



Colors in Video Artworks

How the Color Theories Can Help to Create Atmospheres and Implications of Emotions

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ABSTRACT

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The most important parts of color theories of the moving image are discussed in this thesis. The thesis starts with discussing the history of color theory, more specifically Isaac Newton's discoveries about colors and the history of how the three primary colors in fine arts were agreed upon, alongside with the development of the color circle. Modern color theories by Johannes Itten and Josef Albers are also explored.

Itten developed the color circle that includes the primary, secondary and tertiary colors. It is still often used during the introduction to color theory nowadays. Furthermore, in this thesis the seven color contrasts by Itten and their predicted outcome and effect on the artwork are presented, as well as the deceptive nature of colors as described by Albers. In the last part of the discussion about color theories in the moving image, the different meanings that colors carry are investigated. Discoveries about the change of meaning, depending on context and background of the viewers were made. Nonetheless there are more common associations of a certain color with a certain emotion, which has been used in cinematic works, for example in Alfred Hitchcock's films.

As examples of how video artists apply color theory in their work, the works of Pipilotti Rist and Isaac Julien were examined and analyzed. It was concluded that color is a powerful tool that can help artists to create strong atmospheres and implement emotions in their work.

After a deep research into color theory and looking into cases where the influence of color can be clearly seen in the work, *Seek||Shift* was created as the case study. The report of the work process is presented. In *Seek||Shift*, the color theories by Itten and Albers, along with the psychological effects of colors to create feelings and emotions that are associated with teenagehood, were utilized. This project was created to be part of the *Kaleidoscopers* exhibition at Galleria Himmelblau, Tampere in spring 2021, but it had to be postponed to autumn 2021 due to the Covid-19 situation.

Key words: color theory, psychological effects of color, video art, fine art

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GLOSSARY

achromatic colors	colors that lack hue
aposematism	the use of a visual signal (bright colors) by animals to warn others that they are poisonous
avant-garde	new and experimental
brilliance	vividness of colors
hue	color and shade of color
low-keyed lighting	a lighting technique commonly used in film noir, using back light and fill light to separate the character from the background
primary colors	colors that cannot be achieved through mixing other colors together
saturation	the intensity of a color
secondary colors	colors achieved by mixing the primary colors
tertiary colors	colors achieved by mixing the primary and secondary colors together
tint	shade of a color
value	the relative degree of lightness or darkness in a color

1 INTRODUCTION

I began this thesis by discussing the most important color theories in fine arts. Starting with the discoveries of color, in the form of colored lights by Isaac Newtown which led him to create his own color circles with seven primary colors arranged in connection with musical notes. Then I discuss the issue of finding out the primary colors, specifically the primaries used in fine arts.

Next, I look deeper into color theory by examining the theories by Johannes Itten (1888–1967) and Josef Albers (1888–1976) in their books *The Art of Color* and *Interaction of color*. I discuss the seven color contrasts by Itten and their intended effect and explore the deceptive nature of colors, according to Albers. Along with his theory on color, using the color triangle. To close the chapter about the color theories, I discuss the different meanings the colors could imply mainly by looking through the western eyes.

As examples of the video art works with the use of extraordinary color worlds, I discuss the works by Pipilotti Rist (1962–present) and Isaac Julien (1960–present). Both artists use colors as an aesthetical tool and utilize them to either harmonize the work or create subtle disturbances. I analyzed the award-winning work *Ever Is Over All* (1997), by Pipilotti Rist. The work is about feminism. I connect the color theories discussed in the chapters before and see what kinds of results and correlation there are to the atmosphere and meaning of the work.

Then I discuss the works *Looking for Langston* (1989) and *Ten Thousand Waves* (2010) by Isaac Julien. *Looking for Langston*, a work about the poet Langston Hughes who is African American and is assumed to be homosexual, is an example of how artists can implement the lack of color in a work. *Ten Thousand Waves* is a work which was inspired by the very tragic Morecambe Bay incident in 2004. Julien worked closely with Chinese artists to create a work which views the tragedy from a Chinese perspective. The work utilizes a lot of color to create harmony and underline the storyline.

As a study case I present a report of my own project *Seek||Shift* which was supposed to be exhibited as a part of the degree show *Kaleidoscopers* at Galleria Himmelblau in spring 2021. Due to the stricter guidelines and safety measures, because of the Covid-19 situation, it has been postponed to autumn 2021. Instead, the work was premiered during the International Week online exhibition and previews are available on the www.kaleidoscopers2021.com website, along with the video walkthrough of the virtual reality gallery.

Seek||Shift is about conveying the feelings of teenagehood through a perspective of someone reliving it. I tried to portray my own experiences and struggles using the color theories of Itten, Albers and the researched effects of colors, to underline and implement the emotions and feelings which hopefully the viewers will feel too. The artwork is 7 minutes long and is designed to be projected largely, on a wall in a dark room with yellow seating around it to give a feeling of comfort to the viewers.

2 COLOR THEORY

2.1 History of color theory

Color theory as we know it today started around the 17th century, when Isaac Newton (1643–1727) published his paper *New Theories of Color*, in which he defines the scientific aspects of color and how it is created (Shevell 2003, 2). Nonetheless observations about color and theories about the aesthetical aspects of it can be dated back to the ancient Greek philosophers. These theories would affect the views on color theory in Europe heavily. (Kuehni 2012, 224.)

2.1.1 The Theory of color by Isaac Newton

The knowledge of sending light through a prism and it exiting as colored light was already available. But prior to the findings of Newton people believed that colored light was a modification of white light, which is light in its purest form. Newton discovered through an experiment called *Experimentum Crucis* (Figure1) that different colored lights have different abilities to be refracted. This ability to be refracted is also called refrangibility, the light which is most refrangible has a deep violet color and the light that is least refrangible is red. (Shevell 2003, 2.)

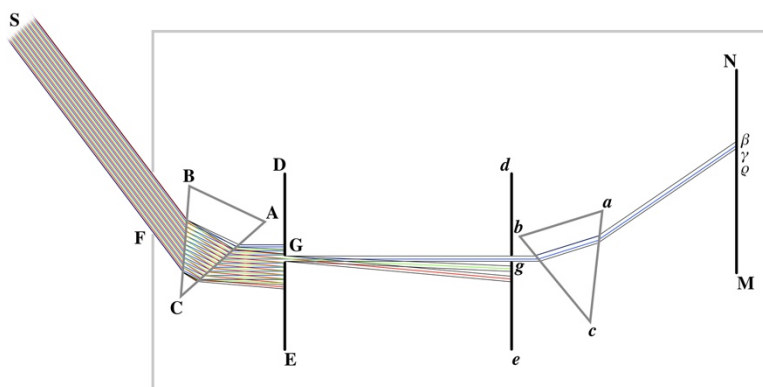


FIGURE 1. Newton's *Experimentum Crucis* (Müller 2015)

Counter to the belief at the time that the prism modifies the white light to be different colors, Newton discovered that color is a quality of light and it can be either simple or compound. The prism doesn't modify the white light, it breaks the

white light into the different colors, which can be observed, and white light is a combination of all the colors. (Shevell 2003, 3.)

Newton also made his own color wheel (Figure 2) with seven sections according to the diatonic musical scale. The circle represents the center of gravity, the sections are categorized as p, q, r, s, t, v and x, proportional to the number of colored rays. Z is the center of gravity which predicts the color of the mixture and the radius predicts the saturation. (Ribe & Steinle 2002, 43–49)

There are seven primary colors in his model (Kuehni 2012, 233): orange, yellow, green, blue, indigo, violet and red.

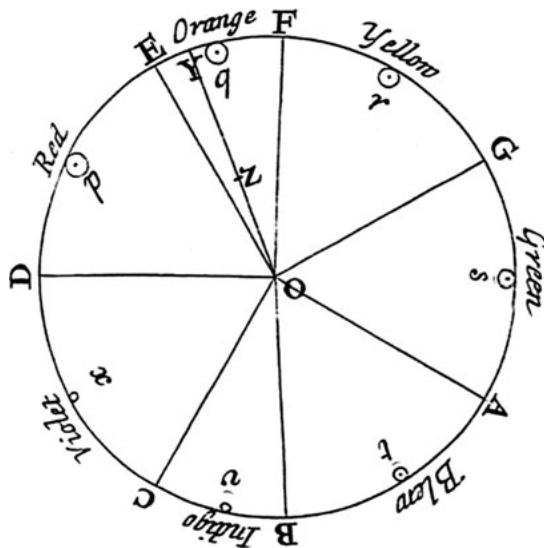


FIGURE 2. Newton's color wheel (ca. 1665) (Ribe & Steinle 2002, 43–49)

2.1.2 Primary colors

According to Aristotle, there are five primary colors: yellow, crimson, violet, leek-green and dark blue. Newton argued there are seven. (Kuehni 2012, 224, 233.) So how many primary colors are there?

