IS ROTOSCOPE TRUE ANIMATION?

Christine Mersiana Lukmanto

Abstract: Throughout the years, technologies have developed varied techniques for animators to create films. One of the oldest and interesting techniques of animating is Rotoscope by tracing every single frame from live action footages and enhancing it with animator's style. In terms of anthropomorphism, it creates an uncanny realistic effect because it mimics the reality of the structure, the proportion and the movement. Due to its easy process in animating, there are some critiques and debates about how far rotoscoping can be considered as the "true" animation. This research would cover the identity of rotoscoping, professionals and animator's perspective as well as the aesthetic of this technique.

Keywords: rotoscope, realism, true animation, perspective and aesthetic

Introduction

The research aims at investigating the use of rotoscoping in animation, to explore a deepe understanding of it. Throughout this report you will also find related matters to articles and interviews that I have researched, I will identify the techniques used and different definitions of true animation, an real animation, as well as special effects used. During these articles I will also build upon my ideas of how the concept works from notes throughout class. I will also explain why I have agreed with the authors, their ideas and their reasons. I will also look into criticisms of rotoscoping and further dialogue surrounding the issue.Animation has developed over a long period of time. This led to many varied techniques for anim

ators to animate the non-living objects. One such technique is Rotoscope, which is a method which allows animator to trace every single frame from a live action footage to create moving images in the style of cartoon animation (Rotoscope, 2014). In terms of anthropomorphism, rotoscope creates a realistic effect because it mimics the reality of the structure, the proportion and the movement. The method has become more advanced with technology by using digital camera to capture live action and computers to trace the footages. However, this realistic effect can create uncanny feelings because it seems real and unreal at the same time. Moreover, due to an easy process in animating the characters, there are some critiques and debates about how far rotoscoping can be considered as the "true" animation.

A number of articles (Deitch, 2008; Sabiston, 2011; Ward, 2004) examine the consideration of ani

Christine Mersiana Lukmanto adalah pengajar tetap pada peminatan animasi, Program Studi Televisi dan Film, Universitas Multimedia Nusantara.

e-mail: christine.lukmanto@umn.ac.id

mation techniques as "true" animation. While the interview by Sabiston and the reflection by Ward emphasis the process and the aesthetic of rotoscoping; the reflection by Deitch highlights motion capture in the film Boewulf. The main concerns of all the authors are to discuss how far are the techniques in making a movement can be considered as "proper" animation. This report will compare and contrast the three articles based on the aesthetic of rotoscope and realism in rotoscope of each author.

The History of Rotoscope

Rotoscope has been used by lots of animators in the past including Fleisher brothers, Ralph Bakshi, Bob Sabiston and even Walt Disney. In 1917, it was patented by Max Fleischer. In his article, Langer (1993, p. 67) asserts that Fliesher invented a mechanical device of rotoscope by using a translucent surface to project the footage of live action film and trace it into a drawing frame by frame. The smooth movements can be seen in his films such as Out of The Inkwell (1915s) and Betty Boop (1930s).

Ward (2004, p. 35) mentioned that Walt Disney also used rotoscope to animate the characters in Snow White and the Seven Dwarfs (1937). In term of anthropomorphism, he is considered as an important figure in natural realism in animation because in order to get the right effects, he used multi layers to create depth, mimicked human movement by avoiding depicting movements that are not real. His creations are considered as hyper realistic because he designed the characters with a continuity by using

