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Investigating Visual Differences Between Japanese and American Animation

Boyao Dai
bd4655@rit.edu

Rochester Institute of Technology

School of Communication

College of Liberal Arts

Investigating Visual Differences Between Japanese and American Animation

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Boyao Dai

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The members of the Committee approve the thesis of
Boyao Dai presented on December 8, 2016.

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Andrea Hickerson, Ph.D.
Associate Professor and Director
School of Communication

_____

Kelly Norris Martin, Ph.D.
Assistant Professor
School of Communication
Thesis Advisor

_____

Emily Glass
Visiting Assistant Professor
Department of Imaging Arts & Science
Thesis Advisor

_____

Grant Cos, Ph.D.
Associate Professor of Communication
Director of Graduate Programs
School of Communication

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Boyao Dai

School of Communication

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Abstract

This study looked at animation produced in the US and Japan, in order to discover the visual differences between the two. After sampling from four distinct animations of the US and Japan, over 300 screenshots were captured. A visual content analysis of the 300 screenshots was conducted, focusing on differences in character psychological status and environment rendering. Results revealed that Japanese animation contained at least three times more psychological depictions and used more subdued coloring than American animation. Lastly, using semiotic analysis, the findings from the content analysis were interpreted and potential reasons for the differences between the two animations are discussed.

Keywords: animation, semiotics, visual content analysis, Japan, America

Investigating Visual Differences Between Japanese and American Animation

Now a section labeled as "Anime/Manga" in a Barnes & Noble bookstore may not surprise anyone or even may make customers wonder what the word means. Anime, a type of Japanese originated art form has spread steadily across the world with the help of globalization. Although being two distinct cultures, American audiences enjoy watching this exotic form of cartoon from an Asian country (Velasquez, 2013). Japan has culturally distinct styles of representing their characters' appearances and character interactions; this is considered very different from cartoon character representations in Western culture, yet many people find them fascinating (Napier, 2001). Influence of cultural background can be a huge factor contributing to the styling of animation characters, and as an audience who is able to view works from both countries, may notice the difference between anime and American animation since there has been a chance for comparison.

Environmental designs, props used, lightings and coloring, and the distinct ways of drawing up a character, are set in various ways in anime and American Animation (AmA). One may wonder why finding out the difference is important and why it is worth a deep research. J. R. R. Tolkien once said, to construct a work is not simply for the purpose of entertainment for fulfillment, it is also how the author communicates to the outside world, how they use their work to reveal their true self (Purtill, 2003). Thus, to study works on a larger scale can help us understand what lies behind the creation, what the elements in the work represents culturally, and what makes the work popular in a different culture so successfully.

Moreover, there is relatively fewer researches done in the area of Japanese anime comparing to other visual works studied. The first anime imported into the US was around the 60s, named *Astro Boy*, and the study regarding animation from another country has been limited

to a rather dated time period—most of the studies are focusing on animations from 1960s to 2004, when numerous classic and famous animations were created (Kasa, 2005). Yet this can also be a valuable chance for new research to further develop on this topic.

This paper will conduct a visual content analysis on four chosen Animations from both Japan and the US, aiming at discovering several visually distinct aspects in each show, and to see if globalization has done anything to influence both Japanese and American culture to modify their animation works. What's more, with the help of semiotics theory proposed by Saussure and Pierce, the paper will discuss what are the implications and cultural influences behind all the differences, hoping to make inner connections among culture, people, and their works.