During the 12th century monk and lecturer Francis Bacon argued against Aristotle's five primary colors and reduced them to three: yellowness, redness and blueness. This idea however didn't pick up until the diagram by Aguilonius in 1613 (Figure 3) with the interpretation of Ruben and Kirchner in which they assigned red, blue and yellow as the primary colors. (Kuehni 2012, 232.)

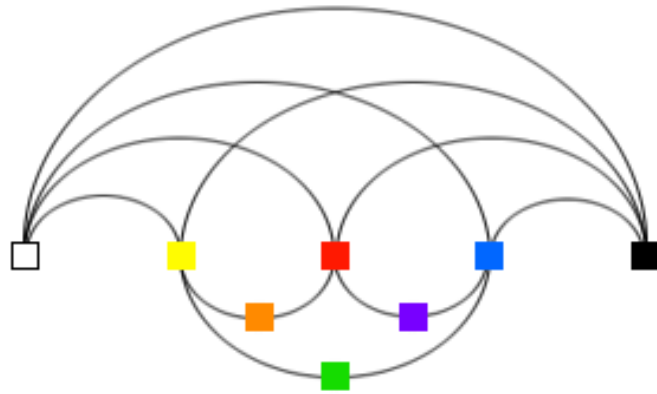


FIGURE 3. Aguilonius color diagram (1613)

The first known published and completed color circle (Figure 4) is in a French publication of the book *Traité de la peinture en miniature* in 1708 by the Dutch publisher van Dole. The author of the book however is unknown, but it is often accredited to Claude Boutet (lived between the 17th and 18th century). In this book the primitive colors are described as yellow, fire red, carmine red and blue. (Kuehni 2012, 233.)

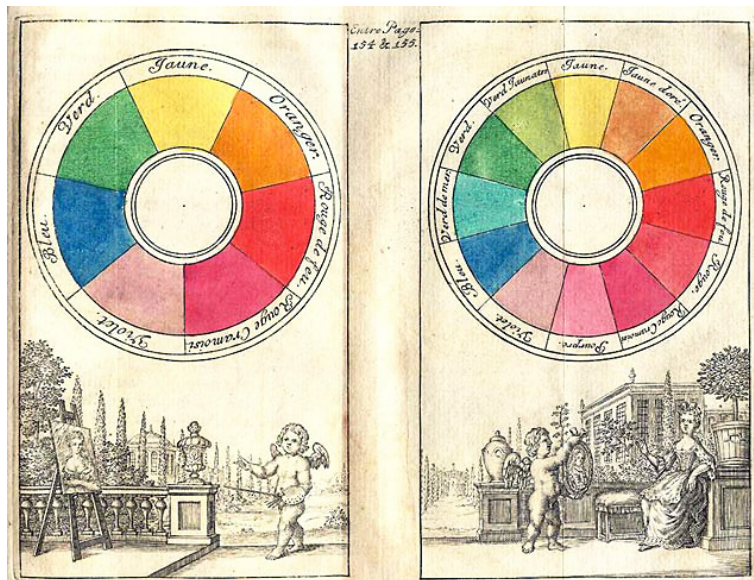


FIGURE 4. color circle from *Traité de la peinture en miniature* (1708) (Kuehni 2012, 234)

In 1808–1810 Johann Wolfgang von Goethe (1749–1832), a German naturalist and poet, released his book *Zur Farbenlehre* (Theory of colors). He aimed to help his artist friends by coming up with a color system and assigning ethical values to the colors. His hue circle (Figure 5), which was published in this book, is still being used in some form by artists today. (Kuehni 2012, 234.)

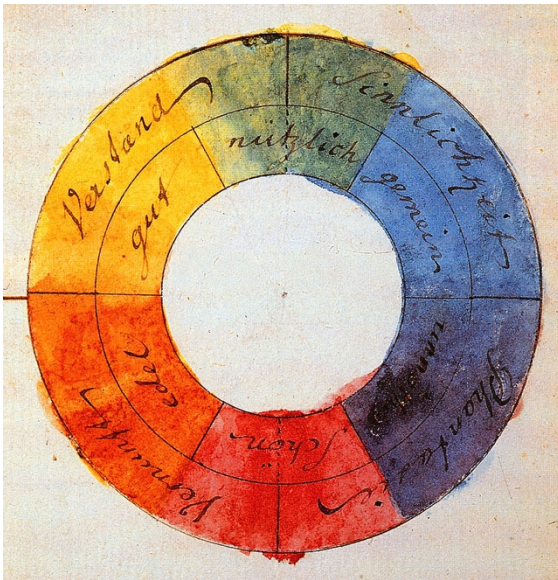


FIGURE 5. Goethe's hue circle (1809)

The influence of Goethe's color studies can also be seen from Goethe's color triangle (Figure 6), even though he never mentioned this triangle himself. It can first be found in 1930 in a book by Carry van Biema (1881–1942), an artist and art educator. The triangle is later on also mentioned by Johannes Itten and Josef Albers in *The elements of color* (1961) and *Interaction of color* (1963). Goethe's triangle consists of three primary colors: red, yellow and blue, on the corners, and the secondary and tertiary colors in between. (Kuehni 2012, 235.)

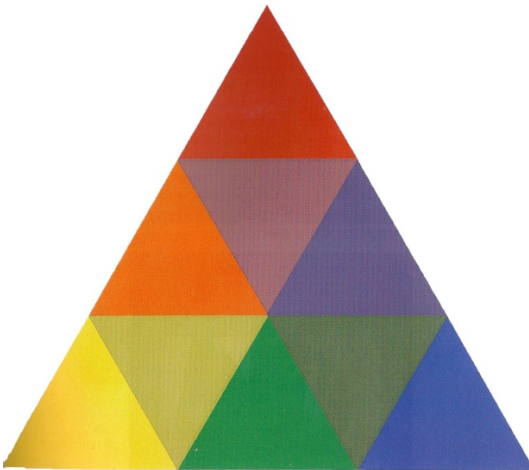


FIGURE 6. Goethe's color triangle (1930)

Nowadays artists agree that there are three primary colors: red, yellow and blue. These primary colors mixed create the secondary colors and those in turn create tertiary colors.

2.2 Bauhaus colors

2.2.1 Johannes Itten

Johannes Itten (1888–1967) was a teacher at the Bauhaus from 1919-1922, his teachings were fundamentally about color theory (Smith n.d.). He mainly taught painting at the Bauhaus and throughout his life. His style of teaching however was very unusual for the time. He valued creativity and according to Zuffi and Pistolesi (2012, 22), he would have had his students do physical activities to loosen them up and help them to concentrate. Itten also had his students examine the colors of an abstract painting and then on a more realistic one. Finally, they apply the findings to their knowledge of classical Artworks (Smith n.d.).

After fleeing Germany from the Nazis in 1934, Itten moved on to teach at the School of Applied Arts in Zürich, Switzerland. In 1961 he published his findings on color theory in his book *Kunst der Farbe* (the art of colors), his book and findings are to this day referenced by many artists. (Zuffi et al. 2012, 22–23.) Amongst many of his other theories on color he was the founder of the twelve-part color circle, which includes primary, secondary and tertiary colors (Figure 7). This color circle is still used frequently to teach color theory to this day. (Smith n.d.)

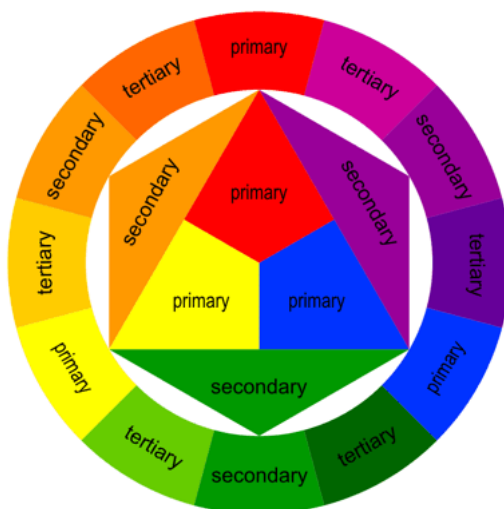


FIGURE 7: Itten's color wheel (1961)

Itten also categorized the approach to color contrast into seven different methods:

- Hue

Hue is the color itself. Red, blue and yellow for example are hues. Primary, secondary and also tertiary colors are hues. According to Itten by Birren (1991, 33) “the contrast of hue is the simplest of the seven”. Contrast of hue could just be the contrast of the primary colors: red, blue and yellow or it could also be other combinations such as: blue, yellow and violet. For the hue contrast to work, the minimum amount of three distinctive hues is needed. The effects that could be gained by this, “is always tonic, vigorous and decided” (Itten et al. 1991, 33). The further the hue is from the primaries, the weaker is the effect.

- Light-Dark

The simplest and strongest contrast of light and dark is the contrast of black and white. They are opposite of each other and in between are all the values of grey and chromatic colors. On both ends of the color spectrum there is only one brightest white and one darkest black, in between, though, exist infinite values of grey. The contrast of light and dark in art can bring depth and shape into a work. A neutral grey color has the ability to be a complimentary color to any color that is placed next to it. The color that is placed next to it could give the grey more character or the grey could also mellow out the vibrance of the other color.

