Glimmer

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Glimmer

by

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A Thesis Submitted in Partial Fulfillment of the requirements for the degree of Master of Fine Arts in Film and Animation

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# Table of Contents

Committee Approval...........................................................................................................2

Abstract..............................................................................................................................4

Acknowledgements...........................................................................................................5

Introduction........................................................................................................................6

Pre-production.....................................................................................................................8
  Research and Inspiration..................................................................................................8
  Story...............................................................................................................................11
  Character Design...........................................................................................................13
  Animatic........................................................................................................................15

Production............................................................................................................................17
  Modeling.........................................................................................................................17
  Texturing.......................................................................................................................18
  Rigging...........................................................................................................................19
  Animation.....................................................................................................................23

Post-Production..................................................................................................................25
  Lighting & Rendering......................................................................................................25
  Compositing..................................................................................................................25
  Sound & Music..............................................................................................................26

Screenings and Critique......................................................................................................27

Conclusion..........................................................................................................................28

Sources...............................................................................................................................29

Appendix A – Original Approved Thesis Proposal.............................................................30
Abstract

*Glimmer* is a 3D animated graduate thesis film that is 4 minutes long. The film is a gag-based comedy that sets out to emulate the style of early Warner Brothers shorts as well as other slapstick-style comedies.

The story itself follows a bumbling treasure hunter as he explores a set of newly discovered ancient ruins in the hopes of finding untold riches. His fumbling missteps wake the inhabitant of the ruins, who turns out to be a mischievous and clever monkey. This monkey does not take kindly to the treasure hunter’s theft of his possessions and so sets about the task of removing the treasure hunter from the premises. The rest of the film showcases the monkey’s attempts at expelling the intruder with devious traps and pitfalls.

As comical as this set-up was, it was actually a chance for me to explore an inner struggle that I have dealt with for quite some time. The treasure hunter represents my tendency to get “tunnel vision,” or rather to focus completely on one element of something and lose sight of the larger picture. The monkey represents my gut reaction to noticing that I have become excessively focused on one aspect, and that reaction is to step back and see that larger picture. The drawback to this is that I tend to overcompensate, and so this comes at the cost of missing finer details. It is only when the monkey finds a middle ground between the two that he is able to successfully repel the treasure hunter.

This paper will elaborate on the process and methods I used in the production of the film. It will explore everything from the initial stages of conceptualization to the screening of the final product, including all of the problems and solutions for these problems found along the way.
Acknowledgements

Firstly, I need to thank my advisor, Atia Newman for her support an advice through this whole process. Things were looking rough after I fell behind so early in the process, but Atia was there to give me the kick in the butt I needed to get myself back and focused. Her feedback on my work was always helpful and always helped me to see the work I was doing in a new light.

Next, I would like to thank the other members of my committee, Mark Reisch and Meghdad Asadi Lari, both of whom have been excellent teachers for me. They have taught me so much and have always had an answer for my questions. They have helped me to see the artist in myself among the tech skills.

I am also forever grateful to Jeff Spoonhower, my first 3D teacher who set me on the path to animation. Without his lessons and encouragement, I don’t think I would have sought out a graduate degree, and so I truly would not be where I am today without him.

And finally, I extend my love and gratitude to my family who have stood by me through everything. They have given up a lot to help me get to where I am, and I will make sure that someday I can repay them.
Introduction

When I started in this graduate program, I had next to no expectations for what a thesis film would actually entail. The very idea of a thesis project in general seemed somewhat alien to me given that my undergraduate degree required neither a capstone project nor a thesis in order for me to graduate. The first two years of the program went by in the blink of the eye and, before I knew it, I was sitting in my thesis prep class deciding what I wanted as the focus of this massive, year-long project. The pressure of making such a choice was daunting to say the least, but to help make the choice a little easier, I first re-examined my previous work to get some perspective on what I had done successfully and what I wanted to be different about my thesis.

My first film was a thirty second attempt at an experimental film. There, I learned that I was not cut out for the kind of abstract thinking necessary for a truly good experimental film. It was a worthwhile project that definitely took me out of my comfort zone, but watching it didn’t provide the feeling that I was looking for when I usually watch films.

After considering that film I looked at some of the other coursework I had done, and they were all strongly character-focused narratives. That is when I realized the element missing from my previous experimental piece, and that element was characters. Characters are what I get attached to in stories. I am willing to forgive a weak story if the characters within that story are interesting enough. This realization led the choices I made with my second film, and ultimately became the deciding factors in my choices for thesis.