Literature Review

Japanese Animation and Its Popularity in the US

Japanese *manga* and animation has a profound history, blended tightly with the culture and its people. Manga is a dedicated noun used to describe the Japanese style of graphic novel or comics, and the word is phonetically translated from the Japanese word for manga. The concept of manga can be considered stills of animation. Japanese animation has its own history, and it all began with the invention of manga. Ever since Katsushika Hokusai created his "Hokusai Manga" in the 1700s, this art form was destined to further expansion into today's Japanese animation (JpA) (Schodt, 1986). Two hundred years later in 1917, the first-ever Japanese anime was produced, named *Blunt Sword* (1917). This is where manga began to inspire the production of animation in the country (Clements, 2013). The market for manga and animation from Japan quickly spread across the Asian continent later in the 1950s—almost 250 years later, manga and anime found their success with Tezuka Omasu, the creator of the *Astro Boy* animation series (Osamu, 1952). By the year 1994, Japan's overall manga and animation has taken up nearly 35%

of the whole country's publications (Grigsby, 1998). This is when anime, following the steps of manga, went global. Before, major markets for Japanese animation were China, Korea, Singapore, and other Asian countries; now one can find anime imports on bookshelves in European countries like France and Germany, or the US easier than 20 years ago (Wong, 2006). Anime like *Spirited Away* (2001) and *Princess Mononoke* (1997) even won international film awards for their uniqueness and wonderful productions—the period of 1990s is considered a vital turning point because of the many award winning anime, and this eventually led to the anime popularity overseas (Reider, 2005).

The anime fandom in America, which developed from getting together and viewing animation in a hotel room to large-scale conventions, reflects audience's preference to anime and its related culture (Martinez, 2009). Many anime fans identify themselves using the word "Otaku," which is a Japanese word's pronunciation that means "love something too much so that have to abandon everything else" (Napier, 2001).

While one can use cultural similarities to explain the success of anime in its Asian market, it is another case for its widespread market in Western civilizations. "Culture odorless" is a term coined to provide insights on the popularity of anime in Western countries, especially the US. Anime producers from Japan, over the decades, have tried to adjust with the oversea market with a different approach—omit the vast amount of content relating Japanese history and traditions from their animation to fit the international market better (Allison, 2000). Another way of catching the audience's interest is to include more features from other cultures, such as setting the story in a foreign country or city like New York or London; this is also a way to enhance the exotic feeling of the anime, which can attract more audience from Japan itself as well (Said, 1978). Exoticness, a never-ending and never-boring theme for a lot of creative works including

movies, novels, and now animations, contributes to the wide welcome of anime in countries (Said, 1978). The idea of "Orientalism," proposed by Said, explains a lot about why audiences choose to spend time to watch productions that come from another continent. Curiosity and a sensation of contacting with something new can lead to appreciation.

One more element that is slowly seducing foreign audiences to become more and more interested in anime is the concept of "Moe Culture" (Bowman, 2011). Moe, in Japanese, means cute and adorable. The term can apply to anything; no matter if it is a person, an animal or an object. There are basically two different types of Moe, the first one is narrative Moe, and the second one is non-narrative Moe. The former means the loveliness of a character is carried out by the character's personality, behavior, and gestures. The latter focuses on visual elements that can evoke the attraction in an audience, such as cat ear ("nekomimi" in Japanese). The non-narrative Moe elements are considered "fetish objects" according to the study.

On the other hand, much dated anime remain popular today, even more popular than most new anime, especially among audiences who were born in the 80s and 90s (Chambers, 2012). Issues regarding stereotyping develop with the rise of these classic-yet-out-of-date anime works. Blood, sexual violence, and horror are the major dated stereotypes Chambers found out, which only take up a considerably small percentage of Japanese anime today (Phoenix, 2006). These dated stereotypes are the residuals of early imports of Japanese animation pornography and other anime that depicts heavy historic stories; much early anime deals with war and conflict, which is especially popular after World War II (Kincaid, 2014). Yet by viewing dated anime, certain stereotypes persist and influence audience's perception of the real world even today—although this number is slowly decreasing, as people are getting to know the ever expanding anime industry better in a globalized world.

