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Teratorn
A Study Of The Illusion of Life

"Believe in your character. Animate with sincerity"

- Glen Keane

Disney animator Glen Keane is a veteran in his field. He has worked in traditional hand drawn animation, but was a believer in the future of computer animation from the very start of its development[1]. In essence, Keane is adamant it is not the technique used which makes an animation great. It is the story and the performance of the animator that does. The Young Cuts Film Festival encourages a similar method. It focuses around displaying short films from young, emerging filmmakers, by promoting the exploration of different mediums. Our project explores traditional frame-by-frame animation with the use of computer programs. Since the early days of the Disney animation studio, the idea of the illusion of life has driven the nuances in the motions portrayed. It is the illusion of life that allows the audience to engage with the characters and can only be achieved when the animator uses the character as a "puppet" to perform the role. To create our animated short, Teratorn, two key factor drove every aspect of the film. First, a thorough investigation of the development of animated films showed how the illusion of life is achieved in a range of stylized animations. Second, by exploring the process of creating a film, it becomes clear how each stage provides an opportunity for the animators to perform through the characters. Both are essential throughout the production of Teratorn.

It was *Gertie The Dinosaur*, in 1914, that performed for audiences and amazed them due to the technical skill of the film and the high entertainment value. Winsor McCay was the early animation pioneer behind this project. He took an innovated approach in the presentation of his short film which fully embraced the idea that animation should be a performance. When the film was played for an audience he would stand by the projection screen and perform with Gertie. "Come out

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[1] Paik, Karen. *To Infinity and Beyond!: The Story of Pixar Animation Studios*. San Francisco: Chronicle Books, 2007. Print. pp. 39

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Gertie, and make a pretty bow." "That's good! Now raise your left foot"[2] (Fig. 1). McCay not only

explored the early techniques of frame-by-frame animation, he brought life to his character, making

the audience care about Gertie. He set the foundation for other animation pioneers. By the late

1930's as the Disney Animation Studio was creating *Snow White And The Seven Dwarfs,* the early

animators (later referred to as The Nine Old Men), began to explore the idea of the illusion of life

and the techniques to achieve it. In doing so, twelve basic principles of animation were developed [3].

These techniques explain the various parts of any movement which must be considered and how it

effects the style and characteristics of the film. These have become the fundamentals of current

animation and are a critical part of allowing the animator to perform through the drawings. These

lessons were pursued in our study of animation. By experimenting with these techniques along with

studying photographed and filmed movements, a deep understanding of the motions were achieved.

Fig. 1a - Winsor McCay performing with
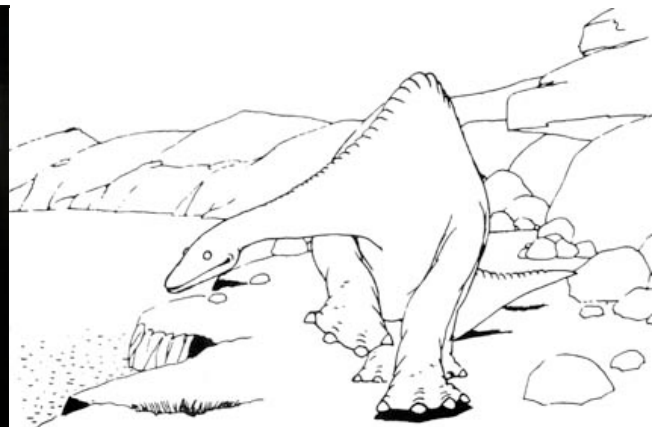   *Gertie the Dinosaur*
                         Fig. 1b - A frame from *Gertie the Dinosaur*

Disney animation maintained a clean and neat style in their work which remained constant

through all their films. In contrast, the work of Pat Smith of Blend Films embraces his roughly

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[2] "Gertie the Dinosaur 1914 - YouTube." *YouTube*. N.p., n.d. Web. 22 Sept. 2013. <http://www.youtube.com/watch?v=ww6zqGHlgsc>.

