposterous idea because it would be impossible for a creature that massive to exist, and even if it did, the monster would be so massive that it would not only block out the entire sky with just a small tiny fraction of its body, but its own gravitational pull would be enough to rip the entire planet apart. Although I always saw this story as a fantasy/fairy tale I wanted the world to exist in a universe that followed some basic fundamental principles of physics that govern our own world. I should also note that in the creative world, we are allowed to bend the rules in any way we wish to, and this is what makes animation such an amazing format for creativity. However, this being a personal film, I wanted it to be a reflection of my personal preferences.

Unfortunately, as I showed early versions of my animatic to my committee and to others, the idea that the monster was not real was not that clear, and the purpose of the hero trying to find and hunt this monster, was something that was impossible to understand based on the versions of the animatic and storyboards I had made. The only way to show this seem to be by adding a full 1-2 minute exposition to the story that would explain that the monster was an idea and that the hero had set out on a personal journey to hunt it.

As my last semester began, I still was not able to come up with a good resolution to this so I had to give up and follow the suggestions given to me and added the monster in the film as a way to clarify the basic idea of the film for the audience. However, I do believe that the appeal of the film has increased by adding the monster, and not only that, but the idea has become clearer for the viewer to create a more successful film in the end. But to me personally, not being able to find an adequate solution to not showing the monster is one of the biggest personal setbacks of my film.

Because the monster was never intended to exist, I never bothered to create a backstory for it, as it is just a goal that the Heroine would try to reach and fail in the end.

The Hero (-ine)

The unnamed heroine (and the film in part) is in my mind, an homage to a character named *Nausicaa*, from the animated film '*Nausicaa of the Valley of the Wind*', created by *Hayao Miyazaki*. Nausicaa was a princess, but unlike the ones portrayed in most films, she was an actual leader and the strongest and most courageous character in the film. In that movie it was

these qualities that helped propel the story, unlike the standard where a princess is just a pretty face who's journey is driven by 'love'.

I always envisioned the Heroine as a strong and determined individual who is fearless as she

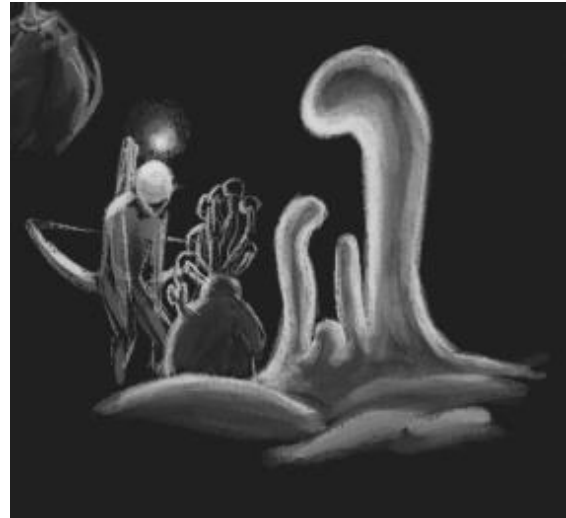


travels across the perpetual darkness of her world. On an original draft of the story, the character lives alone in a home, the last of her people, and builds her hat and prepares for her journey in the dark. Although many changes have been made to my original vision of the film, the one thing I was able to keep in the end was the strength, courage and determination of my character.

The World

Although the dark world was also meant to be in some ways the major antagonist of the story, to me personally, it is also the mystery that was intrinsically woven to the journey of the Heroine. The darkness was meant to be a beautiful part of the world, hiding treasures for the Heroine to find as an added incentive for her journey. As the Heroine traveled, she would find hints of the beauty that used to exist in the past.

While most people tend to relate the dark with fear and danger, I've always found it soothing and relaxing in my own personal experiences. The darkness also has its own aesthetic beauty that is not only unique, but difficult to recreate in any art medium. Darkness has always been associated with more negative connotations, but I wanted to use it as a canvas to bring beauty into the film. I also hoped to bring a sense of wonder and mystery with the use of light as it reveals the remnants of the world.