When it comes to chromatic colors, the contrast is more complicated. Generally, the brilliance of achromatic colors is easily distinguishable, it's easy to tell different grey tones apart. With chromatic colors of different hues however, it is more difficult to tell which one is more brilliant. Pure saturated yellow for example is lighter than pure saturated red. Because of this, Itten developed a twelve-step color diagram, including twelve steps of grey squares from white to black and next to them hues from the hue circle with matching brilliance (Figure 8). In this color diagram the pure yellow is in the third step, orange is in the fifth step, red at the sixth, blue

at the eighth and pure violet, as the deepest of the pure colors at the ninth. (Itten et al. 1991, 37–42.)

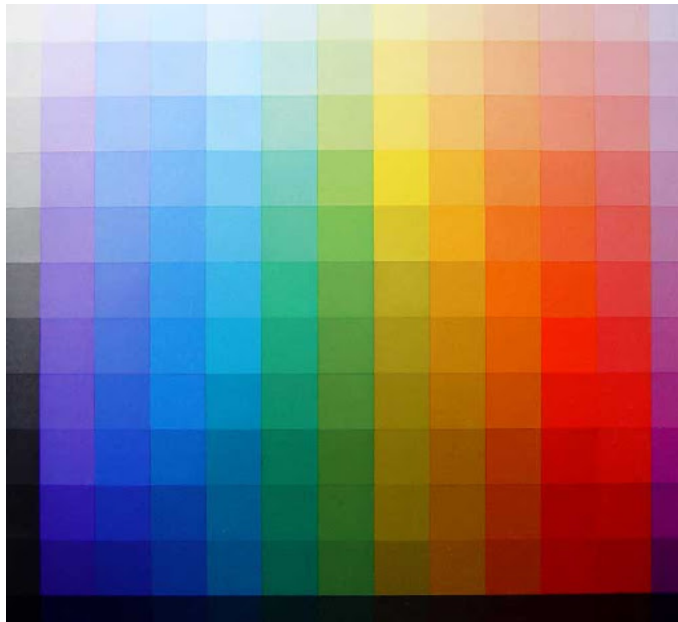


FIGURE 8: Itten's twelve step scale (1961) (Itten et al. 1991, 43)

- Cold-Warm

According to Itten, colors can be connected “to the sensation of temperature” (Itten et al. 1991, 45). In an experiment, one workroom was painted blue-green and the other one red-orange. In the blue-green room subjects felt cold at the temperature of 59° F (15° C) while in the red-orange room the subjects didn't feel cold until the temperature dropped to 52–54° F (11°–12° C). So, in conclusion of this experiment, the subjective feeling to blue-green is more cold and to red-orange is more warm.

In the hue circle we can find yellow and purple, which are the opposite hues on the light-dark contrast, also opposite of each other in the circle. On the circle blue-green and red-orange can also be found opposite of each other, they are the two opposites of the cold-warm contrast. But like the dark-light contrast, where the lightness or darkness of greys are always relative to the color next to it, coldness and warmth of some hues are also relative to the temperature of the hue next to it. However, generally speaking, yellow, yellow-orange, orange, red-orange, red and red-violet are regarded as warm and yellow-green, green, blue-green, blue, blue-violet and violet are referred as cold. The effect of this contrast, besides

creating a warm or cold atmosphere, is that objects can be perceived as further away when they are cool toned and closer when they are warmer toned. (Itten et al. 1991, 45–48.)

- Complementary

If the pigments of two complementary colors are mixed together, they will create a neutral grey-black. But if the colored lights of complementary colors are mixed, that on the other hand will create white. On the color circle the complementary colors are directly opposite of each other, for example:

red-green

blue-orange

yellow-violet

When placed next to each other, both can maximize the vividness of their complementary color, but when mixed they'll extinguish each other to grey. (Itten et al. 1991, 49.)

- Simultaneous

According to Itten the simultaneous contrast takes place because the eye, when it sees a color, simultaneously requires the complementary color. We will generate this color in our mind if the complementary color is not present. Because this effect happens in our mind, it cannot be captured. The contrast can be seen in Figure 9, smaller grey squares with matching brilliance are placed inside bigger squares. The grey square which can be found inside the yellow square will have a slight violet tint to the eyes, the grey square inside the orange square will have a slight blue tint. Further examples can be found in the appendices.

This effect doesn't only appear on greys next to a strong chromatic color, but it can also happen between two chromatic colors, one can shift the tint to fit the complementary of the other. Because this effect is generated subjectively in the eyes of the viewer, it generally gives the viewer a feeling

of excitement and a “lively vibration of ever-changing intensity” to the colors. (Itten et al. 1991, 52–54.)



FIGURE 9: Itten: Simultaneous contrast effect on grey square (1961) (Itten et al. 1991, 53)

- Saturation

The saturation, also called quality, describes the purity of the color. Contrast of saturation is the contrast between the pure and intense color and the diluted and dull color. There are four ways that Itten describes how to dilute a color:

- 1) Added white will dilute a pure color and the resulting color will be cooler toned.
- 2) Color can be muted and diluted with black. It will make the resulting color darker, duller and therefore the color will lose its liveliness.
- 3) Added grey will render the pure and saturated color to a duller and more neutral version.
- 4) Saturation can be diluted by mixing in the corresponding complementary color. The result will be a dimmer, more diluted hue. It'll either be reddish, yellowish or bluish depending on the color it's been mixed with.

If two colors are placed next to each other a hue might appear more vivid next to a duller hue and a hue might appear more vivid, when placed next to a hue that's duller. This is the effect that can appear as a result of the saturation contrast. (Itten et al. 1991, 55–58.)

- Extension

The contrast of extension deals with the proportions of two pure complementary colors together. To create balance and a static, harmonious and quiet effect, the colors must follow the recommended proportions. These proportions are created by exploring the brilliance or the light value of each color. Goethe set up a simple numerical ratio for the approximate brilliance of the primary and secondary colors. The values as such are:

yellow : orange : red : violet : blue : green
 9 : 8 : 6 : 3 : 4 : 6

Transferred to complementary pairs these proportions are:

yellow : violet = 9 : 3 = 3 : 1
 orange : blue = 8 : 4 = 2 : 1
 red : green = 6 : 6 = 1 : 1

Figure 10 shows a circle with the colors in proportions to their values. As stated earlier, using the colors with the right proportions can create a more static feeling, but disturbing these proportions selectively can create luminosity to the complementary colors. This contrast allows color compositions and planning what effects are desired. Examples of figures with proper color proportions and disturbed proportions can be found in the appendices. (Itten et al. 1991, 59–63.)



FIGURE 10: Itten: Circle including primary and secondary color with harmonious proportions (1961) (Itten et al. 1991, 61)

2.2.2 Josef Albers

Josef Albers (1888–1976) was a student of Johannes Itten at the Bauhaus and later moved on to be a teacher there in 1925. After the closing of the Bauhaus, Albers fled to the United States of America where he would continue teaching at Black Mountain College and Yale. (Smith n.d.) During his years at Yale, he wrote his book *Interactions of colors*, which was first published in 1963. He developed an experimental way to study colors and concentrated on the perception of color and the observation of the color's behavior. (The Josef and Anni Albers Foundation n.d.)

In order to use color effectively it is necessary to recognize that color deceives continually. To this end, the beginning is not a study of color systems. First, it should be learned that one and the same color evokes innumerable readings. Instead of mechanically applying or merely implying lays and rules of color harmony, distinct color effects are produced through recognition of the interaction of color by making, for instance, 2 very different colors look alike or nearly alike. (Albers 2013, 1.)

There are many ways that we might perceive colors differently, or in other words how colors could deceive us. To show the many effects and deception colors can have, Albers illustrated and described the experiments in *Interaction of color* for his students to recreate and observe the effects themselves. Figure 11 shows one of the illustrations from the fourth chapter of the book, describing how two squares of the same color could look like two different colors depending on their surrounding colors.

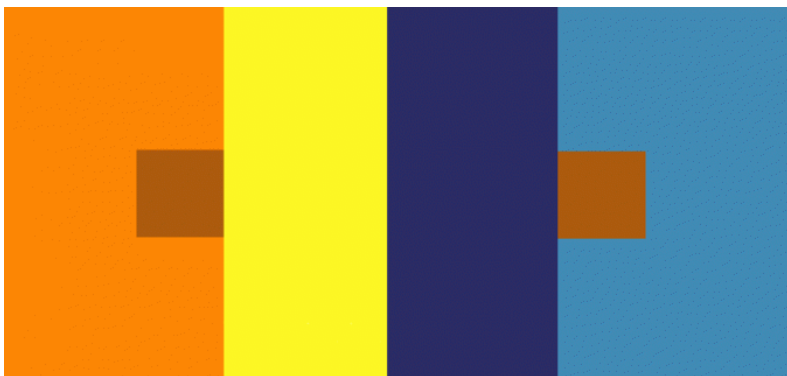


FIGURE 11: Albers: Relativity of color (1963) (Albers 2013, 77)

After studying and experimenting with the behavior of the colors, students can learn about color systems and color theory. “The more a creative use of color

developed, the less desirable became a merely trustful and obedient application” (Albers 2013, 65). In the color theory part of the teaching Albers uses the color triangle also called the Goethe’s color triangle in the earlier chapter (Figure 6). Along with the primaries, secondaries and tertiaries, the color triangle also shows the complementary colors with their mixture, dominated by the primaries, in between them. Psychological effects like melancholic, serene, mighty, serious and lucid are also applied to a combination of colors. Blue, green and blue-violet for example gives a melancholic effect. (Albers 2013, 66.) Figure 12 visualizes the different ways to read the color triangle.