Initially, my second film was a more dramatic narrative about a character facing their fear, but I decided that I wanted to push myself more and decided to take the same character but make the story comedic. The biggest challenge here being that I never considered myself to be particularly funny. When telling jokes out loud, I often stumble over words or miss a key bit of
information which then requires me to backtrack or the punchline will make no sense. In any of these cases, my jokes would tend to fall flat. I told myself that maybe if I couldn’t tell a good joke with words, then maybe I could have my characters tell jokes with their actions. That semester was a great struggle to make something I found funny in the hopes that other people would find it funny as well. When it finally came time for screenings, it blew me away to hear people laugh at the jokes that I had made. The feeling that I got when people laughed at the things that I had designed specifically to get them to laugh was something that I had never really felt before. It was definitely one of the best feelings I’ve ever experienced. Remembering that moment while brainstorming ideas for thesis was when I finally realized what I wanted.

I want to make people laugh.

Once I set this as my primary goal, it was only a matter of parsing through the ideas in my head until I found the one that matched the rest of the criteria that I had laid out for myself. It had to be strongly character-driven, preferably with at least two characters that would interact with one another. It had to allow me to flex my technical skills, allowing my talent for rigging and scripting to shine. Finally, it had to be something that I was going to enjoy. Working on the same project for an entire year would be very demanding, so if the film was not based on an idea that I was very attached to, it would be much harder to motivate myself to focus on work. Whereas, if it was an idea that I loved, working on it and getting a chuckle at some of the silly things I was including in it could help me get through the tougher days and keep pushing to finish.
Pre-Production

Research and Inspiration

Before I entered the School of Film and Animation at RIT, I had next to no experience in the arts. All the way through my undergraduate studies I was the typical science and math focused student and had never even taken a single art history course. I had dabbled in photography and taken a couple design classes that sounded interesting, but I always felt out of place as the only non-artist in those classes. Then one day, an alumnus from my school visited to give a presentation on how he went from a computer science student to a major visual effects artist working at Pixar. My eyes were opened and for the first time I truly realized that my technical skills could amount to more than just numbers on a page or code on a screen. I found a single, small class in the film department that offered the basics of Maya, and that class gave me my first crack at animating. Fascinated and enthralled by the process I sought out graduate studies in the field and so arrived at RIT. I was immersed into the art of animation, almost overwhelmingly so, and as the time for work to begin on my thesis approached, I had a considerable amount of new knowledge from which I could draw inspiration from. Even with this new wealth of potential influence, nothing seemed to resonate strongly with me. All of this was so new that even though I could now appreciate films as art, I had yet to find a personal connection. That was when I decided to look back at my childhood and the films that inspired me then, but now I would be looking at them in a new light. In that contemplation I found the first and most significant of my influences in the Looney Tunes from Warner Brothers.

Growing up, the Looney Tunes were my Saturday morning cartoons. Most other people my age watched more modern shows, but my parents introduced me to the films and shows that they had loved growing up. As soon as they showed me Looney Tunes, I was hooked. Looking
back at them in preparation for thesis, I found something that resonated with what I was trying to get out of thesis: the Roadrunner and Coyote. Their simple motivations, the continuous, wordless struggle, and a series of zany contraptions all destined for failure (See Fig 1-2), seemed like the perfect influence to draw from to fit the goals that I had set for myself.

![Fig 1-2: Coyote’s trap subverts expectations](image)

The second influence was the first thing that came to mind when I thought of the term treasure hunter, and that is *Indiana Jones*. I loved and still love the Indy series to this day. Not because they are considered amazing films, they are campy and silly yet still manage to inject some humor into otherwise serious situations. As far as their influence on my thesis, it is mostly for the aesthetics of exploring ancient ruins, but they do offer some good examples of temple traps that I could build off to suit my own needs.

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Fig 3: Indy removes the golden statue and set off a trap.

The last big influence for this film is actually not something that I grew up with, but instead was something I was not exposed to until I was already at RIT. That influence is the work of Charlie Chaplin. I had known of him, but had never really watched any of his works. It wasn’t until a teacher showed us *City Lights* in class that I was exposed to just how magnificent a slapstick comedian Chaplin was, and not just because he was funny, but because he could make you emotionally connect with his characters through his physical acting and expressions. Take, for example, the still from *The Gold Rush* in Fig 4. In this scene, Chaplin is clearly being comedic by using two potatoes stuck with forks to act as legs in a silly dance number, but when you look at his face multiple times throughout his little performance, you can see a distant gaze and a tinge of sadness in his eyes. That little hint shows that there is much more to the character than the jester his outward actions might label him as. That ability to take a comedic act like that and add that subtle layer underneath was the reason behind the ending of my thesis film which I will discuss further down.