To look for explanations for this phenomenon of anime's popularity, a theory about trust between people from different cultures may be a suitable one. Thomas Volken's study of trust may seem far from this paper's topic, yet it explains the popularity of anime from a unique perspective (2002). People build trust based either upon their experience or their value approach, Volken argues, which means if a person is able to gain benefits from an action, they will grant more trust on the product they have benefitted from. This perfectly explains how American anime lovers favor anime more than any other entertainment types, and since they found anime enjoyable numerous times, their trust for the product is augmented over time. Coming back to Volken's claim that common value approach forms trust, what can be implied to Japanese anime is that although coming from a different culture, there are things or beliefs that audiences share in common. The users of anime agree with the content presented, thus deepening their value beliefs and their trust for anime.

Origin of Animation in the US

On the other hand, when it comes to the origin story of America's animation, many would give the credit to the guy who created that little mouse name Mickey. Moreover, *Felix the Cat*, created by Pat Sullivan, was another animated series even prior to Walt Disney's Mickey Mouse. No one can actually pinpoint an exact instance where animation became popular in the nation, yet during the 1920s, animation sure had its time of revolution, and thus was made known to people across the country (Jenkins, 2014).

Walter Disney was, however, truly the first person who interfaced classical cinema with animation of his time. Disney created a hybrid image of movement and time, and with the cinematic technology by then, Disney created the "cultural series of animated pictures (Dulac & Gaudreault, N/A)." Maybe there are other people prior to Disney who should be named the

"inventor" of animation, yet Disney is without doubt, the first person who made animation well known in nearly every American house. The year 1928 is Mickey Mouse's birth-year, as his first animated episode, *Plane Crazy* (1928), came out. The mouse became extremely popular overnight, and Disney went on to test the limitation of animation and its related technologies at that time – this is where the innovation of sound started, an ideal of merging music perfectly with each scene in the animation (Tankel, 1978). Following the development of sound in cartoons, the field of animation even welcomed a new genre, Silly Symphony, just for the sake of keeping this wonderful invention (Yoe, 1991). Disney did not stop at putting sound with motion pictures together. He then discovered Technicolor, which, surprisingly, added colors to his Mickey and many related characters. The first ever animation done in Technicolor was *Flowers and Trees* (1932); it is also the very first animation where images collaborated with Silly Symphony. With the aid of real symphony played in the background, the sound and color truly made drawings come alive (Leslie, 2002).

Unlike the long and gradual development of anime in Japan, animation in the US grew at a fast pace; numerous inventions came out during the process in the aid of making animation better. The invention of the multiplane camera actually brought an illusion of 3D to the once flat animation. During a live action shooting for the background of an animation, the multiplane camera would move back and forth to focus on the different layers of background props, creating a sense of distance, while the foreground moves faster, and the further away the background, the more slowly it would move (Levoy, 1977). The technology of multiplane camera was first used in several sequences of Snow White (1937)—a Disney animation once again, and then being favored in a lot of other Disney works such as *Pinocchio* (1940) and *Dumbo* (1941) (Butler,

2012). This technology, together with many other techniques used or invented during the time period, are still being favored by animation producers nowadays (Gitlin, 2010).

Today, many major animation companies in the US are competing, yet the world of Disney still holds its ground to be the most powerful and influential animation kingdom there is. Since 2009, Marvel Studios, the birthplace for many world-wide known superheroes has conglomerated with Disney (Vejvoda, 2009). This action resulted in numerous series of new superhero animations, such as *Avengers Assemble* and *Ultimate Spiderman*, which are also part of the focal point of this paper.

Relating Visual Content Analysis to Animation Study

To examine motion pictures like animation between two cultures, content analysis is a favorable method. Throughout history, when content analysis was first proposed, scholars have been using it to study multiple categories of works and phenomena. Visual content has been a target for this method, and people have looked at commercials, soap operas, movies, and music video using content analysis. One of the research done by Aubrey and Frisby dealt with the sexual objectifications in popular music video of the US (2011) In the article, Aubrey and Frisby invented a new code for their content analysis, which is the distinction of sexual objectification between a music video of a female artist and a music video of only female background dancers (Aubrey & Frisby, 2011). Some 147 music videos are collected, focusing on hip-hop and R&B genre, and they showed that female artists are being shown as sex objects more than male artists; also the standard for body shape is stricter for female artists then for male artists (Aubrey & Frisby, 2011). The coding techniques and sampling method is very helpful with the research topic of this paper.