[3] Thomas, Frank, and Ollie Johnston. *Disney animation: the illusion of life*. New York: Abbeville Press, 1981. Print.
     pp. 47

drawn lines as part of his final product[4] (Fig. 2). This approach was explored in the drawings for

Teratorn. Clean, precious lines were used for the key frame drawings, while the inbetweens were

allowed to maintain a loose line type. This decision began to form a style which shaped the rest of

the film. By allowing the rough work to show in the inbetweens, the drawing process is seen in the

final film. A question which this style brought to the forefront was whether or not the illusion of life

could be achieved. By studying Smith's films and comparing to the Disney movies, it became clear

that it is not the style of the drawings which affects whether the illusion of life can be successful.

The larger factor at play was the precision and nuances in the motions being drawn. Although a

consistent drawing style is important, the animators knowledge of what is being drawn is essential in

obtaining the illusion. A performance by the animator is key[5]. Like an actor, it is necessary to fully

embrace the role and understand every aspect of the character being portrayed.

Fig. 2 - Image from the short film "Puppet" by animator
Pat Smith of Blend Films

The importance of using the characters as a puppet to perform through was an integral step in

pushing the computer animation industry into the entertainment field. In the early days of computer

modeling and animation the most common use of the technology was for moving company logos

across a screen and rudimentary special effects. It was John Lasseter, a graduate of the CalArts

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[4] Smith, Patrick, and Bill Plympton. "Scribble Junkies." *Scribble Junkies*. N.p., n.d. Web. 2 June 2013. <http://scribblejunkies.blogspot.ca>.

[5] Williams, Richard. *The animator's survival kit*. London: Faber, 2001. Print. pp.315-325

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character animation program (and currently the chief executive officer for Pixar and Disney

Animation Studios), who had the vision to integrate the new computer technologies with tradition

animation subject matter. His early tests, such as Andre and Wally B (Fig. 3) use the restrictions due

to the lack of computing power to create the stylistic approach. With only using basic shapes, the

characters and scenes could be fully formed. As a result of Lasseter's formal training, he insists that

it is not the method in which the film is made which makes it good, but rather the story being told[6].

This mix of computer programmers and animators at Pixar in the 1980's opened up the entertainment

field for computer generated films. This shift in thinking about the new technology gave animators

the chance to incorporate their traditional methods into the new tool. This development of the Pixar

studio shows how it is not the medium or tools used to create an animation that has an effect on the

illusion of life, but rather the animators understanding of there subject matter.

Fig. 3 - Andre and Wally B, an early computer animated
short by John Lasseter at Pixar Animation Studio

The process to produce a short animation is another aspect that allows the creative team to

use every step as a method of creating the illusion of life. The process for Teratorn began with

developing the story. By iterating versions of the story, the personality of the characters are

developed along with any motives that are key to their actions. The timing and layout of the scenes

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[6] Paik, Karen. *To Infinity and Beyond!: The Story of Pixar Animation Studios*. San Francisco: Chronicle Books, 2007. Print. pp. 42-46

is tested with storyboards. These are reworked until the story is complete. It is at this point that the style of the film must be decided. Inspiration was drawn from Tim Burton's movie Edward Scissor Hands. The monotonous design of the suburban neighborhood is juxtaposed by the eerie castle (Fig. 4). The essence of this town is implied with the feeling that not everything is as "perfect" as the residences portray. In *Teratorn* the simple and familiar act of scaring a bird, forcing it to flight is juxtaposed by a role reversal, with the appearance of the giant bird. The world is no longer an ideal, monotonous town and everything is forced into a fantasy world. The giant bird brings havoc to what otherwise seems like a normal area. As part of this process an animatic was developed to further test the timing of the film. An animatic allows all the actions, timing and layouts of the film to be seem in a rough state before any animation is done[7]. Throughout these early stages of design, a balance between creating a specific style and the fantasy worlds must be met with thoroughly developing the exact movements of the character to ensure that they are as fluid as possible to maintain a believable performance.