Concept Design

The first version of the Hero character was created in the Preproduction course during my first semester at RIT. This version was a male character, nothing special, just an exercise of character design. When I decided to possibly work on Lumens, I knew from the start that I

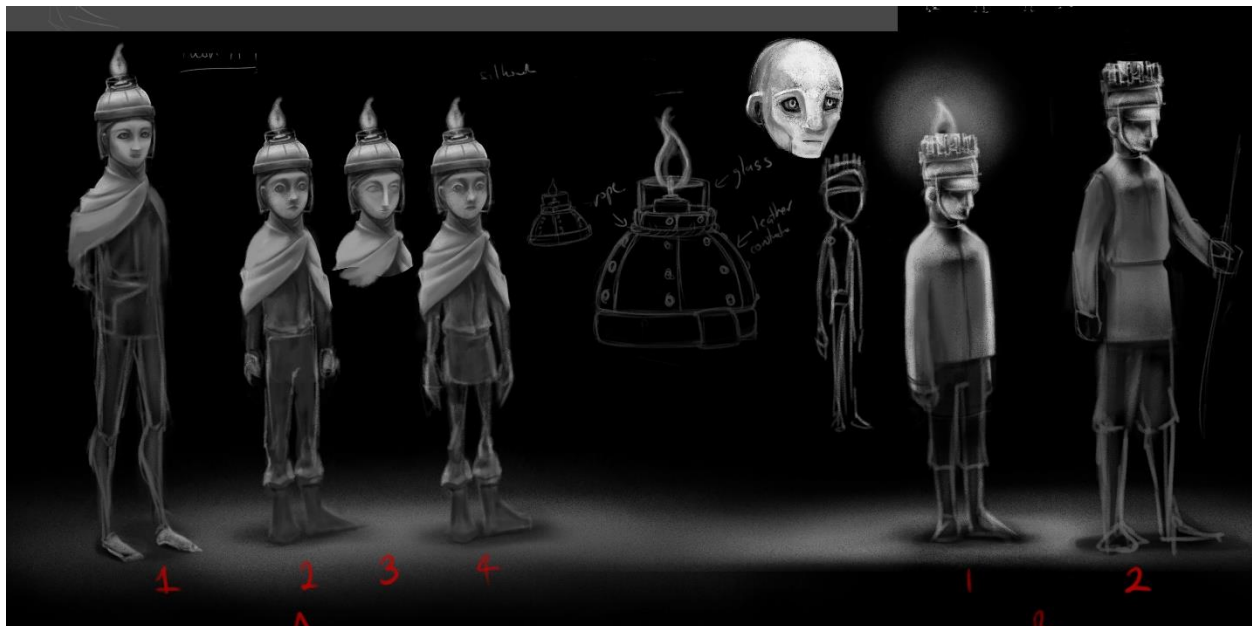


Figure 3 Early Character Designs

wanted to have a female character, although I kept this idea to myself, just so I could receive feedback from others without any prior knowledge of my own intentions which could in the end alter their own opinions. As I developed the character I played around with the idea of using style over functions on my designs.

For the final character design, as I imagined this world without the sunlight needed to grow vegetation and to sustain animal life, I envisioned the hero putting together her clothing and parts of her helmet with dried up fungus from large mushrooms growing in this world. When it came to the costume, I felt that it made more sense to design a costume that kept her warm by layering, because due to the fragile structure of mushrooms compared to other organic medium, she would not be able to sew together complex shapes that could fit her form. Other materials used in her clothing and helmet were parts that she had salvaged and were remnants of a previous civilization.

Style Development

For the overall style of the project, I wanted to try to stay as close to my own aesthetic inclinations and preferences. I always leaned towards a more realistic approach when it comes to design over the more stylized ones that can be found in animation. When it comes to the use of color, while I never felt comfortable using them on my own work, I wanted contrast and value/lightness to be the focal point on my designs. Although I originally intended to have a bit more color than what I ended up having due to time constraints, I was forced to use a more monochromatic palette than I had hoped to. However, because I have always preferred less saturated works, this did not bother me as much and in the end preferred it this way

Storyboards and Animatic

One of my personal preferences as an animator is that I do not feel comfortable moving on to the production stage of filmmaking unless I have a strong storyboard and animatic. Because it was a personal goal for me to create a more visually experimental film and to avoid depicting the monster in the film, I developed several storyboards and animatics, however according to the feedback of my committee, they were all unsuccessful in telling the story and its visual elements did not convey enough interest to warrant the lack of a visible antagonist. No matter how much I tried to create a story that would more closely follow what I intended to do, it proved to be in vain. With just about a month and a half left to complete my thesis, and not having started the production stage on my animation, I simply decided to embrace the existence of the monster and having a narrative driven story. Giving up completely on creating an experimental film is something that I have come to regret through the production process, although it was essential that I did so the film could be completed successfully.

Another major consequence of having a shortened production cycle is that I could not receive any meaningful feedback for my story, animation or designs. At the beginning stage of my production process, the primary goal was to complete the film on time.