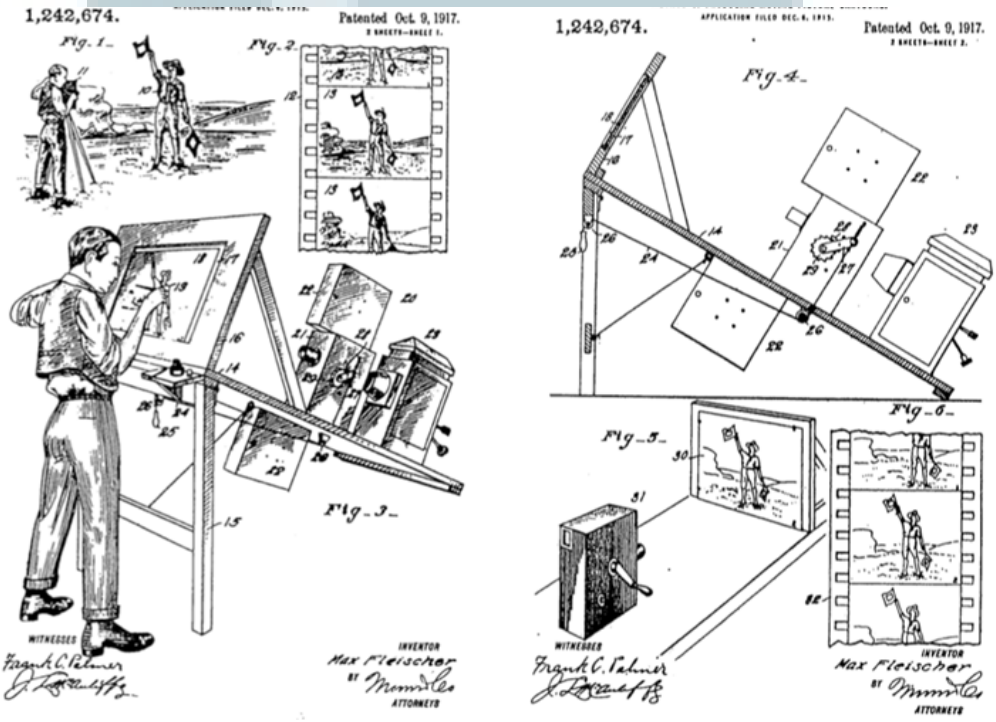

Figure 1. Max Fleischer's rotoscope and the way it works.
(source: The Fliescher Rotoscope Patent)

Figure 2. Multi layers were used in Snow White and Seven Dwarfs.
(source: Snow White and the Seven Dwarfs (Original Theatrical Trailer #1) 1937)

Another famous animator is Raplh Bakshi. Ward (2004, p37) also stated that he was an independent director. His animation, Lord of The Ring (1978) received many critics as well. The rotoscoping process used here was based on footage of an actor who performed against plain backdrops, the animators adding more details during drawing process. This movie received many critics because it was considered as a waste of time and energy. People argued that it was better to do it in a live action.

Digital rotoscope today

In the past , rotoscope involved tracing manually from the live action to make a cartoon film. However, with advances in computers and software technology, rotoscope has grown much better today. With the advanced technology, animators could do everything in the computer. The article 'Rotoscope Artist' analyses the use of contemporary rotoscope. Today, digitally rotoscoping is done with a 2D image processing and drawing tool.

Bob Sabiston is known as an animator who created a new technology for rotoscoping (2011, p.73). He cooperated with Flat Black Films to make a rotoscop software in 1990s which was used in his short films: Incognito (1997), Roadhead (1998) and Snack and Drink (1999). One of his known short film animation is Walking Life (2001) which brought much attention to the animators who worked on it. It is digitally animated from the pre-shot the filmmakers took but he also controls the colours and techniques. Nowadays, other software developed for rotoscoping are Shake, Nuke and Digital Fusion.

Most of the Hollywood movie use rotoscope techniques, including Star Wars, Jurassic Park, The Lost World and Titanic. Titanic (1997) used rotoscope in some of the scenes like the close ups of Jack and Rose in the deck scenes and their breathing. Digital rotoscope artists use mattes and key frames to rotoscope. They interpolate the significant in-betweens and adjust the parameters of opacity and colour correction. They argue that the effects, the techniques are

Figure 3: A rotoscoping animated commercial with surrealism effect.
(source: Spot Ceres – La Citta Ha Bisogno Di Eroi)

used to serve the story.

Although rotoscope leads to motion capture and some other techniques by using advanced technology, the basic fundamentals in doing rotoscope is still the same. Tracing over the images from live actions. The differences are they could be more creative by adding more

visual effects and adding some elements to the drawings. They could make it look more cartoony or realistic. This is known as CG compositing. This is also leads to motion capture. One example of motion capture is "Boewulf" that has been discussed by Deitch.

Therefore, people who are involved in modern rotoscoping in animation studios and productions are often called a "compositor". Many animation studios and productions are using rotoscope because of it costs less but still can create good films. Often it is used for commercials and products design. One of the commercials that used rotoscoping is Spot Ceres – La Citta Ha Bisogno Di Eroi (2012). An Italian drink commercial with less jittery movements. The movements are realistic and the look is cartoon because of the colour. They also added surrealism effects such as a girl with octopus hands.