Another study examining Black's coverage in non-daily newspapers of the US shed light on constructing a thorough coding category (Smith & Price, 2005). The scholars used independent coding for the category of newspapers and collected different race representations in them. The content dealing with white people are mostly related to politics and science, while for African Americans, three major fields were found: entertainment, sports, and crime. Frequency of Blacks being covered by nondaily newspaper is collected mainly through photographs; 14 categories from previous studies are used for coding (Lester, 1994), including photo types.

The interesting thing to point out is that Blacks, being a minority, are under-represented in all the chosen samples. This finding leads to one of this research's aims to find out if a certain group of people are facing the same issue in animation, such as female characters.

A paper looking at framing and YouTube videos regarding obesity also used visual content analysis to help with the research process (Yoo, 2012). The research is aiming at finding out how prevalent is the existence of obesity videos on YouTube, namely the frequency of the presence of "obesity" in videos. Some 417 YouTube videos were randomly chosen, then the videos have been examined through different content perspective, including News, entertainment, and documentary.

Content analysis for video products is a proper way of finding frequency and prevalence of existence of a certain visual element or phenomena, together with an interpretive discussion, the implications behind the scene will become obvious. This paper will incorporate content analysis in a similar way to find out the frequency of a certain aspect's appearance in animation, and to see if the quantified frequency can unravel any reasons behind it.

Connecting Animation with Semiotics

The product of these two culturally distinct countries may reflect something interesting and worth study in the field of communication. Therefore, the paper would incorporate semiotics when compare and contrast JpA and AmA.

Semiotics is the study of signs and signifiers (Moriarty, 2005). It connects the abstract with the literal, gives meaning to our lives by creating and using a coherent sign-meaning system. We are living in a world of signs, to some degree, where almost everything can suggest something else, and it is depended on us to decode the underlying meanings (Hoopes, 1991). Semiotics categorize objects into symbols and icons, where the former only connects the object through an abstract meaning, where no physical resemblance can be observed between the symbol and the representamen. The later, icon, actually indicates a connection between the meaning and the physical form of the object (Fiske, 1990). A good example for symbol would be a national flag; and for icon, political cartoons would be a straightforward example. People arbitrarily assign meanings to objects, and this process is motivational. In other words, people create the meanings of signs, not by the object presented (Moriarty, 2005). This is one of the major reasons people make sense of a visual work or a physical object, even when the concept has no connection to the appearance of that object.

When people refer to meanings, they create a relationship between the object and the sign it bears. People can get a denotative meaning from an icon, knowing directly of what it is presenting. In the contrary, people may need some further thinking when a symbol is shown, for it would convey a connotative meaning that cannot be understood by simply examining the outer form of the object (Barthes, 1968).

People hardly notice the fact that they are actually using semiotics to make sense of various things and events happening every day. We presume meanings while assign meanings at the same time, influenced on a psychological level by what was presented to us. Different parts of the world use semiotics in different ways, and this is sometimes identified as “culture codes” of semiotics, for different countries have various types of systems for their symbol and signs that rhymes with their cultural norms (Rapaille, 2007). Culture’s influence on the display of emotions and the usage of colors is the focal point in this study.

Culture affects people’s display of emotion on a profound level. Since emotions are intangible, invisible and abstract nonverbal cues, it requires the receiver to decode, so that a meaningful interaction can take place (Parkinson, 1996). These nonverbal cues, together with one’s mind movement and thoughts, reveal most frequently on people’s faces, thus humans coin the term “expression.” Ekman categorizes emotion into six basic groups: anger, fear, surprise, happiness, sadness, and disgust (1987).

