

BALL STATE UNIVERSITY

Animating Silhouettes

Honors College Senior Project

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Abstract:

This paper is a record of my experiences creating an animated movie of silhouettes, based upon the movies of Lotte Reiniger. It includes information about the artist that inspired this project, my processes, and related art forms.

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INSPIRATION: LOTTE REINIGER

The project I chose to do is based upon the animated silhouette films of German Artist Lotte Reiniger (1899-1981). I was exposed to her work in my first class at Ball State University, a computer art class. Our QuickTime animation project was introduced based on her innovations in animation, updated through the use of the computer. In planning this project, I felt that a deeper exploration of her process would be a fitting summarization of my learning throughout my college career.

ABOUT THE ARTIST, HER FEATURE FILM AND HER PROCESS

"I could cut silhouettes almost as soon as I could manage to hold a pair of scissors." – Lotte Reiniger

Lotte Reiniger's artistic medium was established at a young age. During her youth, she greatly enjoyed the theater and acting. As a little girl, she created silhouettes to perform Shakespeare in her shadow theater. Reiniger's one goal in life was to create films. In her later years, it was in the theater where she found inspiration and encouragement to pursue this dream (Reiniger).

In 1917, while creating silhouettes of actors and actresses at Max Reinhardt's school of acting, she made a connection with film-maker Paul Wegener. He hired her to create silhouettes for the titles of some of his films, and eventually helped her discover the secret of animating her silhouettes. Wegener took Reiniger to the Institut für Kulturforschung where she created some short silhouette films.

These films caught the eye of Louis Hagen, a banker from Berlin, who financed Lotte's first full length film, *The Adventures of Prince Achmed*. Lotte worked for three years, from 1923 through 1926, with a team to complete the animation process. Carl Koch, her husband, worked the camera, while Lotte created and animated the silhouettes. Other artists contributed as well; Walter Turck created the backgrounds for the characters to inhabit, while Berthold Bartosch and Walter Ruttmann created the special effects. The animations were timed to the original score to the film, which was composed by Wolfgang Zeller.

When creating a film, Reiniger planned each scene meticulously. Each scene was created using a storyboard, with every detail drawn in full color. The figures and scenes were later reduced to silhouettes for animation. Taking away the lines and colors of each drawing, however, did not destroy the charm of the characters Lotte created. The details that Lotte included in her characters were no longer visually represented on the physical appearance of the character, but were now conveyed by the movements of the silhouettes.

The figures were cut out from paper and hinged together using wire. The paper was not always black, but was made of opaque materials, so as to cast the black silhouette form when placed on the lit surface of the light table.

Once *Prince Achmed* was completed, Reiniger took some time off to draw pictures and write with her husband. She only took one year off, and then went back to work creating silhouette animations. She created these animations while travelling to different locations around Europe, as husband Karl Koch worked on his own films.

After 1943, Reiniger took a break from her work to care for her mother and family in Berlin. She continued animating to survive, but did not reappear with her stories in the public sphere until ten years later. Upon her return to film, she was commissioned by the BBC and American television to create a series of thirteen 10-minute animations. During her commissioned work, she was also commissioned to step outside of her normal black silhouettes and create a colored animation, *Jack and the Beanstalk*. Lotte disliked this work, because she believed that the lack of color in the black silhouettes allowed the viewers imagination more room to expand and interact with the story.

The death of Karl Koch in 1963 was almost the end of Reiniger's career. Without her creative partner, Lotte was afraid to continue working on her signature artworks. She took another decade-long break from her animation, but then returned for her final stint in cinematography in 1974.

Reiniger spent her final years working in Tübingen. Her last film was created in 1979 during an exhibition of her silhouettes, where she demonstrated her process to museum visitors. She enjoyed passing her skills and processes to others, especially young children. She died two years later on June 19, 1981, in the home of close friends. Reiniger's lifetime portfolio totaled over 80 films.

OTHER SILHOUETTE ARTISTS

Lotte Reiniger was not the first to adopt silhouette as an art form. Throughout history, many artists and cultures have adopted the silhouette as a story-telling vehicle. Beginning as early as 930 CE in Indonesia, the silhouette (in puppet form) has been used to entertain the masses. Silhouettes were also a popular art form in Eighteenth-century America. Named originally for Etienne de Silhouette, finance minister to Louis XV, these paper cutouts of loved ones' profiles became a popular keepsake amongst high-class Americans (Knipe). Despite their apparently simplistic nature, silhouettes continue to be used today as a means of artistic expression and story-telling.

WAYANG-KULIT

Beginning around 930 CE, the *Wayang-kulit* were and still are used by the Balinese and Indonesian cultures as cultural story-telling tools. These leather puppets, made of leather, have been used to relate religious, mystical, and moral stories to the people of Bali and Indonesia. This puppet theater plays an important role in many religious ceremonies. However, these performances can take place in a less formal setting within a village. Stories performed in the theater are folktales that belong to the

people, mixed with Hindu stories. The puppeteer, or *dalang*, is deeply respected throughout the community, for his story-telling ability and also his mystical powers (Ingersoll).