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Story

When our required thesis prep course began, I still hadn’t settled on what I wanted to get out of my thesis yet, so I had to go through several different story ideas before I arrived at the silly comedy that would ultimately become my film. My initial idea told the story of a chameleon who began to lose his sense of self-identity by constantly forcing himself to blend in with the people around him. It was a deeply personal story and one that I would still very much like to tell, but, at the time, I could not think of a way to make this film without make the textures the primary focus. Since texturing is not one of my strengths, and I did not want to hand off the most important part of my thesis film to another person, I decided against pursuing this idea any further. I then had an idea that echoed my struggle to find original thoughts in my art by following a sorcerer-in-training who had been tasked with creating in original spell in order to

complete their apprenticeship. I never became particularly attached to the idea and none of the feedback I received about it seemed to favor it either, so this idea was abandoned as well.

At this point I had an idea for a single gag to open a film with. A treasure hunter would strike a heroic silhouette at the top of a set of stairs leading down into some ancient ruins. He would then take a single step down before slipping and tumbling down the stairs, landing face-first at their base. This simple idea had me chuckling to myself and that was when I knew that I had found what I was looking for. Now all I needed to do was make sure that the rest of the story lined up with my other objectives in making this film. I wanted desperately to explore character interaction, so I introduced the monkey character who would antagonize the treasure hunter and provide a conflict by setting up various other gags throughout the film. Then the creation of two flexible, Warner Brothers-esque characters would provide me with the rigging challenge that I sought.

When I wanted to add more of a personal touch to the film, I considered the internal struggle that was mentioned in the abstract and began filtering the story through that premise. At each point, the treasure hunter would become utterly fixated on an object in front of him and would proceed ahead as if wearing blinders and get himself caught in a trap set by the monkey; however, each of the monkey’s traps would have a detail that the monkey would miss that would cause them to fail. With the last trap the monkey finally catches any loose threads and succeeds in ejecting the treasure hunter from the ruins. With that, I had an outline for how my story was going to proceed, and the only thing I needed in order to pitch the idea to the committee was to flesh out the different gags. Once I pitched the story, the gags did not go through many drastic changed before the final product, and most of the changes did not even occur until I reached the storyboard and animatic phase, and they were only adjustments for the sake of clarity and flow.
There were some significant changes made to the ending, and I did not make these until I began more regular meetings with my advisor during the Fall semester. In my first iteration, the monkey simply won, and the treasure hunter was launched out of the ruins, but under my advisor’s suggestion, I made it so that even thought the monkey won his victory, the treasure hunter still managed to claim the object that he was after. I believed that the monkey’s shocked reaction would make for a much more satisfyingly humorous end than simply having the monkey be content with a victory. Unfortunately, this somewhat clashed with my idea of that struggle between the hyper-focus and lack of attention to detail, so I added a new ending beat where the monkey retrieves the treasure hunter’s hat and it takes the place of the treasure that he had lost. It might not have left the ending of the film quite as impactful, but I was quite fond of the idea of the monkey being content with this new treasure as it was something that he had earned himself.

**Character Design**

Given that the characters are such a strong focus of this film, the character design step was incredibly important to me. It was unfortunate that my lack of more traditional art experience made this much more challenging for me than I would have liked. I had even specifically taken a character and concept design course to improve my skills in that area, but I simply had not achieved the level that I wanted by the time thesis production arrived. I also didn’t want anyone else to do any concept work for me, mostly because I was concerned that any design for these characters that didn’t come specifically from me would have felt wrong.

The first iteration of the character designs was incredibly generic as is the case with many of the designs that I have created. The treasure hunter had a very stereotypical “heroic” silhouette with broad shoulders and a thin waistline, while the monkey looked simply like a real monkey.
After initial frustrations at being unable to come up with more unique designs, I began to focus more on the lessons I had learned in my courses. I took each of my character designs and started to squash and stretch different elements of the design until it felt more like they fit the characters.

I needed the treasure hunter to cut a decent silhouette in order to sell the opening gag, but he also has the tendency to bumble through things, so I did not want that silhouette to be too heroic. As a result, I decided to make him tall and lanky, while at the same time leaving him with a bit of a gut. The long, spindly legs would make him ungainly at times, and the extra weight around the midsection would more believably allow for momentum to have a strong influence on the treasure hunter’s movements. Also, as he was going to be subject to all manner of tricks and traps, I needed to make sure that he looked like he could take a hit and get back up mostly unfazed.

To get my monkey character away from a more natural looking design, I simply had to look back at my inspirations for this film to find several good examples. I took the
anthropomorphic animals of Looney Tunes fame and tried to emulate their designs while still incorporating my own style. The monkey is supposed to be clever, so I made sure to leave his head proportionally large compared to the rest of his body. He is also supposed to be considerably nimble, so I left him very thin. The unique element of the design that I was very pleased with was the tuft of hair that looks somewhat like an antenna on top of his head. Not only would this give him a more unique appearance, but it could also be animated to add extra emotion to his expressions.