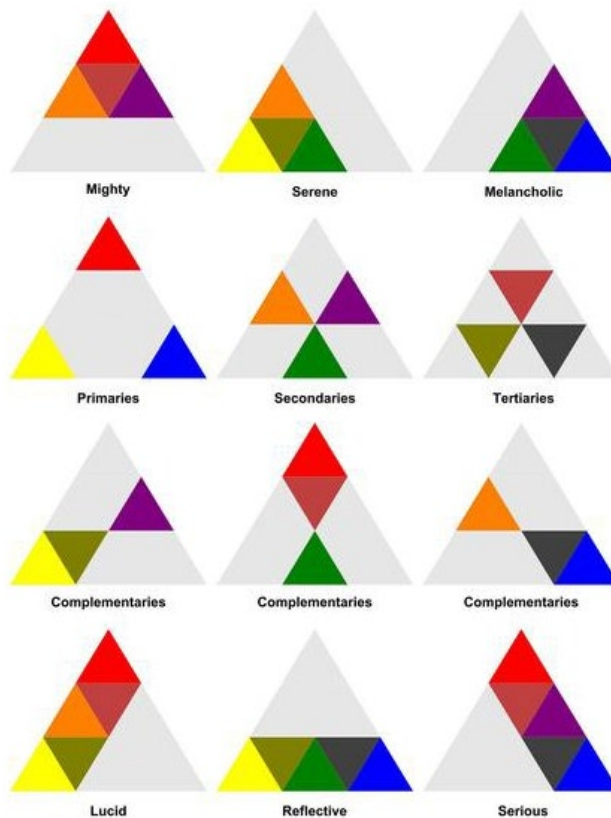


FIGURE 12: Albers: Color triangle (1963)

2.3 Colors and Emotions

As stated in the previous chapters of this thesis, colors have been linked to psychology and they carry certain meanings. Goethe has assigned ethical values to the colors in his hue circle, in the teaching of Albers, some color combinations can create certain feelings and Itten has mentioned that certain colors have physical effects such as warm and cold (Kuehni 2012, 234; Albers 2013, 66; Itten et al. 1996, 45). The perception of the meaning of color can be subjective and vary between cultural backgrounds, age, place and context. One color could carry

different meanings in two different contexts. For example, red can be perceived as danger or it can be perceived as passion in two different contexts. It is clear, however, and can be agreed upon, that colors do carry an effect on our cognition and feelings. (Elliot & Maier 2014, 95–120.) The following paragraph will describe these effects according to some studies through the western point of view.

According to an article in the annual review of psychology by Andrew J Elliot and Markus A Maier (2014), red is the most prominent color in terms of evoking a feeling “red is the color of blood, therefore, the color of life and (when spilled) death”. It carries the meaning of love and arousal through blood flow in the body on the other hand it can also be a symbol of illness and danger, as it can be a sign of poison in the wild. (Elliot et al. 2014, 95–120.)

Blue and green haven't been as widely researched as red. But there are some, and, according to their findings, these hues generally have a positive effect and have recently gained attraction for marketing purposes. They carry the meaning of nature/ natural (blue=water, sky; green=plants, forests) and therefore eco-friendliness. (Elliot et al. 2014, 95–120; McGinnis 2015.) More precisely, blue generally carries meanings of openness and peace, green generally gives the effect of calmness and success (Elliot et al 2014, 95–120).

Like red, yellow is often used as a sign of warning and danger, because of its link to aposematism in nature. Some studies have also shown that yellow might have a negative or hostile outcome in performance. Black and white can have negative and positive undertones. Usually, black is linked to greater and white to lesser in terms of aggression. Black can also be associated with fashionableness and attractiveness. (Elliot et al 2014, 95–120.)

3 VIDEO ART

3.1 Differences in the color worlds between film and video art

There are generally three different distinctions in moving image: traditional cinema, artist films or avant-garde film and video art. Traditional cinema and artist or avant-garde films generally follow some sort of plot and storyline while usually having dialogues as well. Cinema is more commercial and is made for a bigger mass of people with profit in the foreground. Avant-garde films explore different tools and experiment with ways to tell a story with aesthetic as the focus of the film. Video art however is about using moving image as a tool and discovering new ways to experiment and manipulate it to fit the artist's vision, traditional rules in film such as dialogue and story line don't necessarily apply to video art. (Williamson, 2016.)

3.2 How video became art

Video as an art form emerged in the late 1950s and early 1960s. By the mid 1950s Television became widely available in North America and Europe. According to Hall and Fisher (1990, 71), there has been a growing amount of people owning television sets and the time spent watching also increased. But all the content shown is commercially curated and created by corporations or state-run systems. So instead of television being the communication channel that it claims to be, it has become this one-sided marketing medium for the corporations instead. (Hall & Fisher 1990, 71)

With the release of the portable video tape recorder and the video player in 1965, artists saw a potential to take the medium into their own hands and create an alternative to the existing medium of commercial television (Hall et al. 1990,71).

It is widely believed that the practice of video art started when artist Nam June Paik (1932–2006) followed and filmed the Pope's visit to New York City on the 4th of October 1965 with the Sony Portapak video tape recorder and held a screening that same evening in a place called Cafe au Go-Go. The technicalities

of this work concerning the filming equipment was controversial, since several historians and artists have pointed out that the Sony Portapak tape recorder did not become commercially available before 1968. However, Paik did have his showing at the Cafe au Go-Go and in combination with his exhibition in 1963 at Galerie Parnass in Wuppertal (Germany), this earned Paik the title of the first video artist. (Meigh-Andrews 2006, 16.)

3.3 Analyses of the use of color in video art

3.3.1 Pipilotti Rist

Pipilotti Rist, born Elizabeth Rist, is a Swiss video artist born in 1962 in Rheintal, Switzerland. She combined her childhood nickname Lotti with the first name of a children's book character by Astrid Lindgren, to get her artistic moniker Pipilotti in 1982. (The Guggenheim Foundation n.d.) Her work deals with topics of sexuality, the human body, feminism and the many ways it means to be a woman in this society.

One of her most well-known work is a two-channel 4:07 min long video called *Ever Is Over All* (1997). Currently in the collection of the Museum of Modern Art in New York. In 2000 the video received a Premio Award at the Venice Biennale. (The Museum of Modern Art 2019; The Guggenheim Foundation n.d.)

The work shows a woman wearing a blue dress and red shoes walking down a city street carrying a red flower. Meanwhile the other projection shows a green field with close up shots of the same red flower, which the protagonist is holding. The two projections are overlapping each other in the middle seamlessly. The protagonist is walking with a smile on her face. The calm and positive atmosphere is highlighted with the music and the slowing down of the footage. The positive and calmness, however, gets regularly disrupted when the protagonist commits a violent act by smashing the windows of the nearby cars with the flower she is

holding. At some point a female police officer passes her and gives her an approving nod. (The Museum of Modern Art 2019)



PICTURE 1: Pipilotti Rist: *Ever Is Over All*, installation view, (1997)

The Museum of Modern Art (2019) describes this act as “a poetic use of magical realism”. The flower, usually seen as fragile and feminine, is used as a weapon, which is strong enough to break the window of a car. An object that is commonly tied to masculinity.

Rist shot the video in one take using a consumer grade video camera. The quality of the camera created color noise, where colored pixels are bleeding into each other and according to Rist (2011), creating an “aquarelle” look to the video. In an interview with the Louisiana Channel in 2011 she states, that moving image for her is like painting. Rhythm is created through editing, but most importantly, the painterly quality of the video originates from the use of color and color correction. Her videos are, according to her, not peculiarly colorful. She herself is “not more colorful than life is” (Rist 2011). But we are used to seeing less color in video works because it is often associated with advertisements and many artists try to stay away from that. However, Rist doesn’t shy away from it, she often enhances the colors in post production to create a more saturated and vivid tone in her video. When applying color theory from the previous chapters, the following analyses can be made of the work:

The video (Picture 1) is for the most part cooler toned. The dress of the protagonist is light blue, as well as the uniform shirt of the police officer. On the other video that is projected simultaneously, a lush green field is shown. According to Elliot and Maier (2014) blue and green are connected with the feeling of peace and calmness and the hues have a general positive effect. This underlines the peacefulness and the calming atmosphere of the video which is already established through the music and the slow motion effect.