HANS CHRISTIAN ANDERSEN

Although recognized worldwide for his contributions to children's fairy tales, Hans Christian Andersen was also well known for the cut paper designs he created during story-telling performances. These designs were created during storytelling performances. Andersen would sit down with his audience, a pair of scissors, and a piece of paper. As his story unfolded, he cut shapes and patterns into the paper. When his story was finished, his artwork would be complete as well. These artworks did not usually illustrate the story that had just been told, but they were whimsical enough to enchant the viewers nonetheless (Andersen).

KARA WALKER

Still creating artworks today, Kara Walker has employed the silhouette to tell stories much like Lotte Reiniger. Based on a study of the popular art form from the 18th century, Walker began experimenting with the silhouette as a story-telling medium. She chose the basic black outlines of a character, based on the fact that it simplified the persona being represented. In Walker's eyes, a silhouette was a substitution for a true likeness of a person. It could be used as a visual stereotype "to simplify a complicated thing" ("The Art of Kara Walker").

Many of Walker's artworks are based on literary sources, mostly dealing with slavery in the South, including *Gone with the Wind* and *Uncle Tom's Cabin*. She has explored the medium in many different forms, from large paper silhouettes, to installations of cast shadows, and to the animation of silhouette marionettes.

PROJECT DESCRIPTION: ANIMATING A STORY

CHOOSING A STORY

When it came time for choosing a story to illustrate for this project, I decided to follow in the footsteps of Lotte Reiniger and animate a fairy tale. However, there was another venue that I thought could also be explored by the same process, much like Kara Walker's silhouette compositions. In choosing the fairy tale to be re-told, I decided upon a story that could relate to and communicate a current world issue, the care of the environment.

The story that I chose, *The Fragrance of Flowers*, was written by a German woman, Hedwig Dohm. It illuminates a romance between the princess, Lila, and a gardener, Egbert. Throughout the story, the interactions between man and nature prove to be the means by which the main characters find love and happiness. Without the garden, Lila and Egbert never would have met, and furthermore, would not have ended

up together, happily ever after. The garden is the vehicle by which Lila and Egbert meet, fall in love, and find fortune and their future together.

THE REAL STORY

For the purposes of time, I decided to complete only a portion of the story that I chose. I began by reading through the story, eliminating details that were not essential to the main plot. This process allowed me to focus on the main aspects of the narrative and begin planning the visual elements that would be included in the animated story.

Essentially, the story is about Lila, a princess, who lives with her father on a barren cliff. The queen died early in Lila's childhood, and left her energetic daughter to be raised by nannies and ladies-in-waiting. One day, the adventurous girl found her way to Egbert's garden at the foot of the cliff. Enchanted by the beautiful flowers, Lila returned daily to delight in the flowers and help Egbert care for his garden. When her father found out about her work in Egbert's garden, he forbade her to return, causing her to fall ill. She requested the fragrance of her beloved flowers as medicine for her ailments. Egbert learned of the princess' illness and fell into despair that he could not help her. His garden, enchanted with fairies, came to his rescue and provided the potion to help his dearly loved princess. His gift revived her, and in an act of thanks, the King offered Egbert one request. Egbert's request for Lila's hand in marriage infuriated the King, who managed to control his anger and deny Egbert's appeal. The King claimed that while he was thankful for Egbert's help, he could not marry his daughter off to a poor gardener. Egbert went on the road selling the fragrance of flowers that had revived Lila. He made his fortune and returned to claim Lila's hand. The King, with no valid reason for refusing Egbert, begrudgingly agreed to the marriage. Lila and Egbert lived happily ever after, surrounded by their garden and beloved flowers.

THE TECHNICAL PROCESS

DESIGNING THE STORY

Choosing the story was merely the first step in the process of completing my project. The next phase of the project was creating imagery to fit the story. I broke the story into scenes that would be illustrated, making notes on specific movements that would be appropriate to the characters and the action in the scene. The entire story was story-boarded. With the audience in mind, I decided to create the first 7 scenes of the story. These scenes would be enough to introduce the main characters of the story, as well as the beginning of the plot.

CREATING CHARACTERS AND SETTINGS

After narrowing down the scope of the story, it was time to create the silhouette characters. This project was carried out on the computer using the programs Adobe Photoshop and Macromedia Flash. The animated characters were pieced together using shapes of body parts from coloring book pages found online. A few pieces of the

characters were designed from scratch on Photoshop. Each movable part of the character was created in a separate layer in the Photoshop document. Anywhere a joint occurred in a major appendage, a new layer was created.

Once the characters were created, it was time to create an environment for the characters to inhabit and with which to interact. Again, I turned to the internet to find the backgrounds, buildings, and plant life that were to create the settings for the characters. To generate the backgrounds and characters in Photoshop, I used the clone stamp tools, as well as the paintbrush to create the silhouetted forms of the buildings, plants, and character parts. In keeping with the idea of a German setting, I chose to set the castle scene in one that is both an icon of Germany as well as of fairy tales, the castle Neuschwanstein. This castle, built in Bavaria, was used as the inspiration for Walt Disney's Cinderella castle. I also chose to include a specific flower that was native to the region, including Edelweiss, a flower that grows in Germany and Austria. Even though they are small details, I felt that they were important to include, keeping with the consistency of the fairy tale's origins.