Fig. 4 - The village from Edward Scissor Hands was an inspiration for the style of Teratorn

Once the story is complete, key frame animation, followed by inbetweening, clean up and colouring is done. Key framing is the first stage in animation, and it is when the motion is laid out

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[7] "Brave - Behind-The-Scenes B-Roll (Part 3) (Pixar) - YouTube." *YouTube*. N.p., n.d. Web. 22 Sept. 2013. <http://www.youtube.com/watch?v=WE0cJ5D2_wk>.

and given it's shape. This process involves drawing only the essential frames, usually ones that are at the beginning or end of a movement, at a point of changing directions and when actions overlap[8]. When these drawings are done, inbetweening is the next step. This fills in all the frames between the key frames, giving the motions it's fluidity. After, all the drawings are cleaned up, by redrawing any part of an image that is not constant with the rest of the drawings. Finally, all frames are coloured. Base 14 Productions uses this system in an efficient method through Adobe Flash. It is thoroughly explored in the companies short film "The Girl And The Fox" (Fig. 5). The same technique was used in the creation of Teratorn. Instead of using a symbol library and using computer generated tweens, individual frames are drawn. This proposes replicates the hand drawn methods, while still utilizing some of the computers efficiencies. It gives the animator complete control over the performance and the ability to fully express the desired emotion.
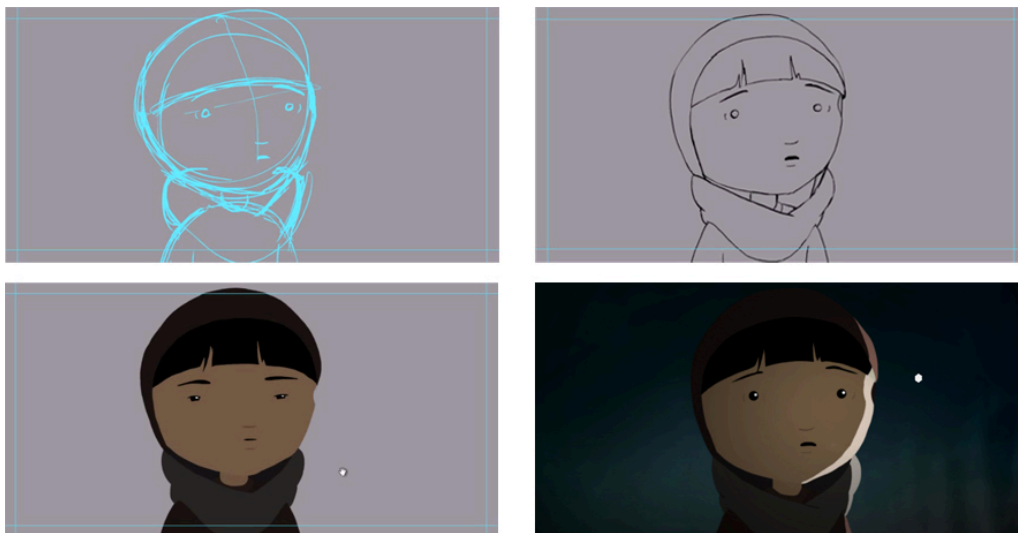

Fig. 5 - Progress images from *The Girl and The Fox* by Base 14 Productions, Clockwise from top-right, rough key frame animation, cleaned up animation, coloured and final composition

From the process that was used to create the short animation Teratorn, to the thought that was put into the performance of the characters, the driving force behind the project was the illusion of life. By exploring examples of animation from various studios, it is clear to see how important the

[8] Williams, Richard. *The animator's survival kit*. London: Faber, 2001. Print. pp. 84-90

portrayal of a believable performance is, even when the world, characters or styles is not realistic.

The goal of the Young Cuts Film Festival is to create entertaining short films while encouraging an

exploration of the medium. From the early design phases to the final editing, Teratorn was a project

which allowed a thorough study of techniques in achieving the illusion of life.

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9. Williams, Richard. *The animator's survival kit*. London: Faber, 2001. Print.

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Fig. 1a   <http://kadmusarts.com/blog/?m=200703>

Fig. 1b   <http://animationbegins.files.wordpress.com/2011/11/dinosaur.jpg>

Fig. 2   <http://geektyrant.com/news/2013/3/23/puppet-fun-animated-short-film.html>

Fig. 3   <http://www.ecstudents.net/11spring/katelinkim/shortfilms.html>

Fig. 4   <http://fogsmoviereviews.com/2012/05/13/movies-that-everyone-should-see-edward-scissorhands>

Fig. 5   http://www.youtube.com/watch?v=wQjOynnr7AI&feature=c4-overview&list=UUx3C4Lkrd0eLDA6BhiXzB3Q