Production

Software

As someone who has primarily trained in 3D animation, I decided to use Maya as my primary animation tool. Photoshop was used for the creation of textures and designs, just because it is a program which I have used in the past. After effects was chosen for compositing, again, only because I have used it before.

Painting

One of the original ideas I wanted to explore was the use of projected textures to create a sense of the Heroine exploring a world that resembled a painting. I planned to use Photoshop to create a fully rendered scene which would be recreated in 3D while trying to keep the original painted look by using projected textures instead of the more conventional mapped textures into the 3D objects. In the final film, this method was used on several scenes primarily as a time saving tool, and I was personally pleased with some of its results.

Modeling

My character's clothing was composed of pieces of organic mushroom material that were simply put together in layers for both protection and insulation. When modeling the skirt, I planned to mimic the modular design of her clothes by having all the pieces modeled separately and then rigged together, however as I modeled the clothing I realized that the different parts would create gaps that would be difficult to cover up, and the over 40 pieces of clothing would be tedious to rig, model and work with to ensure proper coverage of her body. So to minimize my frustration in the future I thought about creating an inner layer that would

be essentially a singular geometry dress instead of multiple parts. This provided better coverage and would simplify the animation process in almost all steps of production. However, the outer layers would still be composed of separate parts, which would provide a much better look for the design when animated.

After completing the first version of the hero's clothing, I began to work on the rig of the character, while taking into account how the arms were going to move and interact with the clothing. This was especially important when her arms would move between the layers of



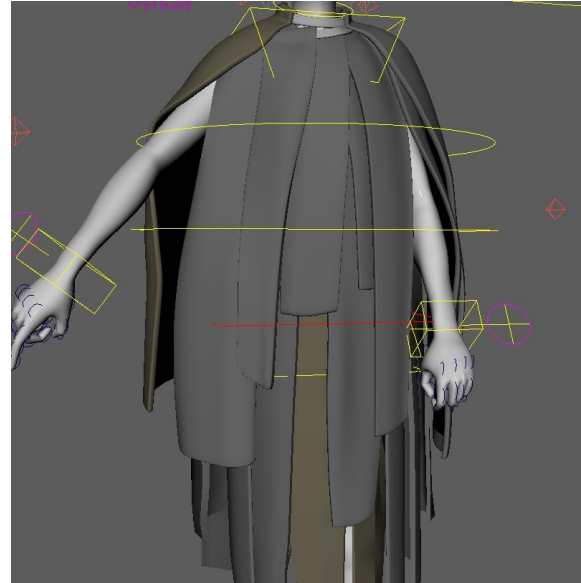
fabric to guarantee that the pieces would move well aesthetically and also how they would technically move apart allowing a wide range of motion of her arms. It was during this time that it became clear that the way I had originally designed her clothes, which was based entirely on the original design of the character, would make it time consuming for me to properly animate (key animation) in case the dynamic setup I had would not be able to create a good result in certain specific movements of her arm. After running a few tests, I determined that although I would be able to animate the clothing by hand with an acceptable result, it would be too time consuming, especially due to the number of layers that were right on top of her

arms. After these tests, I decided to simply re-design her clothing to make the process of animating her clothing by hand less time consuming, in case her dynamic setup failed to provide an acceptable result.

Rigging

Because I still intended to use my thesis as a learning opportunity to develop my skills as a 3D generalist, I decided to create an advanced character rig that was much more complex than anything I had done in the past. A practical reason for it as well was in case I had to “cheat” poses to create a more aesthetically pleasing composition, and also in case the clothing proved to be problematic, in which case I could use the characters stretchable body to move around any troublesome parts.

Her clothing was originally designed to have 3 separate rigged versions within the character.



1. A static one for shots that did not require the body to be moved at all, and specifically for any close-ups of her face. This would make it less computationally intensive for animating.
2. A hybrid dynamic setup where the top part of each clothing layer had a regular FK controls while the bottom half would be driven dynamically. This proved to be an interesting rig because it theoretically allowed more control over the clothing while creating the illusion of a fully dynamic rig. However, it was difficult to control the dynamic bottom half unless I was very meticulous animating the top half, as the top

would affect the behavior of the bottom. I abandoned this setup due to time constraints.

3. A fully dynamic rig. After finding the right attributes for the clothing's "behavior", it would help bring more complexity to the character's movement and design.

