NOTICE:

The copyright law of the United States (Title 17, United States Code) governs the making of reproductions of copyrighted material. One specified condition is that the reproduction is not to be "used for any purpose other than private study, scholarship, or research." If a user makes a request for, or later uses a reproduction for purposes in excess of "fair use," that user may be liable for copyright infringement.

RESTRICTIONS:

This student work may be read, quoted from, cited, and reproduced for purposes of research. It may not be published in full except by permission by the author.

Albright College Gingrich Library

Animation: The Creative Process

Angela Manfredi

Candidate for the degree

Bachelor of Arts

Submitted in partial fulfilment of the requirements for

Departmental Distinction in Digital Studio Art

a de Ging Matthew Garrison, MFA Brian Glaze, MFA Marian Wolbers, MA

F. Wilbur Gingrich Library Special Collections Department Albright College

Release of Senior Thesis

I hereby grant to the Special Collections Department of the F. Wilbur Gingrich Library at Albright College the nonexclusive right and privilege to reproduce, disseminate, or otherwise preserve the Senior Honors Thesis described below in any noncommercial manner that furthers the educational, research or public service purposes of Albright College. Copyright privileges remain with me, the author.

Title: Animation : The Creative Process Signature of Author: infumfuntion Date: 4/20/18

| Printed Name of Author: Angela Manfred; | |
|---|-----------|
| Street Address: 15 Thomas Place | . C (31) |
| City, State, Zip Code: Parlin, NS, C | 248590 V |
| | Girls |
| | Mt Colles |
| Albri | 99° |
| | |

Animation: The Creative Process

Animation is the portrayal of movement and motion by using many images. This art form has been used for hundreds of years and has branched off into various subgroups across the world. Its history is long and vast and has many diverse areas that can be explored. When one first thinks about animation, what it is, and how it is used, one major thing comes to mind being cartoons and feature length films consisting fully of the characters drawn up to take the place of an actor. This is a very acceptable view of what the field represents to most in western countries; however, animation covers a much larger area and expands over into several forms of art. Not all animation is created in the same fashion and throughout history the way artists have learned to animate has changed and adapted with technological growth. There are many different ways to create movement by animating and they all have their own advantages and disadvantages when it comes to telling a story or expressing motion. Each one of them has a specific creative process that goes into bringing a narrative to life in an animated work. The three most well-known and vastly used forms of animation are cell animation, computer animation, and stop-motion animation.

The process used to create animation is a lengthy one that has many different steps that vary depending on what type of animation is being created. The process for all forms of animation, artistically, begins at the storyboard. The storyboarding process is meant to create a rough draft by laying out the visuals for the narrative of an animation. These thumbnail drawings are a layout for the animators to use as a guide when determining how a scene should be set up and are often much more helpful to the artists instead of just being handed a script to work off of (Amblimation). After running ideas to create a solid storyboard, which is necessary before any animation is created, the character designing begins. It is important for the main art directors to create solid and thorough turn around, well designed character sheets of each character to pass on to the artists who will be animating them. This way, the character will have a uniform look throughout the film no matter which artist on the team is working on them (Amblimation). When creating a feature length film, it is common practice to assign a team of artists to each animated character. This is because it cuts down on the amount of work significantly. Creating a film is an immense amount of work and animation takes a lot of time and creative labor to produce. It also benefits the development of the character if only a few people are responsible for them. That way, said artists will be able to fully develop how that character moves, behaves, and interacts with the world around them (Amblimation).

After fleshing out characters and assigning teams as well as finalizing any storyboard changes, the animating process can begin. Each team works on creating animated sections, usually only several seconds long, within the scenes that their character appears. These scenes are often first sketched out roughly and can even be done in several different takes (Great). This is very similar to how an actor would be shot performing a scene several different times in different ways even from different angles. This way the director can pick out what they feel adds the most to the scene and meshes with everything else in the best way possible. Once a sequence has been approved and drawn out fully, they are then colored in. With traditional cell animation, this would be done by taking a clear sheet, referred to as an animation celluloid, tracing over the drawing, and painting it. Acrylic paint is the most common form of paint to use when coloring a cell due to its consistent color and easy mixing abilities (Maltin). The important thing to remember during this process is that when lining this character on the clear sheet, the image is

Manfredi 3

actually in reverse and when it is to be painted, the sheet needs to be flipped over before the painting begins so that the character is facing the proper direction (Maltin).