Animatic

The animatic phase of production was where I started to run into some issues, specifically regarding time. Over the summer I had planned to make any adjustments to story, finalize character designs, and have about a month’s worth of time allotted to working on the animatic. As a result of some health troubles, I was only able to accomplish some minor story adjustments and finishing the character designs, so I began the semester already almost a month behind schedule and had to find some way to make up for lost time.

As a way to make up some ground, I skipped a more thorough storyboarding process, opting to just use the simpler thumbnails for placement in the animatic. This also made much more sense considering that once I had refined more of the timing, I would be transferring shots from the more traditional 2D animatic to a 3D animatic with basic set layout, character placement, and camera movements.

Before I could make that jump to the 3D animatic, I first had some considerable adjustments to make to my timing just based on the regular animatic. In the first meeting with my advisor regarding the animatic, it became glaringly obvious that I had timed almost
everything in the film much too slowly. I was aiming for a slapstick comedy, and for that kind of humor to land, the jokes could not be dragged out as they were in my first pass at the animatic. That first pass had a length of around 5 minutes, and, by the time I had cut down most of the sequences that dragged on, the second pass at the animatic was approximately 4 minutes long. Simply by cutting out unnecessary pauses, I was able to cut down the length of the film by almost a minute, which would prove very important in my attempts to catch up to my original schedule.

Once the timing for the 2D animatic got much tighter, it was time to insert the scenery and character models that I had been working on concurrently. As the environment layout for each shot was ready, I substituted the camera information from inside Maya for the drawn thumbnails in the animatic.
Production

Modeling

When I started working on the animatic, I simultaneously began working on creating the environment and character models necessary for the film. The process I used to model all the scenery was very straightforward, simple polygonal modeling inside Maya. I also tried to keep all of my environment models relatively simplistic to try to match the cartoon aesthetic of the characters and keep their levels of detail similar. Most of the environment pieces are made up of fairly standard geometric shapes, but in some places, I did attempt to set certain edges askew in the same vein as the background drawn by Maurice Noble shown in Figure 8. Unfortunately, I found it difficult to maintain the integrity of some of my textures when skewing certain objects, so I was not able to push that look quite as far as I wanted to, and as a result the effect is barely noticeable in many of the shots.

![Figure 8: Maurice Noble background from the short Claws for Alarm](image)

The process for modeling the characters followed most of the same principles as the scenery, with the biggest difference being that I needed a comparably higher polygon count on my characters than I normally would because I wanted the models to be able to bend very

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smoothly and without the high number of polygons, the likelihood of sharp edges appearing when the characters deform becomes much higher. Apart from that the other major concern for both of the characters was the topology. The treasure hunter had an oddly shaped chin, so the point where his head meets his neck initially provided some odd edge flow, but that problem was solved without much extra effort. The design of the monkey presented a much more complicated topology issue that required a more involved fix. The tufts of hair that come out of the sides of the monkey’s face added several extra edge loops to the face, which normally would not be too much of an issue. The problem was that these loops interrupted some of the other, more important edge flows around the mouth and at the hinge of the jaw. After trying and failing to solve the problem in Maya, I decided to bring the monkey’s head over to ZBrush to re-topologize it. I am quite fond of ZBrush’s re-topology tools for the speed at which you can get a desirable result, and sure enough, within minutes, I had fixed a problem that I had already spent hours on. I then brought the head mesh back into Maya and stitched it back onto the monkey’s neck, thus making the monkey ready for texturing and rigging.

**Texturing**

The texturing process is a step in the production pipeline that I am not fond of, nor do I consider myself proficient at it. This step was one that I didn’t allocate much time to either in planning or execution. I did handle the textures for the characters myself, giving them mostly flat colored textures. The flat was used to give them the feel of the 2D characters I had drawn inspiration from. I was pleased with the final result, but I do think that they could have benefitted from a bit more actual texture as opposed to simply a plain, flat color. I also handled the textures for most of the walls, floors, and ceilings. They presented a problem because they all had very large surface areas and I wanted to avoid tiling or texture stretching if possible. To get around
this, I resorted to using procedural shaders as opposed to handmade textures. It was difficult getting those shaders to match the aesthetic that I was looking for, but I think that I ended up with something that works fairly well.

Given that I am not a great texture artist and had numerous environment objects to create textures for, I felt comfortable enlisting help for this stage of the process. I was able to get my old friend Aiden to create the patterns that appear on the columns and coins throughout the ruins. I was very pleased with his results, though I did create my own normal map from the texture files that he provided, so that I could give the objects with those patterns a bit more apparent depth. The other help I received was from my friend and classmate from RIT named Ryan Adriandhy. He created the page designs for the treasure hunter’s journal, and he did a wonderful job with them. They don’t show up for very long, but considering they were a big focus in a couple shots, I wanted them to look as good as possible.