The cool toned blue and green are disrupted with several objects throughout the video, e.g. the red shoes, the red flower, the protagonist is holding and the red flowers on the right projection (Picture 2). Red is a color that evokes the strongest emotions and can carry many meanings depending on the context it is used in. In *Ever Is Over All*, a seemingly positive and calm video on the first glance, red is used to contrast and disrupts the peaceful flow of blue and green. (Elliot et al. 2014, 95–120.) It resembles the act of violence by breaking the car windows that is committed by the protagonist.



PICTURE 2: Pipilotti Rist: *Ever Is Over All*, installation view, (1997)

Red disturbs the blue and green by the meaning it carries, being the color of life and passion but also danger as well as violence and by being the complementary pair to green. According to Itten and Birren (1996), if used in correct proportions to each other complementary pairs can give the effect of harmony and tranquility.

For the complementary pair of red and green, because it has the same brilliance, the proportion is 1:1. In *Ever Is Over All*, generally speaking, the proportion of red and green is not 1:1 throughout the piece. This conjures a disruptive atmosphere.

This work can be interpreted in many ways but overall has a feminist undertone to it. Pipilotti Rist stated in an interview (2011) that she created the work after having her idea rejected by a man who was the chief editor of a newspaper after which she felt like wanting to shatter the windows of his car. She took, in her opinion, a weak moment and turned it into something positive. (Rist 2011.)

One possible interpretation is that the video is dealing with the power imbalance between men and women. Rist created a fantasy world where the peacefulness gets interrupted by a feminine woman. She commits a violent act using a flower, an object commonly associated with femininity, destroying windows of a car, which is typically associated with masculinity. Femininity in the eyes of misogyny is viewed as something that is weak and fragile and that women have a submissive role to men. This work deals with the misogynistic idea of femininity with irony, in the world of the video femininity is strong, powerful and it can also be violent.

In the contemporary world there is still a power imbalance between men and women, in many places women are still being viewed as not equal to men and are still oppressed by men. This work is a message to fight up against oppression, for women and femininity to not be seen as weak or fragile but something that is equal to masculinity.

3.3.2 Isaac Julien

Isaac Julien, born in 1960 in London, is a filmmaker video and installation artist. He studied painting and fine art film at the St Martin's School of Art in London, where he graduated in 1984. His work deals with subjects of sexuality, identity, history and one's place in the social structure. Julien earned a cult following with his debut film *Looking for Langston* in 1989. (Royal Academy of Arts n.d.; Maerke 2010.)

Looking for Langston, a drama documentary, explores the world of poet, social activist and playwright Langston Hughes (1902–1967) and his fellow artist who pioneered the Harlem Renaissance in the 1920s (Isaac Julien Studio n.d.). The film deals with the experience of being a queer African American artist. The opening shot shows a gathering crowd of mourners and then we go on to see Hughes, played by Julien, in an open casket. Then the scene shifts to a bar, men in black tie attire are dancing together or are sitting with a drink or cigarette (Picture 3). The feeling shifts from the 1920s to the 1980s with the music and the pictures. The film then goes on with dream-like sequences of pictures of younger Hughes and his relationship with beauty and desire (Picture 4). These dream sequences and imagined scenes are mixed with archive footages of Harlem in the 1920s. (Tate 2019.)



PICTURE 3: Isaac Julien: *Looking for Langston*, film still, (1989)

The soundscape mixes poetry by Hughes, Richard Bruce Nugent (1906–1987), James Baldwin (1924–1987) and Essex Hemphill (1957–1995) with club music from the 1980s (Tate 2019). “The work explores queer, black desire with no clear time or place” (Tate 2019). *Looking for Langston* was shot in the 1980s London, but the setting is the jazz world of the 1920s Harlem. Julien utilizes low-keyed lighting, and other techniques that are associated with the film noir of the 1940s creating a world that is a mix of these three decades.

There are many reasons why an artist might choose the visual choice of stripping the film from chromatic hues and just using black and white. *Looking for Langston* is a documentary-like film with real archive footages, mixed with scripted, imaginary and dream-like scenes. According to Miller (2017) black and white not only underlines the contrast of the real, chromatic world but also creates a more dream-like world but also a more serious atmosphere. Black and white also adds to the ambiguity of the time setting of the work.



PICTURE 4: Isaac Julien, *Looking for Langston*, film still, (1989)

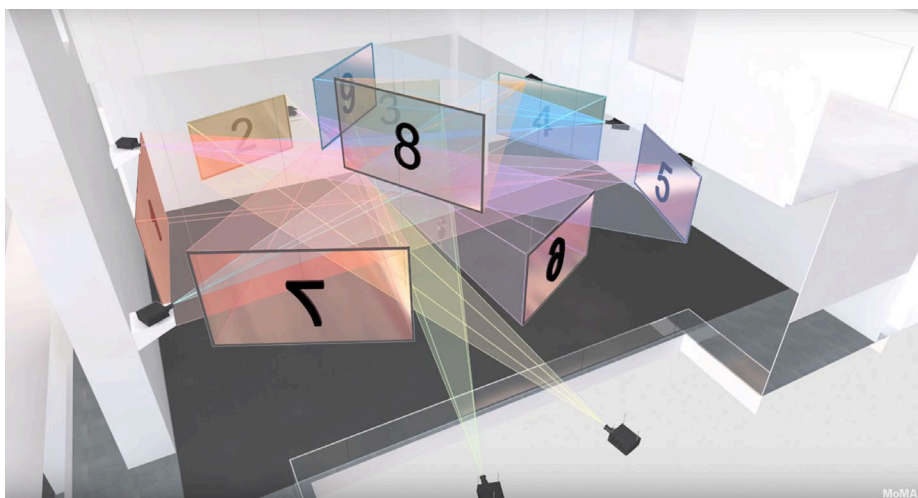
Furthermore, in film noir the protagonist often feels alienated in society (Britannica 2019), this underlines the plot of the work, about the dangers of being a black, queer artist. During the opening sequence at the bar, after the funeral scene, the narrator says, “Homosexuality was a sin against the race and had to be kept a secret, even if it was a widely shared one”. This highlights the struggles of not being accepted in the community and the alienation Hughes possibly had to face. Additionally, *Looking for Langston* was created during the height of the AIDS pandemic (Tate 2019), which largely affected gay men and a lot of stigmatizing misinformation was spread by people outside of the community. This work still holds relevance and importance to this day (Tate 2019).

Besides *Looking for Langston*, Julien has made many works, for example *Ten Thousand Waves* (2010), *Baltimore* (2003) and *Lessons of The Hour* (2019),

utilizing bright and saturated hues as an aesthetic device alongside with parallel montage and sound (Julien 2010).

Ten Thousand Waves created in 2010, is a 55-minute immersive film installation (The Museum of Modern Art 2013) inspired by the tragedy at Morecambe Bay in Northern England in 2004, where 23 illegal Chinese immigrants drowned while picking cockles on that beach. This work brings awareness to the issue of the exploitative nature of the underground system that affects immigration in the United Kingdom. (Maerkle 2010.) With this work Julien wanted to depict this tragedy from a Chinese point of view (Julien 2013). He worked with many Chinese artists, including poet Wang Ping, calligrapher Gong Fagen, cinematographer Zhao Xiaoshi, actress Zhao Tao and an almost completely Chinese cast and crew (21st Century Digital Art 2013).

The video follows a Chinese tale from Fujian province, where the victims of the tragedy originated. The tale is about goddess Mazu, a protector of seafarers and travelers, who is still worshipped to this day. (Maerkle 2010.) The film follows the journey of goddess Mazu, that spans over 400 years, bringing the lost souls back to China. Throughout the film Julien mixes shots of modern-day Shanghai with archival footage of the cultural revolution in China, documentary footage of the Morecambe Bay incident and shots of the reinterpretation of the tale of Mazu. (Julien 2013; Maerkle 2010.)



PICTURE 5: Isaac Julien: *Ten Thousand Waves* , (2013), Museum of Modern Art, Installation plan

With *Ten Thousand Waves* Julien uses color to underline the effect achieved by the immersive video installation. It consists of nine double sided screens arranged in a scattering manner around the room (Picture 5). The immersive cinematic experience is accompanied by a surround sound system, bringing an enveloped experience to the viewer. (The Museum of Modern Art 2013; 21st Century Digital Art 2013.) The use of color sometimes underlines the contrast between the grey and silver modern day Shanghai (Picture 6), the red of the walls of a palace and of the flags during the cultural revolution (Picture 7) and the green of the natural landscape of China. Each scene, even though spread throughout many screens tends to have one color that harmonizes the work and unites all the screens to be seen as one.