Once computers started to be used for animation, it was more common for these drawn cells to just be scanned into software to be colored. This would not only cut down on time spent painting frames by hand, but also cut out the need for cells to be used. It was not unusual for cells to be reused and recycled but by using a computer, it made the storage of these files much easier with ease of access and need for less physical storage space (Maltin). For example, Disney Animation often reused and edited animated sequences in their films *The Aristocats* and *Robin Hood* by simply editing the traditional cells to have different characters but still kept the exact same movement.

After cells are colored and lined, they are to be edited together to create fluid motion. Cell animated pieces would be lined up in their layers: backdrop on the very bottom, foreground, moving aspects within a scene, and individual characters. This process was created in 1916 by John R. Bray and soon became the standard (Maltin). This was so successful when used traditionally that it was altered to function in a similar fashion for computer animation decades later when it was arranged digitally. These frames would be captured one at a time by taking pictures of each cell. Digitally, an editor would align the frames and other elements and record them and their movements. Once the editing was completed, the film would be finalized and prepared for release.

The most popular and highly recognized form of animation is Celluloid animation, also one of the oldest methods. It combines several artistic and technical abilities to create. Celluloid animation, also known as traditional animation or shortened to cell animation, is the hand drawn frame by frame animation that when arranged quickly in sequence shows movement (Maltin). Cell animation started to really make its mark in the film industry in the early 1900's with the growth of the motion picture film. Some of the earliest animations were done by drawing right onto the live action film itself (Compiled). Others were done by doing drawings on sheets of paper and then taking photographs of each drawing on a roll of film to create movement when played back. In order to create a motion picture with backgrounds and characters, an animator would layer the elements on top of one another with each aspect being placed on a separate clear sheet. Backgrounds, however, were usually paintings and rested as the base.

Each cell would be arranged and photographed in sequence to create a moving clip. One of the first shorts that successfully portrayed this type of animation and then caused it to grow was *Gertie the Dinosaur* by American artist Winsor McCay (Maltin). Gertie is introduced and interacts with a narrator while she moves across the screen and entertains the watcher with her mischievous behaviors. This process was used in many animated films in the earlier years to create the iconic films such as Disney's *Snow White and the Seven Dwarves* and *Bambi* (Compiled). Along with other motion pictures, this traditional animation was used primarily for shorts and comedic skits called cartoons. They were often played before films in the cinema and kept audiences of all ages entertained with witty and unique characters. Some of the most well-known and iconic animated characters are Felix the Cat by Pat Sullivan Studio, Walt Disney's Mickey Mouse, and Warner Brothers Cartoons' Bugs Bunny (Kanfer). This form of animating was very popular for many years and slowly evolved through technological advancements. As technology advanced, the use of cell animation started to become more of a digital mix of itself into the computerized forms of animation.

Alongside cell animation, computer generated animation phased into mainstream use. Computer generated animation, also called CG, takes similar steps to create movement as cell animation does. Some of the earlier forms of computer animation had a similar process to cell, such as being hand drawn by frame. However, instead of being colored and arranged traditionally, these cells would be scanned into the computer, colored, and arranged digitally (Amblimation). For example, films such as Universal Pictures *Balto* or Disney's *The Lion King* meshed the two styles of animation to create a more advanced form of traditional animation that still held true to the look of the hand drawn style, but also made the creation a much easier task (Great). This use of animation is often looked at by artists as some of the most aesthetically pleasing because it combines both the drawn look of traditional animation as well as the fluidity of computer animation.