BRINGING THE STORY TO LIFE

The animation of the characters was a learning process. I found that placing the characters within the scene was not a problem, as well as moving the entire character within the background setting. Organizing the many layers of each silhouette was possible through the Photoshop program, and streamlined my animation methods.

One specific aspect of the layer features of Photoshop made the animation process much easier. A positioning crosshair target within each layer functioned as a point of rotation for that particular layer. When a group of layers was linked together, another crosshair target worked the same way. As the movement of these two-dimensional silhouettes was reduced to the hinged movements of joints, much like paper dolls, the repositioning of the crosshair targets allowed me to rotate each layer or layer set, creating movement. At first, I guessed at the degree of rotation to find the appropriate amount of movement. When the correct angle of movement was discovered, I noted that angle and methodically "moved" the silhouettes within the frames to create each scene.

In keeping with the frame-by-frame process of Lotte Reiniger, I saved each new movement within a scene. Working simultaneously, I animated characters, backgrounds, and props. Based upon the speed at which the eye sees movement, I created 32 frames per second of animation, but not every frame contained a new movement. Due to the persistence of vision, the mind creates movement based upon the changes of an image seen by the eye. I experimented with the process and found that movement of the character every three frames was often enough for movement to take place and still appear smooth and natural.

In order to upload the still frames into Macromedia Flash, I simultaneously saved the frame in both the Photoshop and JPEG formats. Each still frame was saved with a

certain file name which allowed me to keep them in order. To animate each scene, I imported the still frames into a Flash document, which plays the frames at a rate of 32 frames per second, creating the animated sequence. I often tested my animations in Flash to make sure the movements were timed properly or worked smoothly. Each scene was saved as a separate Flash project, and exported as QuickTime files, to be put together in iMovie and burned to disc using iDVD.

MY COMPARISONS AND IMPRESSIONS

My initial thoughts when starting this project were doubts and worries about how well I could pull off such a large project. With dedication and immersion in the art form, I am proud of the end product and the fruits of my labors. Calculated time on the actual project came to an estimated 168 hours over a six week period. This time was spent planning, creating scenes, editing, and learning. A few of the scenes were started and then re-done due to changes in scenery, characters or a new technique that I had discovered.

While I felt that the animation process was completely tedious and time consuming, the end product was always fulfilling. Figuring out the movements of characters by acting them out in the mirror and then seeing it recreated on the computer animation felt like magic. I have to give credit to Lotte Reiniger for her patience to work throughout the days, weeks, and months to complete the entire movie without much chance for reviewing her work mid-process. Even with a team of creative supporters assisting in the process, the artistic genius was apparent in Reiniger's skillful creation of characters and knowledge of movements or subtle changes required in order to make her silhouettes come to life.

Throughout the process, I had my hands full trying to understand the movements and timing of the characters interactions. I think that trying to add the element of sound would have both its advantages and disadvantages. I really enjoy how Reiniger's characters seem to dance throughout the scene while completing certain movements. This has to do with the timing used to fit the animations to music. However, I think that the correlation between movement and musical elements must have come after some practice and experimentation. Because my focus was purely on the animation aspect of the silhouettes, I felt adding music to the mix was too much to handle. Reiniger was able to figure out scientifically how to match the movements of her characters with the composition of the music. Although not timing the movements to music, I did use a sequential breakdown of movements by varying degrees of rotation. I think that this process would have easily translated over to animating by music. The usage of the score for her movie, *The Adventures of Prince Achmed*, further proves the artistic genius behind her process and movie.

While researching Reiniger's process, I was surprised to find that she originally started with full color drawings and then moved to silhouettes from there. Drawing the

actual figure aided my understanding of the positioning and movements of the characters. Perhaps the same can be said of Reiniger's process. Without the details of the characters given in the secondary contours, the shape of the silhouette and its movements are the only communication of a character's personality and traits. Without these details, one would think that it would be harder to communicate this information, but I found that it was actually easier to tell the story in silhouette. The viewer doesn't get lost in the little details of the character's clothes and features, but is forced to see the character as a whole, not just a compilation of parts. I also think that keeping a character in silhouette allows for a deeper connection with the audience. Instead of a character with a specific trait to identify with, the character is vague enough for the audience to relate to universally.

Reiniger's process, aided by her team, is much like today's animation process. While not created on the computer, each piece of the animated work had several important parts, such as the creation of characters, movement of those characters, settings to put the characters in, and sound effects, including speech and musical compositions. Reiniger had a wonderful team who took direction from her vision of the project, and contributed their specialties to the end result. Reiniger's team was constantly together, discussing aspects of the film with each other. The team was all on the same page creatively, allowing for a beautifully compiled animated film. Her process is closely mirrored by today's animating processes, although updated by the use of computers and animation programs. Creating all of these parts on my own allowed me to be continually vigilant of how my project fit together as a whole. However, if the project had stretched into a full-length film including musical arrangements, the process would have slowed down and taken much longer to do alone. Also, if the characters had not been silhouetted, the process on the computer would have been much more complicated.

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