The aesthetic of rotoscope

The three authors discuss the aesthetic of rotoscoping and motion capture. There is general agreement among the articles that these methods have great advantages in term of aesthetics in arts.

Both Sabiston (2011) and Ward (2004) claim that rotoscoping has the ability to control the looks and the animation itself. While Sabiston (2011) who is the founder of the Rotoshop software claims that his rotoscoping software is a time and labour saving device, Ward points out that it is seen as a challenge and crucial in animation as in term of its aesthetic and the production. Sabiston's Rotoshop captures the movement of realism and by using interpolation change, eliminating jittery shimmer. He finds it as a great skill and artistic ability. Similarly, Ward argues that rotoscoping enables animators to produce moving characters with a naturalistic motion. There is an example by Ward when he mentions about the film Walking Life. They used digital grading, a frame by frame animation so that the movement looks so real and attract animators' attention.

Furthermore, Sabiston (2011) highlights rotoscoping is different to motion capture as it has human element by using hand drawing to express the form of the characters. In addition, the recording method is also done by a person not a machine. The aesthetic of rotoscope is so genuine because it is done by hand. However, Deitch (2008) claims that animation should not be categorised by their technical process but rather as a film as a whole. He also states that it has no business to imitate live action because the creation can be widely anything. The three studies express that rotoscope creates a great aesthetic that is different from a hand drawing process.

Realism of rotoscope

The three articles (Sabiston, 2011; Ward, 2004; Deitch, 2008) state that an rotoscoping is anthropomorphism because it mimics the reality so closely.

Sabiston (2011, p.78) describes Rotoscope as a photorealistic because the movement is so realistic. Even though they trace the actual image, they still draw it by hand and make it look very realistic. It also depends on animators as to how far they mimic reality in their work. In order to accomplish their natural realism image, they could polish the image, with absolute faithfulness to the author and their performance.

According to Ward (2004), due to the realistic movement effects, audience may find the eerie experience. Because at the same time, they feel like the movement is very real, in contrast to the cartoon aesthetic of the work. The realistic

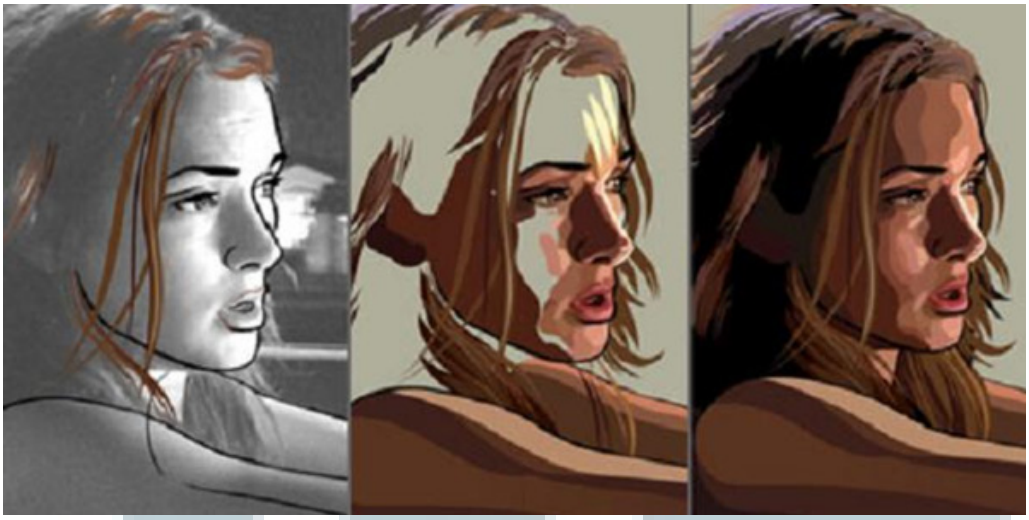

Figure 4. The process of rotoscope taking a form.
(Source: Rotoscoping: A Promising Art)

representation can lead the audience to feel unsettle as they are not sure if it is real or not. Ward (2004) gives an example of Richard Schickel who complains about Snow White and the Seven Dwarfs. He states that there is a big gap in the smoothness of animation between the human and the animals, looking jerky and hesitant.