The rifle of the character had two versions of the belt, a dynamic one and a static one which used a ribbon spine. The dynamic one was chosen to create a more realistic movement, while the rigged one was used on any scenes that require direct control and interaction with it. An example of this is when the character swings the weapon around to her back, right before she climbs down a cliff.

Dynamics

Ncloth

This was my first time using dynamics, but I decided early on to use it due to the design of the character's clothing, which would have required way too much work to animate by hand. This was the most time consuming part of the rigging process due to the nature of testing the rig and its many attributes. In the end, I wanted to create a heavy and thick fabric that would retain its shape while also having an airy/dreamlike flow as the character moved around.

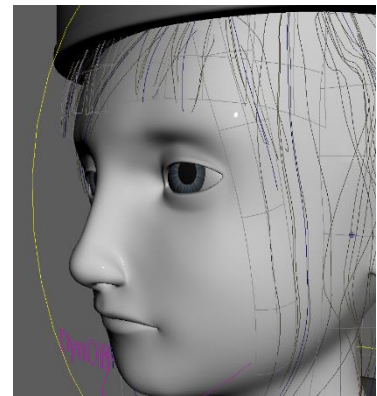
Another major technical problem was also caused by the layers of cloth on top of each other. At certain parts of her body, there were up to 5 layers of cloth interacting with each other as well and the body of the character. While finding the right attributes to ensure that the cloth behaved properly was just a matter of trial and error, this also increased the time it

took to test out and fix any animation as it took much longer to create a playblast (a quick test render).

Another unfortunate problem caused by my lack of experience was that due to the placement of the dynamic clothing, and due to the lack of testing in my part, the character was limited in certain movements because her clothing would then fold against other layers of clothing. Although it became quite clear to me how to properly layer and place cloth layers on my character, I did not have the time to go back and redo and retest any new setups because of time constraints.

Nhair and Xgen

Even though the character in the film did not have a dynamic hair system, one was developed for the character, primarily because I felt that it would provide a stylistic choice that more closely resembled my own, while also trying to avoid the standard sculptured hair found in most 3D characters. However



due to the time consuming nature of replaying any animation with the hair dynamics turned on, and the vastly increased render times, I decided to give up and create a sculptured hair for the character.

Animation

Due to the lack of time to properly animate my film, I was not able to spend as much time animating the character as I had hoped. The dynamic clothes and its time consuming nature also limited how much I could properly animate the character.

The Committee and Process

One of the most important parts of working in a thesis project, is to have the feedback and help of the committee. I personally saw the involvement of the members of my committee as an amazing learning opportunity while also using their varied expertise to shape my understanding of filmmaking when it comes to both technique and artistic direction. This also became one of my most prominent failures at the academic level, as in my own attempt to complete the film on time, I was unable to take advantage of having instructors guide me through the process to improve the quality of the film.

Working remotely

During the first semester of my thesis, I had to work remotely so I could be with my wife as she was transferred to another state. This ended up hindering my progress so I decided to move back to Rochester to ensure that I could complete my degree on time.

Narrative vs Experimental

One of my major goals for this film was to create something different from my previous films. Although I had personally loved watching experimental animation, I never had any experience working on one. Due to the nature of *Lumens*, and its potential for creating interesting visuals, I decided early on to create a lightly narrative driven story with the visuals of a more experimental film. My lack of experience on this type of filmmaking made it very difficult to

put this type of film together, so with time running out, and with the recommendation of my committee chair, I moved on to a completely narrative driven film.

As I look back at my insistence to create an experimental film, it was clearly a mistake on my part abandon this idea at such a late point in time. Making this change earlier would have allowed me to have more time for production and to properly work with the other members of my committee, while also being able to experiment and shape the film into one that was more successful in its aesthetic goals.

Screening and Critique

After the screening of the film, some of the choices I had made during the production process to ensure the completion of the film were commented on by the audience. For one of the faculty members, there was a difficulty connecting emotionally with the character due to the lack of story, which is something that I agree with. This was however something that I expected due to the nature of the original intent of the film to be a more visual experience, which meant that it was not necessary to flesh out the character. When the decision had been made to change the film to a fully narrative structure, it would have been ideal to revise the story and to develop the character's personality. This adaptation would have helped increase the appeal of the character and so the audience could be more invested with her journey. Another possible reason for this disconnect with the audience was the lack of depth in the performance of the character.

Another important comment was the age jump of the character during the final act of the story, which was a bit too sudden. This was something I was not entirely surprised about because it was another unfortunate change I had to make during production. Originally, the heroine was supposed to be shown to grow older in a specific scene showing her traveling through different landscapes. This would have depicted a much more fluid transition of the character's age.