PICTURE 6: Isaac Julien, *Ten Thousand Waves*, installation view, (2010)



PICTURE 7: Isaac Julien, *Ten Thousand Waves*, Installation view, (2010)

4 APPLYING COLOR THEORIES TO SEEK||SHIFT VIDEO PROJECT

4.1 Process of creating *Seek||Shift*

For the artistic part of my thesis, naturally because of the topic of the thesis, I made a video artwork. It is a 7-minute video with the title *Seek||Shift* completed in 2021. It is shot using a Nikon Z6 camera and using Adobe Premiere Pro as the editing software. The video deals with themes of teenagehood, from a distanced perspective. I explore the feelings and emotions from my own experience going through the teenage journey and trying to find oneself as well as a place to fit in, into society.

The process of producing the artwork started in the September 2020 with creating a vision and story board. I decided not to have any concrete storyline in the work but rather an emotional story conveyed through images and narration. The use of color is both aesthetic and symbolic. I decided to film during autumn, because of my aesthetic vision of the colors, as well as the symbolism of it being the season of change and becoming mature. Filming took place in two locations, at the Tupakkirullan Puisto, Tampere and the photography studio in Mediapolis, Tampere. These two locations highlight the two spheres of the world within *Seek||Shift*.



PICTURE 8: Jasmin Gams: Screenshot of *Seek||Shift*, (2021)

My idea with *Seek||Shift* is to create a world in which there is a protagonist named “Jay” (played by Rebeca Kivijärvi Busto), who goes on a journey both in a literal sense by walking through the Tupakkirullan Puisto, but also on an emotional journey. There are two layers within the world of the video, the one in the forest (Picture 8) and the one that unfolds in the mind of the protagonist (Picture 9), resembling the feelings, hopes, fears, dreams etc. However, these two spheres seem to merge sometimes, creating a feeling resembling that of a daydream (Picture 10).



PICTURE 9: Jasmin Gams Screenshot of *Seek||Shift*, (2021)



PICTURE 10: Jasmin Gams: Screenshot of *Seek||Shift*, (2021)

After thinking about the aesthetic choices of the video and the plot, I started to plan how I can best utilize the research of color theory and connect that with the atmosphere and feelings I wanted to create. The goal of the video was to convey the feelings of teenagehood throughout the journey, the feelings I wanted to convey are listed along with the strategy to execute the ideas with the colors:

- Love, hope, passion: This is symbolized through the color red. It is the most powerful color and can have both a negative and positive connotation (Elliot et al. 2014, 95–120). In this case I was trying to convey the seemingly positive side of red using a blindfold that the protagonist carries and wears throughout the video. She uses it almost as a comforting tool, carrying it with her on her journey (Picture 8). She uses it almost as a comforting tool, carrying it with her on the journey (Picture 8). Sometimes this makes her trust her instincts and do the right thing by intuition (Picture 10). However sometimes the lack of visual stimulus keeps her too much in her introverted comfort zone, so that she isn't able to develop perceptions about her future anymore (Picture 11).



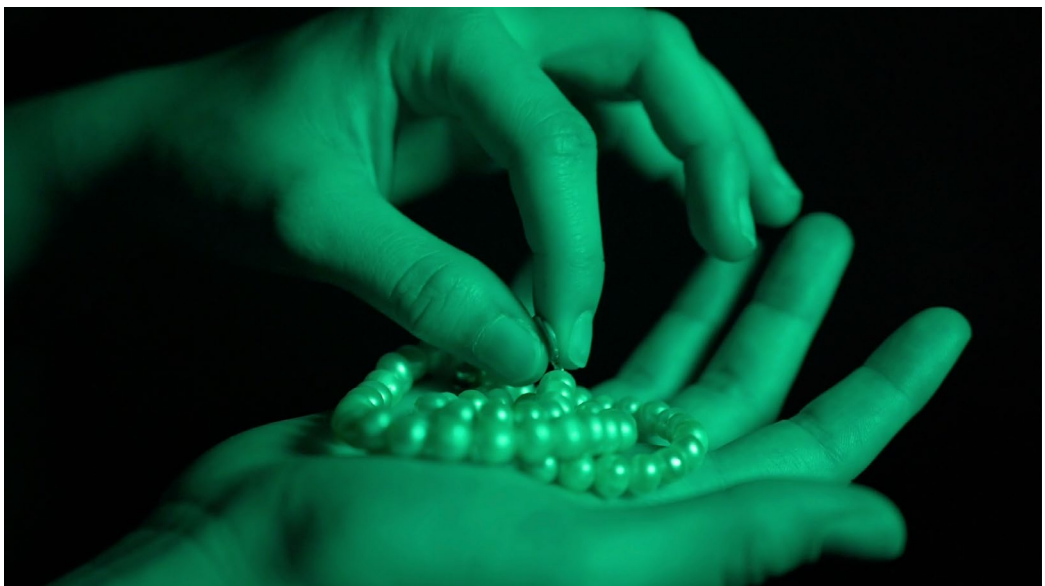
PICTURE 11: Jasmin Gams: Screenshot of *Seek||Shift*, (2021)

- Anger: Symbolized with red (Elliot et al 2014, 95–120; Incredible Art n.d.). This is an emotion that takes place on the second sphere, in the mind of the protagonist. Thus, it is filmed in the studio using a red gel on led light panels to create a strong artificial red that consumes the whole body of the protagonist (Picture 9).

- Coldness, depression: Symbolized using blue (Incredible Art n.d.), also an introverted emotion. I used shots with strong artificial light to contrast with the natural colors from the other sphere, that are connected to more positive feelings. There wasn't any blue gel that was strong enough to create the color that I wanted. So, this scene (Picture 12) was first filmed using green and changed to blue during the color correction process, using the Adobe Premiere Pro software.



PICTURE 12: Jasmin Gams: Screenshot of *Seek||Shift*, (2021)



PICTURE 13: Jasmin Gams: Screenshot of *Seek||Shift*, (2021)

- Envy, materialism, jealousy: According to Incredible Art (n.d.), these emotions can be portrayed with the color green. Like the other negative

feelings, I filmed this scene in the studio as well, using green gel on LED light panels. This shot is a close up of the protagonist's hands (Picture 13) playing with a piece of jewelry seemingly playful but in an eerie way.

- Growth, maturity: This is constructed using the natural autumn color, which, according to Albers (2013) and the color triangle (Figure 12), can create a sense of being serene. A part of growing up is to attain a sense of stableness and calmness. These autumn colors are scattered throughout the whole video, it can be found in picture 8 and more prominently in picture 14 and 15.



PICTURE 14: Jasmin Gams: Screenshot of *Seek||Shift*, (2021)

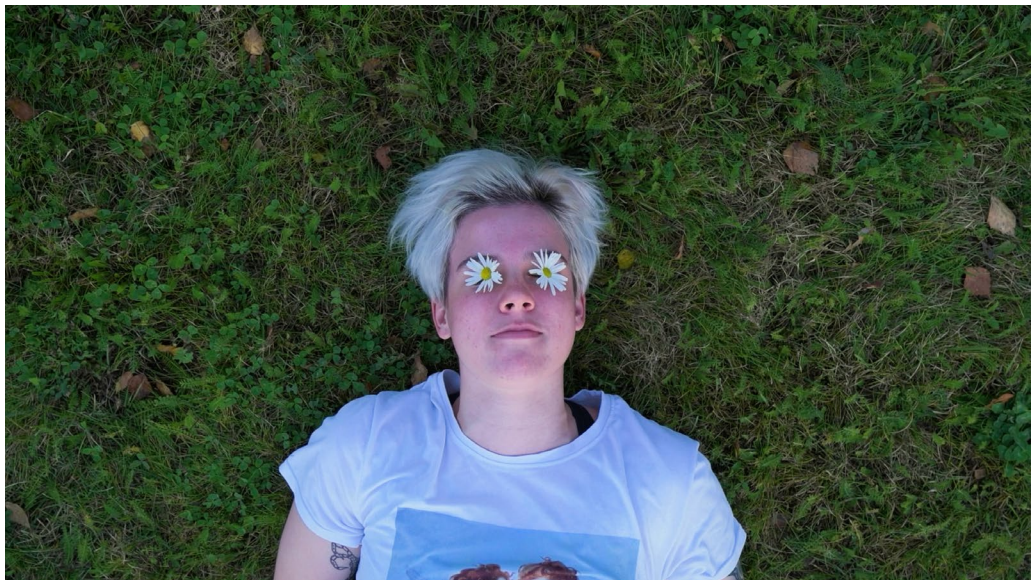


PICTURE 15: Jasmin Gams: Screenshot of *Seek||Shift*, (2021)

- Calmness, content, peace: The end of the video consists of two long scenes (Pictures 16 & 17) with the main colors being blue and green, shot in nature. These scenes symbolize that the protagonist has grown and accepted that she might never find the destination she was looking for and that the journey is part of her life and what makes her the person that she is. Blue and green, when connected to nature, tend to carry very positive effects (Elliot et al. 2014, 95–120).