**Rigging**

As the step in the pipeline that I consider to be my specialty, rigging was, without a doubt, the most important part of this entire project for me. The process was not without its fair share of problems, but solving said problems brought me more personal enjoyment than any other step in the pipeline.

While working on the earlier steps in the production pipeline, I had also been devoting some time to creating a simple auto-rigging script that would help me to get the basic rigs for my characters up and running quickly so that I could focus more on some of the more advanced features that I had intended to add. The script works by creating a set of locators which the rigger will then move into the locations representing the joints of the skeleton. Once the locators are in
place, all that needs to be done is to press the corresponding buttons to automatically place the joint chains and controls and the constraints that drive them. The script currently only adds a basic IK/FK switch for the arms and legs. It does arrange everything neatly into a hierarchy that was designed to allow extra joint chains or other features to be inserted relatively easily. This tool actually proved itself very useful to me when a file corruption wiped out a good deal of progress that I had made on one of the rigs. Normally I would have needed to start from scratch or find an earlier version before it got corrupted, but since I still had the locators in place, all I needed to do was hit the proper buttons and I had my simple IK/FK skeleton back.

One of the extra features that I added to the simple rig was a ribbon system for the arms and legs so that they could smoothly bend and stretch with a very even distribution of weights along the mesh skin. The trick behind the ribbon method is fairly complex, but I will attempt to describe in the simplest manner I can. The first step is to create a standard joint chain, preferably IK, that will act as the driver for the whole system. Next is to create a “ribbon” using a NURBS plane and give it as many subdivisions in one direction as you so choose. Then create a hair system on the plane and afterwards delete everything that is not the follicles. Inside of the individual follicle groups, place a new joint and zero out their position values so that each joint is centered around on of the follicles. You can now bind the driver joint chain to the ribbon and the joints on the ribbon will now be the ones that bind to the mesh.
A big compromise that I had to make with my rigs in order to make sure I stayed on track with my schedule was to use only Maya’s blendshapes to control facial expressions. My original plan had been to include a full-featured, joint-controlled face rig, but the amount of troubleshooting I would have needed to perform and the amount of skin weighting that would be necessary would take up too much time for someone who was already behind schedule. Having to use blendshapes kept me from having the range of facial expression that I had wanted, but did allow me to work at a faster pace, especially since the 2017 version of Maya introduced the ability to directly edit blend shapes on the model instead of having to duplicate another piece of geometry every time you want to create a new expression.

The one part of the face rig that I was able to get working without too much trouble was the eye rig. The benefit of this particular rig is that it is incredibly flexible in the degree of control it offers over the eyelids. This set-up requires that first a curve be created along the vertices of both the upper and lower eyelid. Then a series of joints are extended out from the center of the eyeball’s rotation and made to lie on the previously created curves. The joints are
then constrained to remain touching the eyeball’s geometry as well as for their position to be driven by those curves along the eyelid. Then by controlling the curves the entirety of the eyelid can be moved up and down or individual controls can be used for more fine details. Thanks to the geometry constraint the eyelid should also follow the motion of the eyeball. The only problem that I had with this was that the elongated shape of the characters’ eyes seemed to raise issues with returning the joints to their default positions along the eyeball. I tried several solutions, but none seemed to permanently solve the problem, so in the end, I simply removed the geometry constraint and used the individual controls to make sure that the eyelid stayed along the eyeball. Figure 11 shows what the eye rig looks like in use.

I would have loved if the entirety of my thesis project was just creating rigs. Adding in new features and fixing all the problems that arise from them was supremely satisfying for me, but seeing as this thesis was supposed to be an animated film, I would have to get started animating at some point. If I had not fallen so far behind so early on, I would have been able to
add those last couple features that I ran out of time to implement. Overall, the rigs handled well in animation and there were no other major bugs that appeared during use. I was pleased with how they turned out, but would have loved those last couple pieces of functionality to make the rig truly feature-complete.

**Animation**

Reaching the actual animation stage of production was both an exciting and terrifying prospect. It was exciting in the sense that this was the chance to show off what the rigs I had put so much work into could do. It was terrifying in the sense that this was the longest stretch of production and I would be animating for quite a while. By the time I had gotten around to blocking in my animations as a rough first pass, it was already November, but I would be finishing and fixing the animations of various shots all the way until the end of April when the film would be due. Of course, because the animation process takes such a long time, I knew that this is the stage where I would be able to make up time and catch up to my original schedule. That isn’t to say I didn’t still have some fun animating some of the shots.