There were also two conflicting comments made about showing the monster at some point in the film. While one person had wished that the monster was visually depicted in the film, another person preferred the mystery of keeping it hidden. The original plan for the story was to show a small part of the monster which I believed could have satisfied both opinions by

allowing a detailed hint of what the monster looked like while also keeping the mystery of its true form intact.

When it came to the visual aesthetics of the film, some of the audience found it to be appealing. Based on the comments of several audience members, the plot of the film was easily understood. A few audience members also described the film as being successful in its overall quality. The overall opinion of the audience was positive.

Conclusion: My Journey through the Darkness

The primary objective of my thesis was the creation of a short film. However, its true success is determined by several factors: the personal goals I had set out to accomplish with the film, its technical merits, the overall quality of the film and the experience gained from it.

My own personal goal for this film was to create something different from the previous ones I had made, which is why I wanted to create a more experimental experience. This is a goal that I did not accomplish, and in fact hindered the quality of my film as I stubbornly tried in vain to hold on to this objective until very late in my production schedule.

When it comes to its technical merits, every time I set out to work on a new project, I have always tried to learn a few technical skills. Although I was unable to experiment on some of the more technical aspects of composition, lighting and texturing, I was still able to gain important skills and knowledge when it comes to rigging, working with dynamic systems including ncloth, Xgen and nHair, and bifrost. So when it comes to its technical merits, the film is primarily a success.

When it comes to the overall quality of the film, the one month and a half production cycle ended up affecting the film negatively so it is only acceptable to deem the film a failure. Although it is impossible to avoid feeling regret for the way in which the film turned out, this also tends to be an important part of the experience of most, if not all animators. However, it is also a very important to experience failures so we can grow as individuals and for me personally, as an artist. If I do not learn from this failure it remains a failure, but if I learn from this setback, it becomes an experience.

Conclusion Part 2: My Unexpected Success

As I think back on my own personal journey through the process of making *Lumens*, I have come to the realization that it has somewhat mirrored the journey and the failure that my character had experienced herself. However, what was less clear to me was the success, or more precisely, the unexpected success of this project. When it comes to the experience that I gained from this journey, this can only be considered a success when I have proven to have learned from it in a future project, if it helped me grow as an artist or if it has improved an aspect of my own personal life, so at this point it is impossible to consider this to be a success because I have not implemented what I have learned from it...yet. It would also be plausible to think of the final film as the true success of my journey, that even with all the setbacks, failed goals and regrets, I was able to make a film in the end. But after pondering about this for a while, it would be an injustice to my experience to call the film a success. No matter what happened during my thesis, I would have completed a film, but the short production cycle affected the quality of the final product, so at this point the film is in fact, just a minor/partial success, of my journey.

The true success of my film comes in my journey through the darkness, and more precisely, what I have learned about myself as an artist through my failures. On every project I have made, I always implemented a wide range of goals from technical to artistic. Most of these goals tend to be minor ones and involve trying out something that I had never done in the past. However and most importantly, I also implement backup plans in case I am unable to reach a goal, either because it doesn't work properly in the end, because I found a better

solution, a change in plans, or because of time restrictions. For example, a goal I had for this project is the implementation of a hybrid manual and dynamically driven clothing for my character (something that I failed to do in the end). When I set out to achieve this goal, I had at a wide range of backup plans in case I was not able to find an adequate way to properly do this. A few of these plans included the simplification of the design, creating a single clothing mesh, using textures + transparencies instead of a mesh, a fully dynamic set up (which I ended up using for some of my shots), etc. This system of backup plans is an integral part of every one of my projects. However, I have never implemented a backup plan for my major/primary goals in any project. I never took into account the possibility of failing my primary goals, and if I had, I would have accepted that I had to change what I had set out to do, and in the end I would have not only increased my production time, but I might have even be open to other ideas which could have drastically changed the story but in the end, might potentially resulted in a better film. This realization that I have to create a more robust and complete set of backup plans that are found at the higher levels of a project is just one of the true accomplishments of my journey. It is not only the acceptance of a possible major failure, but to ensure that I plan out ahead of it. As time passes and as I work on other projects, new hidden lessons from Lumens will emerge, and slowly but surely, the true goals of my journey will be revealed.

Appendix

Original Proposal

Lumens (working title)

A 3-4 minute animated short in 2D and 3D

Log Line

A boy born in a land covered in perpetual darkness decides to go out of the safety of his home, to find the monster that swallowed the sun.