As computers and software became more readily available, a different style of CG animation became common practice within the industry. Three-dimensional forms started to be used instead of the flat imagery that had been popular in the past 150 years or so. These three-dimensional forms would be created by modeling a character as well as their environment by using software that is capable of rendering images in a three-dimensional space. By continuing to layer elements such as background, foreground, and character into separate spaces, much like how traditional animation established, these forms could then be captured in stills and repositioned to create movement (Maltin). Many films first started to experiment with the use of three-dimensional animation by incorporating it into the backgrounds of a scene. One of the most popular films to gain great amounts of praise by using this method of animation in such a unique and successful way was Disney Pixar's *Toy Story* (Compiled). The amount of detail and smooth movement of all of the characters still holds up today even years later.

The earliest forms of animation in film began with the use of photography. Photography ultimately led to one of the three most popular forms of animation, aside from computer and traditional, throughout history which is still widely used today: stop-motion animation. Stopmotion animation is the use of physical objects being positioned, taking a picture, and repositioning slightly to create the illusion of movement when played back in sequence. When these images are played back quickly they appear to make a figure move. It is common practice to use figures, clay models, or cutouts to create a stop-motion work. Stop-motion is one of the oldest forms of animation and also one of the most tedious to create. The film that brought stopmotion to the attention of a large audience was King Kong by Willis O'Brian in 1933 (Animation). In this film, live action and stop-motion were fused to create a narrative for one film by using live actors and model figures to represent the mighty beast. In the case of creating an entire film with stop-motion elements, such as with Tim Burton's The Nightmare Before Christmas and Aardman Studio's "Wallace and Gromit" franchise. These shorts and movies are not only moving characters created through models, but the entire set as well (Stopmo). Just like a live film set, stop-motion films also often consist of a miniaturized version of a set. In fact, the processes of filming and editing a live action film and a stop-motion film have many similarities since they both work in the physical space as opposed to a drawn space. The use of green screen to add complex effects and edit out props that assist in the positioning of the model are two similarities that are used in both types of production. Stop-motion is often created by using clay models but can also be achieved through models that move and adjust like action figures.

When comparing stop-motion to other types of animation, the process and creation are a bit different and it resonates much more with the process of creating a live action film. Unlike traditional animation or CG, stop-motion animation requires the use of a real live space and sets. Lighting and effects are achieved using similar methods as would a live set, but they are usually smaller in scale when compared to a movie set (Stopmo). For example, intricate lighting as well as the use of green screen are quite prominent for both film making processes. The 2016 Laika film, *Kubo and the Two Strings*, is a strong example of a stop-motion film being created with these methods. Granted, editing is still a major part of creating a large amount of the proper atmosphere with both processes since only so much can be achieved effectively during filming. The largest difference between live action film and stop-motion animation is that stop-motion takes far longer to create. This is because unlike traditional animation and similarly to a live action film, stop-motion requires the use of a three-dimensional space. Even though computer animation deals with this as well in its more advanced renderings, manipulating a physical object is much different from doing so in a computer program or rendering graphics through program algorithms. If the animators are displeased with results, the artist must start again from scratch; there is no undo button for hand drawn animation or stop-motion. Both must be redone when error occurs.

Animation has greatly impacted the world over the years that it has grown and developed for storytelling and technical advancements. Many varieties and styles have come to fruition in many different countries. It is important to note that even though animation is a global and very diverse form of artistic expression, the cause for it to become so vast of a field is due to the deep roots it has in the United States (Cavalier). The United States animation industry had a major impact on the outside territories, such as Europe, which in turn influenced other areas to bring in their own styles into how animation was presented as well as created. Many countries work to emulate the styles and processes that American animators use; however, there are a few countries that instead have taken these ideas and have run with them to create their own genre entirely.