PICTURE 16: Jasmin Gams: Screenshot of *Seek||Shift*, (2021)



PICTURE 17: Jasmin Gams: Screenshot of *Seek||Shift*, (2021)

Alongside the emotions I established and underlined, I also created an overall sense of melancholy and serenity, as if the video were a distant memory. According to Itten (1991), objects can be perceived as further away when they

are cool toned. This is a technique often used in painting, but I wanted to transfer it to video and in a more figurative and subtle way. I color corrected the video to be cooler toned, to have it fit to the idea of it being a memory. Furthermore, melancholy and serenity are achieved with the color combinations according to Albers (2013) using his model of the color triangle (Figure 12).

I worked with Anna Haaraoja and Ian McIntosh, music production students from TAMK, to create the soundscape for this project. Anna Haaraoja composed the music, creating an ambient sound, fitting to the visuals. Ian McIntosh was the producer and also created sound effects to underline the two different spheres of the world in the video. The narration resembles a stream of consciousness, of my own struggles and experiences, that I had growing up. It is voice acted by Noora Nenonen, a student from TAMK.

Originally the work was supposed to be exhibited during spring 2021 in the Kaleidoscopers exhibition at Galleria Himmelblau. But due to the stricter guidelines of the still ongoing Covid-19 situation, we have decided to postpone the degree show to autumn 2021. My plan for the exhibition is to have a big projection of the video in a dark room with colorful (preferably yellow) seating. I created picture 18 using the Adobe Photoshop software to visualize my plan for the exhibition.



PICTURE 18: Jasmin Gams: Exhibition plan created with Photoshop

4.2 Virtual Reality Gallery

Due to the change in schedule a website was created by Aleksandra Näveri and Tiina Heikka with a video walkthrough of the virtual reality gallery. The virtual reality gallery, designed by fellow students, is a virtual space where each student has their own room. The website and virtual reality gallery serve to give a preview of the actual exhibition in autumn 2021. In my room I decided to have a colorfully lit up nocturnal forest. The viewers can walk through the room as if they're walking in the forest, but the further away they walk from the door, the quieter the music becomes. The viewers have to be careful not to get lost in the forest and use the ambient music as a guide.



PICTURE 19: Jasmin Gams: Screenshot of the room in the virtual reality gallery of the *Kaleidoscopers*, a video walkthrough

5 DISCUSSION

“In visual perception a color is almost never as seen as it really is –as it physically is. This fact makes color the most relative medium in art” (Albers 2013, 1).

As Albers stated, color is a very relative medium, with a deceptive nature regarding the physical aspect of it. However, this thesis focuses on psychological and social relativity. Thus, the meaning of colors always depends on the context of the work and the background of the viewer. This makes color a versatile medium to further the plot and underline the meanings that the artists want to convey with their works.

Before analyzing the works of the artists Pipilotti Rist and Isaac Julien, I had to learn about the color theories and their origin. Observations about the behavior of colors and which combinations are more preferred i.e., color theory can be dated back to ancient Greek philosophers. Newton was one of the pioneers of modern color theory by discovering the properties of light and colored lights. Furthermore, I examined and discussed parts of the color theories by Johannes Itten and Josef Albers to further understand the rules and effects that can be created with certain combinations of colors and color contrasts. Lastly, in the color theory part the emotional effects of colors were discussed based on research in the western world. All the different colors can have meanings but those can differ according to context and environment. Red for example, has been proven to be the color that evokes the strongest emotions, because it is tied to blood and depending on context, it could be a symbol of passion (blood flow in the body) or violence or even death (spilled blood).

So, color theory is very relative, and context driven, but nonetheless it is a great tool for artists to create atmospheres and give depth to their works. As an example of such I examined the work *Ever Is Over All* (1997) by Pipilotti Rist and concluded that color is being used there to create a disturbance in the seemingly peaceful atmosphere of the work. I also analyzed the drama documentary *Looking for Langston* (1989) by Isaac Julien as an example how lack of color can underline and deepen the plot. Isaac Julien's immersive 9-screen video

installation *Ten Thousand Waves* (2010) is another work I studied. He uses color to harmonize the content, as well as creating contrast between scenes.

After getting an understanding of color theory and examining examples of the use of color by artists, I created my work *Seek||Shift* as the artistic part of the thesis. I used my understanding of color theory to create emotions like anger, jealousy, peace and passion. The work explores the journey of growing up and being a teenager through the eyes of an adult. The teenage years are generally very confusing, sometimes frustrating and full of emotions. I used my own experience as the base of the artwork and connected the emotions with the colors that correlate to them. I achieved that by framing the colors that are available in nature, using colored gels on LED light panels and with color correction in Adobe Premiere Pro software.

I think overall I have succeeded to realize the project well. The implications of emotions are subtle but noticeable. Since the meanings of colors and the effects of color theories are relative, the results that I'm seeing are relative to my own experiences. Someone else with another background might perceive the work differently, as interpretation of art always lies in the eyes of the viewers.

For the future I intend to further investigate the color theories in moving image and create artworks using these tools. I aim to make a sequel to this work, by creating a video artwork about adulthood and using the lack of color as a tool. I plan to create more works experimenting with the psychological effects of colors as well.

REFERENCES

- 21st Century Digital Art. 2013. Ten Thousand Waves. Referred on 23.04.2021. <http://www.digiart21.org/art/ten-thousand-waves>
- Albers, J. 2013. Interaction of Color. 4th edition. New Haven: Yale University Press.
- Britannica. Film Noir. 2019. Referred on 22.04.2021. <https://www.britannica.com/art/film-noir>
- Elliot, A. J. & Maier, M. A. 2014. Color psychology: Effects of perceiving color on psychological functioning in humans. Annual review of psychology 65, 95–120. Referred on 10.04.2021. <https://www.annualreviews.org/doi/10.1146/annurev-psych-010213-115035>
- Hall, D. & Fisher, S. J. 1990. Illuminating Video. An Essential Guide to Video Art. New York: Aperture.
- Incredible Art. N.d. Color Symbolism and Culture. Referred on 24.04.2021. <https://www.incredibleart.org/lessons/middle/color2.htm>
- Isaac Julien Studio. N.d. Looking for Langston. Referred on 22.04.2021. <https://www.isaacjulien.com/projects/looking-for-langston/>
- Itten, J. & Birren, F. 1991. The Elements of Color. A Treatise on the Color System of Johannes Itten Based on His Book The Art of Color. 1st edition. London: Chapman & Hall.
- Julien, I. Artist. 2013. Interviewed on 27.11.2010. The Museum of Modern Art. New York. Referred on 22.04.2021. <https://youtu.be/IM32TL7VnOw>
- Julien, I. Artist. 2010. Interviewed on 02.07.2010. Interviewer Maerkle, A. Transcribed. Art-It. Referred on 22.04.2021. https://www.art-it.asia/en/u/admin_ed_feature_e/n6fmcr3eju52squitpqf
- Kuehni, R. G. 2012. Color. An Introduction to Practice and Principles. 3rd edition. New York: Wiley.
- Maerkle A. 2010. Isaac Julien. Not Global, Trans-Local. Art-It. Referred on 23.04.2021. https://www.art-it.asia/en/u/admin_ed_feature_e/n6fmcr3eju52squitpqf
- McGinnis, L. 2015. Color Affects Ethical Judgments of Brands, Research Suggests. Studies Show Blue is 'Greener' Than Green When it Comes to Signaling Environmental Friendliness. Science Daily. University of Oregon. Referred on 10.04.2021. <https://www.sciencedaily.com/releases/2015/12/151203140007.htm>
- Meigh-Andrews, C. 2006. A History of Video Art. The Development of Form and Function. Oxford: Berg.

Müller, M. 2017. This Is Why Directors Still Make Black and White Movies. Esquire. Referred on 22.04.2021.
<https://www.esquire.com/entertainment/videos/a54270/black-and-white-movies-explainer/>

Ribe, N. & Steinle, F. 2002. Exploratory Experimentation. Goethe, Land, and Color Theory. Physics Today 55(7), 43–49.

Rist, P. Artist. 2011. Interviewed on 11.2011. Interviewer Lund, C. London. Louisiana Channel. Louisiana Museum of Modern Art. Referred on 16.04.2021.
<https://youtu.be/NdLuwX2uRTM>

Royal Academy of Arts. N.d. Isaac Julien. Referred on 22.04.2021.
<https://www.royalacademy.org.uk/art-artists/name/isaac-julien-ra>

Shevell, S. K. & Optical Society of America. 2003. The Science of Color. 2nd edition. Amsterdam: Elsevier.