Making the transition from the animatic to full blown animation presented me with a significant challenge regarding my timing. Many of the actions in the animatic seemed quick and snappy enough to make the jokes land as strongly as they should. Unfortunately, when I added the animation in between the key poses, I tended to make the transitions much too smooth, and the action would appear much too slow as a result. This is a problem that affected most of the shots in the film and took a great deal of effort to correct. I do feel that I started to improve on this as I reached the later shots, even if just from the sheer amount of animating I had to do in this film. I’m still not entirely satisfied with my sense of timing, but I do believe that it has developed significantly over the course of this production.
Another challenge that rose during the animation phase was my use, or rather under-use, of exaggerated poses. Like my early attempts at character design, my first passes at the poses in most shots often feel very flat. The motion would convey the intention of the shot but would lack some of the emotional punch that was required, especially in some of the more humorous shots. In almost every meeting with my advisor discussing my animation, her first piece of advice was “push this pose further.” I would attempt to exaggerate a pose but wouldn’t push it far enough, so it would just feel wrong. It wasn’t until I had put in more time pushing the rigs that I had built farther than they were initially meant to go, that I finally got comfortable with exaggeration. It took a long while for me to finally see how motions that might seem odd in relation to reality, can often feel more “correct” in an animation.

One shot in particular always stood out to me as being something special, and that is the shot at the end of the film where the monkey engages his final trap to launch the treasure hunter out of the ruins. I knew going in that it was going to be a very complicated shot to pull off, considering the tangled weave of stretchy vines that the monkey had constructed. In earlier talks with my advisor, she had suggested simplifying the mechanism and turning it into a simpler slingshot. At first, I agreed because I saw how much more work the original idea would entail. When it actually came time to animate, though, I felt too attached to the idea of this ridiculous, twisted contraption to let myself simplify it at all. Getting that shot to work did indeed take a fair bit of trickery to pull off. I managed it by hiding the breaks in the chain behind pillars and moving the treasure hunter a good distance the instant that he disappears from sight. When I was done with it, I knew immediately that it was probably the strongest shot in the entire film, and it was definitely one of the most enjoyable shots I’ve ever worked on.
I started out a little slow in getting to the animation, but as the semester passed, I kept picking up the pace until I had actually managed to catch back up to my originally planned schedule, leaving me plenty of time for lighting and rendering. It was a lucky thing too, because I knew that I was going to need it.

Fig 11: The slingshot scene
Post-Production

Lighting & Rendering

From my experience with making films, the lighting and rendering part of the pipeline is where I struggle the most. I think part of it, at least for me, is that these are the last major steps before reaching a completed product and when there is a problem this close to the end, it is much more frustrating. There was a point where I hadn’t set my render settings properly and one of the shots with upwards of 300 frames had their file extensions switched with the file number and so I wrote myself a small python script that would find all instances of a certain filename and swap the number and extension for files that match. If I hadn’t known how to code, I would’ve had to either re-render the shot or manually relabel each frame, neither of which seemed like an appealing choice.

When I started making a final pass at animations, it was time to add lighting, and once the lighting is in, that is when the final result becomes more real. Getting back a completed render that looks good and has no dropped frames is where I felt like I could actually accomplish this. Of course, it wasn’t completely smooth sailing as there were still some issues with a certain set of the machines on the render farm rendering out blank frames. Once it had happened to me enough and I had accumulated a list of all the bad machine that I could blacklist from my jobs, there were no more unexpected setbacks.

Compositing

I didn’t originally have much of an idea as to how much compositing this film would require. I knew I would be doing at least a minimal amount of color correction to at least fix any shots that were overexposed or something similar. Then I got my first few rendered shots back
and couldn’t help but feel that something was missing from them. It didn’t take too long to realize that the frames were missing the contact shadows from an ambient occlusion pass. I quickly set up and AO pass in the shots that were already rendered and put them back up on the farm. When I got them back, I sent the images into Nuke and layered the pass on top. The difference between the two was night and day and I couldn’t really believe how much of a difference such a small thing could have on the look of a film. The amount of extra depth that it added to each frame was completely worth the amount of extra render time setting up an AO pass for each shot would take. Fig. 12 exhibits the differences between the passes, showing that the addition of ambient occlusion in this shot offers better accentuation of detail in the face as well as better visual separation of objects in the scene.

Fig. 12: Comparison of a shot without (left) and with (right) ambient occlusion added

### Sound & Music

The score for the film was provided by Daniel Hamer, who came recommended to me by a friend. I provided him with several samples of music that I felt matched the tone that I was looking for. Some of these more embodied the cartoon aspect of this, especially a couple pieces from Carl Stalling, the composer for most of the Looney Tunes and Merrie Melodies shorts. I also wanted to match the adventurous aesthetic so the other samples I provided drew from more
stirring orchestral pieces, such as John Williams’s *Indiana Jones* soundtrack. With those samples and some minor direction from me, Daniel created a piece of music that really captures the feeling that I was looking for. I was particularly satisfied with his use of separate instruments for the treasure hunter and the monkey and having those instruments play back and forth at each other, just as the characters do in the story.