An example of this can be seen when looking at the prominence and growing popularity of Japanese animation, or anime. Anime is the general term used to describe Japanese cartoons and animated films (Ivy). The style of anime is a bit different compared to the western style of animation. Japanese animation was greatly influenced by the style of Disney's Bambi with the large doe eves and expressive features of the face (Cavalier). Much like American cartoons were often inspired by comic strips, Japanese anime is often inspired by or based on manga or Japanese comics (Ivy). One of the very first popular forms of anime that displayed this largeeyed style was Astro Boy (Anime). Another difference between anime and western animation is the frame rate used to create movement. Anime generally uses a much lower frame rate than many other forms of animation in the United States or Europe. The most common-US/UK frame rate runs at twenty-four to thirty frames per second compared to around twelve to twenty frames per second for the average anime (Cavalier). Because of this, anime often appears to move in a less than smooth manner when compared to other animated works of the world (Ivy). That is unless the film or animation received a larger overall project budget to work with or wished to achieve a more fluid sequence such as some fast paced action scenes seen in Paprika for example. Even though the style and overall visuals appear differently, the stylistic choice that anime often takes in no way diminishes the beauty and work put into creating it.

Over the past decade or so, Japanese animation has grown incredibly in popular culture. Unlike many of the more childlike themes in western animation, anime tended to focus on more mature themes and capture a unique sense of storytelling, similar to how animation in the west used to be (Anime). Throughout the early to mide 1900's animation was used to entertain all age groups and had themes that could keep any age group's attention. Some strong and convincing examples of feature length anime films would be Katsuhiro Otomo's *Akira*. Another would be Hayao Miyazaki's film that won Best Animated Picture in 2001, *Spirited Away*. The reason that this work is so important not only to anime history, but also to animation as well is because this particular movie brought attention to the anime industry and its unique art style to the rest of the world (Cavalier). Miyazaki was certainly not the first Japanese animator to break new ground within anime, but he definitely is known to have made the largest ripple across the industry. Aside from the unique use of traditional animation that was used, that at this time in the United States was beginning to phase out of the mainstream motion picture industry, the vivid painted backgrounds and lively characters certainly captured viewers' attention and awe.

Animation has grown and progressed over the years from analog to digital. The process is very similar for cell, computer, and stop-motion animation even though stop-motion works directly in the physical three-dimensional space. Aside from the slight differences technicality wise, these types of animation all have a similar creative step-by-step protocol. Animation has grown to influence countries outside of the United States and has branched off to many different subgroups as well outside of the mainstream Hollywood film industry. As technology advances and new artists enter the creative field, there's no telling where the industry will go. As Walt Disney himself once stated, "Around here... we don't look backwards for very long. We keep moving forward, opening up new doors and doing new things, because we're curious... and curiosity keeps leading us down new paths."

Works Cited

Amblimation "The Making of Balto ." The Making of Balto, BBC 2, 1997, www.youtube.com

Blair, Preston. Animation 1: Learn to Animate Cartoons Step by Step. Walter Foster Publishing,

2012.

Cavalier, Stephen. The World History of Animation. University of California Press, 2011.

"Compiled History of Animation." Animation History Timeline, www.joshuamosley.com

- Clements, Jonathan, and Helen McCarthy. *The Anime Encyclopedia: A Guide to Japanese Animation Since 1917.* Stone Bridge Press, 2015.
- Ivy. "The Origins, History and Evolution of Anime and Manga." washington.edu. depts.washington.edu/ub/studpp/srproj/HistoryAnimae05.ppt.
- Kanfer, Stefan. Serious Business: the Art and Commerce of Animation in America from Betty Boop to Toy Story. Da Capo Press, 2000.
- Maltin, Leonard, and Jerry Beck. Of Mice and Magic: A History of American Animated Cartoons. Plume Book, 1987.
- "The Great Directors: The Making of 21st Century Hollywood." Ambrose Video Publishing, 2014.

"The History of Anime." Right Stuf Anime, www.rightsufanime.com

The History of Animation. www.study.com.

Stopmo. "The History of Stop Motion – In A Nutshell." *Stop Motion Magazine*, 3 June 2016, stopmotionmagazine.net