Smith, K. N.d. Bauhaus Colors. Sensational Color. Referred on 19.03.2021.
<https://www.sensationalcolor.com/bauhaus-color/>

Tate. 2019. Isaac Julien: Looking for Langston. Referred on 22.04.2021.
<https://www.tate.org.uk/visit/tate-britain/display/isaac-julien-looking-langston>

The Guggenheim Foundation. N.d. Collection online. Pipilotti Rist. Referred on 16.04.2021. <https://www.guggenheim.org/artwork/artist/pipilotti-rist>

The Josef and Anni Albers Foundation. N.d. Interaction of Color. Referred on 03.04.2021. <https://albersfoundation.org/teaching/josef-albers/interaction-of-color/publications/#slide8>

The Museum of Modern Art. 2013. Isaac Julien: Ten Thousand Waves. Referred on 23.04.2021. <https://www.moma.org/calendar/exhibitions/1382>

The Museum of Modern Art. 2019. Pipilotti Rist: Ever Is Over All. Referred on 16.04.2021. <https://www.moma.org/collection/works/81191>

Williamson, V. 2016. Breaking down the Trichotomy between Video Art, Artists' Films and Cinema. Edge. Referred on 17.02.2021.
<https://journeys.dartmouth.edu/edge/2016/07/12/breaking-down-the-trichotomy-between-video-art-artists-films-and-cinema/>

Zuffi, S. & Pistoiesi, D. 2012. Color in Art. New York: Abrams.

FIGURES

FIGURE 1. Müller, O. L. 2015. Newtons Experimentum Crucis. Mehr Licht. Goethe mit Newton im Streit um die Farben. 1st edition. Berlin: S. Fischer.

FIGURE 2. Ribe, N. & Steinle, F. 2002. Exploratory Experimentation. Goethe, Land, and Color Theory. Physics Today 55(7), 43–49.

FIGURE 3. Tom's Blog. 2014. Color Theory. Referred on 05.02.2021. <https://tomsctwebblog.wordpress.com/2014/02/24/colour-theory/>

FIGURE 4. Kuehni, R. G. 2012. Color. An Introduction to Practice and Principles. 3rd edition. New York: Wiley.

FIGURE 5. Goethe's color wheel from his 1810 Theory of Colours. Referred on 05.02.2021. https://en.wikipedia.org/wiki/Color_theory#/media/File:GoetheFarbkreis.jpg

FIGURE 6. Kuehni, R. G. 2012. Color. An Introduction to Practice and Principles. 3rd edition. New York: Wiley.

FIGURE 7. Itten, J. & Birren, F. 1991. The Elements of Color. A Treatise on the Color System of Johannes Itten Based on His Book The Art of Color. 1st edition. London: Chapman & Hall.

FIGURE 8. Itten, J. & Birren, F. 1991. The Elements of Color. A Treatise on the Color System of Johannes Itten Based on His Book The Art of Color. 1st edition. London: Chapman & Hall.

FIGURE 9. Itten, J. & Birren, F. 1991. The Elements of Color. A Treatise on the Color System of Johannes Itten Based on His Book The Art of Color. 1st edition. London: Chapman & Hall.

FIGURE 10. Itten, J. & Birren, F. 1991. The Elements of Color. A Treatise on the Color System of Johannes Itten Based on His Book The Art of Color. 1st edition. London: Chapman & Hall.

FIGURE 11. Albers, J. 2013. Interaction of Color. 4th edition. New Haven: Yale University Press.

FIGURE 12. Albers, J. 2013. Interaction of Color. 4th edition. New Haven: Yale University Press.

PICTURES

PICTURE 1. The Museum of Modern Art. 2019. Pippilotti Rist: Ever Is Over All. Referred on 16.04.2021. <https://www.moma.org/collection/works/81191>

PICTURE 2. The Museum of Modern Art. 2019. Pippilotti Rist: Ever Is Over All. Referred on 16.04.2021. <https://www.moma.org/collection/works/81191>

PICTURE 3. Isaac Julien Studio. N.d. Looking for Langston. Referred on 22.04.2021. <https://www.isaacjulien.com/projects/looking-for-langston/>

PICTURE 4. Isaac Julien Studio. N.d. Looking for Langston. Referred on 22.04.2021. <https://www.isaacjulien.com/projects/looking-for-langston/>

PICTURE 5. Julien, I. Artist. 2013. Interviewed on 27.11.2010. The Museum of Modern Art. New York. <https://youtu.be/IM32TL7VnOw>

PICTURE 6. The Museum of Modern Art. 2013. Isaac Julien: Ten Thousand Waves. Referred on 23.04.2021.
<https://www.moma.org/calendar/exhibitions/1382>

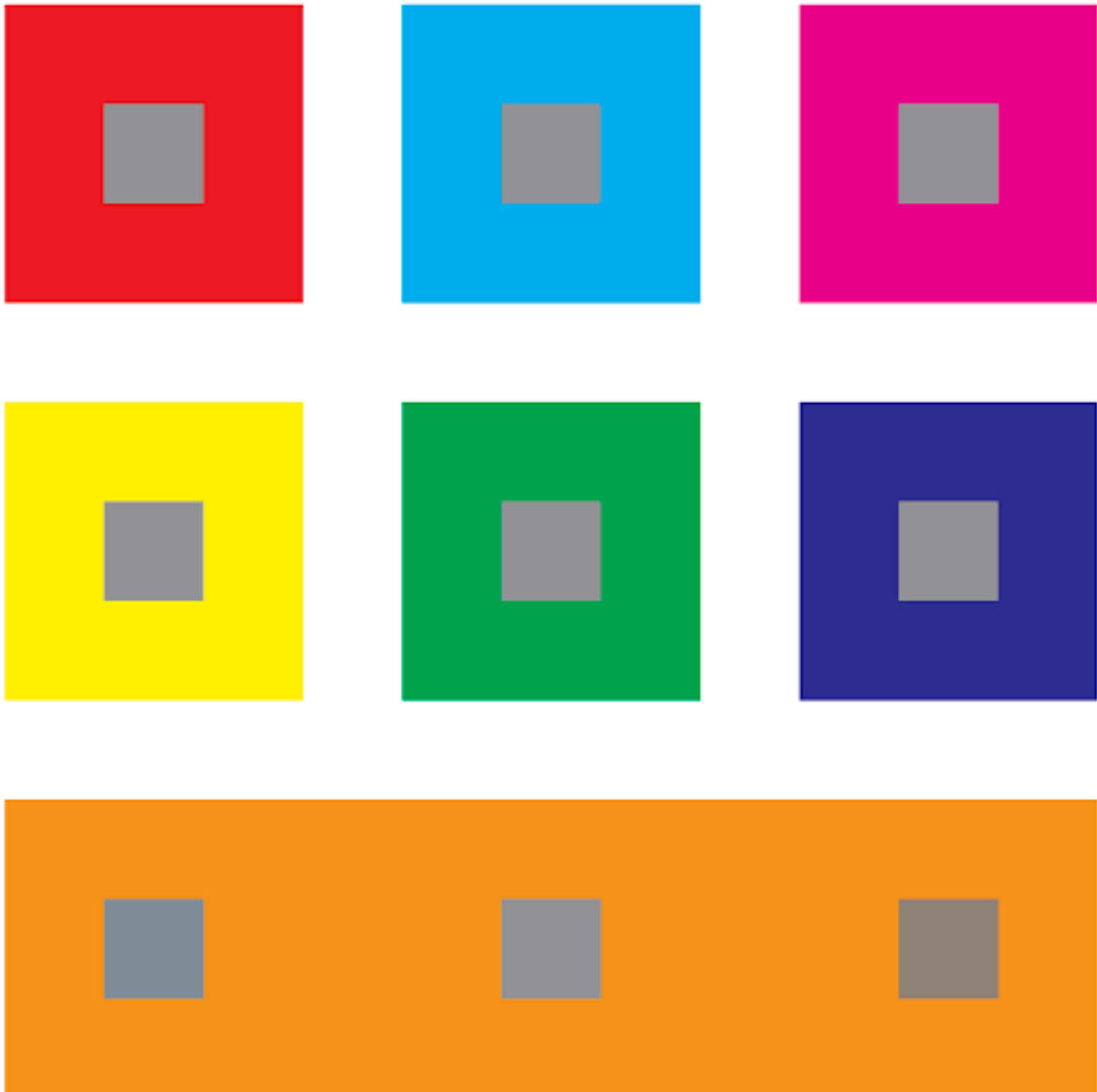
PICTURE 7. Harholdt P. 2009. Isaac Julien. Ten Thousand Waves. Bass Museum of Art. Miami. https://www.1fmediaproject.net/new/wp-content/uploads/2013/11/ttw_bassmuseum_1.jpg

PICTURE 19. Kaleidoscopers Virtual Reality Gallery. Screenshot of Jasmin's room.

APPENDICES

Appendix 1(2). Figures of further examples for the color contrast by Johannes Itten

Example of the Simultaneous Contrast by Johannes Itten form the book *Itten: The Elements of Color. A Treatise in The Color System Of Johannes Itten Based on His Book The Art Of Color* (1996) by Birren, F. Page 53.



Example of the Contrast of extension with the correct proportions (left) and incorrect proportions (right) by Johannes Itten from the book *Itten: The Elements of Color. A Treatise in The Color System Of Johannes Itten Based on His Book The Art Of Color* (1996) by Birren, F. Page 61.