With this film I deliberately chose to not use sound effects separate from the music. I felt the music alone would be able to carry the piece and I was very pleased with the final result. Now, however, having watched and re-watched the film looking for things to fix, I have come to feel that adding some sound effects *would* make the film feel much more complete. Looking into a sound designer to add effect to the film is something I definitely want to do before I submit this film to any festivals.
Screenings & Critique

During the whole production process, I tried to incorporate as much feedback from my advisor, teachers, and peers as I could. The biggest example of which was actually mentioned earlier, when my advisor suggested that I change the ending to have the treasure hunter get away with the jewel. The event the lead to a funny reactionary moment from the monkey and I already liked the ending better than what I had previously. The only problem I had with the new ending was that it didn’t feel consistent with the internal struggle that had become the reasoning behind the two characters’ actions and so I added that extra scene onto the end to give the monkey a reward for winning that internal struggle, and to have that reward be something he had earned rather than something that had just always been there. There had been other feedback as well, and I tried to prioritize suggestions that were regarding timing or framing, the things about visual storytelling in general that I tend to struggle with more often.

When the time came for screenings, I wasn’t sure exactly what to expect. Exhaustion had been setting in and after having been through it so many times, I think I had gone blind to some of the problems that it might have had. When my film did finally screen, it got a fairly decent response. It wasn’t as good a reception as I had hoped for, but people still laughed at most of the important jokes. A few of the jokes didn’t get quite as much of a response as I was expecting, but after going back after the screening and watching it again, I could see there were some timing issues that could be ironed out. I also didn’t get nearly as comments or critiques as I was expecting. I had one person praise how well the music fit to the story, which I have to agree with, and another person said that they could feel the emotional connection that I had imparted with my characters, which was definitely nice to hear. There wasn’t much else at the actual screening, possibly as a result of my film screening early in the morning several days after screenings had
already begun. The room was fairly empty, and that could have had an effect on the crowd’s reactions. I still haven’t screened at any festivals yet, since after the reception it got at the RIT screening, I know that it’s not quite ready and could still use some improvements.
Conclusion

When I set out to make this film, I had one goal above all others, and that was to make people laugh. With that as the metric for the success of the film, I would have to call this one a moderate success. People laughed at the funny bits, but not all of them, so clearly some adjustments could be made. I am pleased with the final product but far from content.

I plan to fix up some of the rough edges, focus on tightening up some of the timing, clean up some animations that got overlooked due to the time crunch, and find a sound designer to add that last layer of polish to the film as a whole. Once I’ve taken care of those things, I think it will be ready to submit to festivals. It may not be a stunning masterpiece set to win scores of awards, but it is a film that I poured my heart and soul into, and one that I genuinely believe is only a few steps away from making the transition from good to great.

This whole film was born from a simple idea I had for a funny 10-second gag. This film that pushed me forward when it felt like there was nowhere to go but down. It forced me to learn new techniques so that I could make something better than before. It helped me to realize that by working with other people I can cover up some of my more glaring weaknesses. Probably most of all, it let me be silly. I don’t get the chance to just be silly very much in my life, and it was wonderful to let that part of me free. *Glimmer* is so much more than just a film for me. It has helped me to learn how to make people laugh, and I hope that, as the years go by, I will be able to continue doing so, reaching more and more people all the while.
Sources


Appendix A – Original Approved Thesis Proposal

Glimmer (Working Title)

by Cody Barron

3D Animated Thesis Proposal
For MFA in Film and Animation
School of Film and Animation
Rochester Institute of Technology, Rochester, New York
March 2017

Approved for Submission by:

Atia Newman, Thesis Chair
Log Line

A monkey defends his home among some ancient ruins from a treasure hunter who has come to take everything within for himself.

Treatment

In the lower level of a set of underground Mayan ruins, a monkey is sleeping atop a pile of old relics. Gold coins, gems, and other valuables are scattered about haphazardly, but, as he sleeps, the monkey clutches tight a pair of small golden statues with the shape of the Mayan representation of monkeys. As the monkey sleeps, a silhouetted figure appears striking a confident pose at the top of the stairs that serve as the entrance to the upper level of these ruins. The figure begins to descend the stairs and as he does so, he is revealed to be a treasure hunter, past his prime but not yet old. After a few steps, he trips on a loose rock and tumbles the rest of the way down the stairs, faceplanting on the ground.