Treatment

Part 1 - 2D animation – stylized

In a stylized hand drawn animation, we see a small village under a bright sun. Then a monster flies across the sky moving towards the Sun. When it reaches the sun, it opens its mouth and swallows it completely in one bite, turning the entire world dark. The monster's eyes begin to glow and then it flies away.

Part 2 – 3D animation

A boy is inside a small cabin, looking at an old book with a drawing of the Sun-Eater in the process of swallowing the sun and casting a shadow to the land below. The boy looks up to the window and there is nothing but pure black on the other side. The boy looks intently at the monster in the painting that caused the darkness. Then, he rips out the painting, deciding to go out and hunt the monster.

The boy walks out into the dark, with his sword ready to strike and a helmet with a candle/lamp on top to light his way. As he walks in the dark, the boy then finds an old oil lamppost, which he then lights up with the candle on his helmet. As the newly lit lamppost lights up the surrounding area, the boy keeps walking down the road, finding more lampposts along the way, which he lights up as well, leaving a trail of lights behind him.

The boy eventually finds a small point of light in front of him far into the distance and decides to walk towards it. As the boy gets close to the light, he realizes it is another village with people living in it. Someone at the village notices the boy walking towards them, and then calls out the rest of the people living there to welcome him. The people in the village gather around the boy, surprised to see another person. The boy, focused on his task, pulls out the painting and points to the monster. The people shake their heads because they do not know where the monster lives, disappointing the boy who then puts away the painting and continues his journey, leaving the village behind.

Part 3 – 3D animation

Montage – As the boy grows older, he continues to explore his world, seeing the remnants of an old civilization, dead bodies with mushrooms growing out of them, the coastline, deserted villages, old statues, etc. Along the way, the boy continues to light lampposts while searching for the monster. In his journey, he also reaches other villages/homes, some who welcome him, and others who hide from him.

Part 4 – Final Scene - 3D animation

The boy is now an old man, struggling to walk up a cold steep mountain. He has grown too old and too tired to travel and collapses - his body giving up. He takes out the old painting, which is now torn, and fading, looks at it for a few seconds and then lets the wind blow it away from his hands, knowing that he has failed. The old man takes off his helmet, places it down in front of him, and slowly closes his eyes and passes away; the candle then dies out, shrouding the old man in darkness.

Behind him, there is a large beautiful network of lights shining brightly in the dark.

Rationale

As I began to think of the idea of a world where the sun had ceased to exist, I enjoyed thinking about how the survivors of such an event would live out their lives and how the world could change because of it. However, a very specific aspect of this story, appealed to me the most – the concept of progress and the pursuit of goals. In life, researchers who pursue academic studies or personal goals will spend the entirety of their lives trying to find a truth or a solution for a problem that exists. Although most of them will never reach a satisfactory conclusion at the end of their careers, their research, even those that end on failure, can become an important part of someone else's own pursuits.

The film will be made primarily in 3D because it is the process that I have spent the most amount of time studying and the one that I believe would be the most useful at depicting the element of light moving dynamically, in a world of darkness.

Technical Process

The film will be made up of a short 2D part in the beginning depicting the legend of the monster swallowing the sun. The rest of the film will be made in 3D.

2D Animation

It will be a stylized animation made in TVpaint, which will match the design and style of the painting being carried by the Hero Character.

3D Animation

The film will be made almost entirely in Maya, and using Arnold as the rendering engine. There will be a main rig for the Hero character and others for the villagers. The rig/models for the villagers do not have to be as complex as the Hero's, and will be reused for most of them.

Visuals

As an artist, one of the things that I personally find aesthetically beautiful is the contrast of light and dark. On the projects that I have worked on, the images or shots that I enjoyed working on the most were those that began as a black canvas, and by bringing out the shapes hidden in the image with the use of light.

Budget

ITEM	Description	Cost	Qty	Cost x Qty
Computer		IK		0
Autodesk Maya	1 year subscription	IK		0
Adobe Software	1 year subscription	IK		0
Zbrush		IK		0
TVPaint		IK		0
Hard Drives	Backups	150	2	300
Online Backup	1 year subscription	60	1	60
Wacom Tablet		IK		0
Media Assets	Sound/images	200		200
Composer		200 - 300	1	300
Sound Mixing		150	1	150
Travel	San Francisco to Rochester	1000		1000
Food & Lodging	Rochester Hotels + Food	700		700
Car Rental	Rochester Transportation	300		300
Festival Fees		300		300
TOTAL				\$3310.00

Production Stills