Deitch (2008) states that realistic human figure can be achieved by advanced technology and many films that are shown in the movie used motion capture to create realistic movements. All three articles make a significant point that the way rotoscope mimics the reality of the structure, the proportion and the movement. This is called anthropomorphism.

What is animation?

Many critics that appear when people see animated films with rotoscoping are a form of cheating, image filtering and not a proper animation. In order to make an argument about whether or not rotoscpoing is a "true" animation, they should know the definition of animation itself.

Kit Laybourne (1998, p.26), The Animation Book explains that animation occurs when single still images are put together and viewed in sequence to create the illusion of movement. Human vision and the brain create the movement.

Sifianos (1995, p.92), describes what animation is according to Norman McLaren. There are three significant aspects of animation. He analyses that animation is 'the art of movement that drawn', the progress between frames is more crucial and it 'manipulates the invisible'.

However, Sifianos (1995, p.93) is not fully agree with McLaren. He agrees that animation manipulates the invisible because animation is like a magic, animators give life to objects that does not move. They make the audience believe that they are moving when they are actually not. In his opinion, the movement cannot be drawn. Animators create the illusion of movement. He is also wondering why images is less important than the process.

Sifianos (1995) also lists some qual-

ities that animator needs to be a good animator. They should know the timing between frames. It is a significant decision to time the movement because only their heart can tell, he called it as 'heart of animation'. Also, animators should study the 'anatomy of motion', observe the movement from real life and experience it themselves. For example, when they would like to animate an angry person hitting a table, they should observe when people doing it or even try to hit the table themselves.

Perspectives and reflections

Based on the three articles (Ward, 2004; Deitch, 2008; Sabiston, 2011), I have concluded that Sabiston (2011, p.77) has a fairly balanced view on rotoscoping. Although he agrees that rotoscop is not truly animation considering the value of making from scratch, he points out is not just tracing. He states that even though he works in Rotoshop, the essential is still a form of animation. Sabiston (2011, p.79) says, "It is taking feature from live video and extending them, amplifying, commenting upon, even veering into true animation". Even though they are tracing from the footages, they still do drawing by hand. Even when they rotoscope in the computer, the artwork is still in the hand of animators. He also against people who critiques about rotoscope that say rotoscope is a form of image filtering, a cheating. He argues that they did not understand how long it takes animator to work up to rotoscoping.

Ward (2004, p.38) agrees that rotoscope is a proper animation. He believes that there is energy in doing rotoscoping and it is crucial because it gives a sense of realism. This is a response to the critique of Lord of The Rings (1978) by Ralph Bakshi. Even though when people argue that 'it should have done in live-action', he thinks the aesthetic of the process in animation is important. In order to make a better realistic effect, they can use widescreen or even add colour and synchronise sound.

Although Deitch (2008) talks about motion capture, there is a similar artistic concept and process that happened between rotoscope and motion capture. He thinks that mostly any movie that has been produced today has some animation if effects animation is included and he mentioned that people should not categorize films by the techniques. What really matters is the story of the film.

I agree with all of these writers that rotoscope should be considered as true animation because even though basically they trace the footages of live action, they do a lot more in creating the whole film. They do not trace the whole animation in the video for the whole film, the footages are there as the source or reference to animators. They sometimes skip over frames. In my opinion, they also could create a different character to a human in the video, they could change the shape or add colours and lines. There is a lot of creative freedom possible. Sabiston (2011) states that animators tend to think a way to speed up the process of making a film. In my opinion, since the technology is so advanced, the animators have a choice to use the technology. There is nothing wrong to use what technology has to offer. Just like farmers who are now using tractor to plow the field, this does not mean that they are no longer farmers. I suggest this also applies for animators. In fact, being an animator still requires the skills to be able to give illusion of movements. Sifianos (1995) highlights that even with the technologies, they still need to know same basic knowledge, have an understanding of design and have the patience and have desire to devote time and effort to their work.

Conclusion

All the three types of research make a significant contribution to an understanding of how rotoscope works. The articles make useful proposals as to why there are some critiques about rotoscoping and what animators say about it. The technology that contributes to animated films is an interesting filed and is definitely worth closer study as it develops in the future.

This assignment has broadened my understanding on how rotoscoping works, how it was developed and how it has changed during the past few years with computers and software and how it is linked to contemporary animation. Through the articles and interviews, I find myself agreeing with Sabiston (2011), Ward (2004) and Deitch (2008).

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