The noise from the impact startles the monkey awake, and after looking around to locate the source of the noise, he carefully sets his two golden statues down and begins climbing to the upper level, where the treasure hunter made his entrance. As the monkey reaches the upper level, the treasure hunter is picking himself up off of the ground, and as he does so, he sees some tarnished gold coins on the ground in front of him, which he quickly moves to pick up. He pulls out a notebook and appears to be comparing the coins to something in its pages, and then proceeds to place the coins in his bag. When the monkey sees him do this, he worriedly glances back in the direction of his important treasure and contemplates for a few seconds before an idea hits him.

The monkey heads off and digs a hole beneath the stone floor which he then covers up with a thin imitation stone. He drops a few coins nearby and hides before the treasure hunter approaches the area. As the monkey intended, the treasure hunter is enticed by the coins and approaches the trap. He falls for it, but his belt had gotten caught on a nearby vine, and so, before he can fall all the way to the ground, he is flung back up out of the hole.

As the treasure hunter begins advancing again, the monkey has strung up a log in between a couple pillars, and he is holding it up while he waits for the treasure hunter to come into range. He times the release perfectly, but as the log swings down to hit him, the treasure hunter stops to remove his shoe and shake out some stray rocks from inside it. The monkey gets flustered, but waits because the log could still get him on the return swing. But, again, just as the log is about to hit the treasure hunter, he bends down out of harm’s way. This time coming up with a couple coins from the ground.

Getting increasingly frustrated, the monkey next readies a set of rails on the stairs leading to the lower level of the ruins and waits for the treasure hunter to descend the stairs. After he’s taken a
few steps down, the monkey appears at the top of the stairs pushing a large boulder onto the rails. As the boulder approaches the treasure hunter, a loose stone step slips out from under his foot and he falls on his back. As a result, instead of being hit by the boulder, he gets picked up by it and holds on as it heads down the stairs.

The treasure hunter is finally approaching the lower area of the ruins where the monkey left his two small statues. Seeing the treasure hunter’s progress towards the most precious of all of his treasures, the monkey begins setting up his best trap yet. He runs back and forth around the treasure hunter, moving rocks and vines around, while the treasure hunter advances on the treasure. Just as he is about to reach out for the monkey’s statues, the monkey steps in front of him, arms outstretched, offering a pristine gold coin. While the treasure hunter takes the coin and begins to examine it, the monkey turns and picks up a gemstone from the ground, then proceeds to hand that to the treasure hunter as well. The treasure hunter becomes completely engrossed in examining the gem, and doesn’t really notice when the monkey picks up a large stone from the ground and places it in his arms. When he finally takes the time to look away from the gem, he notices that the stone in his arms is actually tied to several of the elastic vines like a sort of slingshot. The monkey grabs the gem out of his hand, and as he does so, the makeshift slingshot launches the treasure hunter through the outer wall of the ruins, leaving behind a treasure hunter-shaped hole for light to come through.

**Rationale**

In preparing to create a thesis film, I have carefully considered what my strongest skills are and how best I can showcase them. I consider my greatest strength to be rigging so, to push my rigging skills and show them off, I want to create a very character-focused film with animation that pushes the characters past real physical limitations.

This film’s concept draws its influence primarily from two places. The first of these being my love of adventure movies. A lack of excitement and adventure early in my own life forced me to seek those experiences vicariously through the adventurers and explorers in my favorite films. And since the majority of the time those films paint those adventurers as the heroes, I thought it might be fun to explore a different perspective and imagine one of those characters as the antagonist instead.

The second major influence on my film’s concept comes from the classic Warner Brothers shorts. As character-driven films that frequently push their characters, their influence is already clear, but it is the laughter that they have brought me that I would, in turn, like to bring to others. I’ve never been great at telling jokes with words. Either the words don’t come out right, or the delivery is just weak, but when I took a chance at comedy in my last film and I heard people laugh at the bits I deliberately intended to be funny, I felt a sense of fulfillment greater than I have had in much of the rest of my life.
For the characters and their motivations, I wanted something that felt relevant and personal to me, so I developed the Treasure Hunter’s major flaw to be “tunnel vision” where he focuses so intently on the small details he loses sight of the big picture and problems that exist along the way. It’s a problem that has caused a good deal of struggle for me in my own life and I wanted to show how even though this can provide some small victories, this way of approaching things won’t get you to where you want to be. The monkey will act as the treasure hunter’s opposite where he can see the big picture but will miss some small details that cause his traps to fail, and it is only at the end when he finally gives the trap the necessary time and attention to detail that he is able to truly foolproof it and stop the treasure hunter.

**Visuals**

The film will be in 3D with very stylized and cartoony visuals. The characters will be designed in such a way that they can squash and stretch at will and look as though they can freely take hits that real people could not handle. The environment will be considerably colorful enforcing the lighthearted and silly nature of the film.
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