Japanese are more alarmed with the intensity of emotion, for instance (Scherer et al., 1988). Adding up to their attention to details, Japanese actually rated higher for emotional intensity for minor facial expressions than American and Sri Lankan (Matsumoto et al., 2002). Japanese are also better at judging the emotion of sadness (Matsumoto, 1992).

Color, being another famous indicative sign, can result in different signifiers for different cultures. For a country that has a very long and developed system for animation production, Japan has its own culture codes for coloring. This culture code of color has not only been applied to Japanese’s daily life and their famous industrial designs, but also has its trace in the field of anime. After all, culture codes are prevalent within a group, and it has the ability to spread and

affect everything inside that group, which makes anime and culture code of color inevitable for one another.

Colors have the ability to convey symbolic meanings that in no way are represented though the appearance of them, and people can relate their emotions with the color they see, or vice versa (Kreitler & Kreitler, 1972). For people in different culture groups, some color can also assign meanings that shares little similarity with other culture groups (Kaya & Epps, 2004). The color green, for instance, mainly reminds people of the feeling of guilt, aversion, and sometimes forests in the US (Lucyk, 2014; Terwogt & Hoeksma, 1995). On the other hand, for Japanese, a study done by Cheng et al. (2009) showed that green represents simply of nature and peace. We can also see the usage of green as peace and a natural moderator in animated films like *My Neighbor Totoro* (1993) and many other works by Hayao Miyazaki. Furthermore, in works with saturation, color can have more profound effect on viewers; the saturation of each color subtly affects people's emotion as a stimulus, causing people to react differently toward various saturations (Gao et al., 2006). This thus would result in certain color choices in many JpA—since adults rate darker color more acceptable than children do, many JpA may choose the color and saturation in relation to their target audience group (Lucyk, 2014). Color and saturations will be studied along with other semiotics in JpA and AmA.

Motivation of the Study

However abundant researches have been done regarding visual content analysis and semiotics in relation to films and TV shows, the field of animation has been a wonderland that few have encountered when doing research. Granted, animation based on an American audience group are sometimes studied, yet there is rarely any comparison cross culture. A few researchers have looked at Japanese anime as a curiously different type of motion picture from American

animation, yet they have not had the chance to bring them together and make a detailed comparison (Napier, 2001). There are also many experts in the land of making animation, yet they seem to be living with a shield between each other, often have not have the heart to wonder why animations from two continents are this distinct.

Little visual content analysis has been done in between the two types of animation, especially insufficient data is provided on how ethnicity, cultural stereotypes, and psychological-related visual narratives are presented differently between the two. Therefore, this paper is aiming at doing a careful comparison between these aspects mentioned above using visual content analysis, hoping to gain some insight on how prevalent are these differences, and have a discussion of probably why does the difference exist.

Research Questions

As the literature review has identified that there is a gap in research regarding the differences in visuals and semiotics between AmA and JpA, this research thus decided to explore this area further. Although issues of gender, like those noted below in RQ1a for example, have been studied in the American film industry and in television advertisements, similar research in animation, especially Japanese anime has been lacking. Therefore, this study asks the following research questions:

RQ1: What are the differences in visuals between AmA and JpA?

1a: How does the gender ratio of characters in AmA compare with JpA?

1b: How does the frequency of props like weapons and other high-tech accessories presented in JpA compare with AmA?

1c: How frequent is psychological-related facial presentation in JpA compared to AmA?

1d: How often do JpA uses environmental set-ups such as color themes and saturations to reflect character's emotion and the overall mood of the anime compare to AmA?

RQ2: What are the semiotic implications for the above visual differences between AmA and JpA?

Method

Sample

The paper utilized visual content analysis for the purpose of discovering and collecting the culturally distinct representations in each animation sample. After conducting visual content analysis, the paper also examined results through the semiotic lens, as mentioned previously. By choosing to focus on coloring, saturation, and psychological displays, the implications of signs and signifiers are looked at more in detail with a comparison in culture codes.

In order to achieve a clear comparison, two animations were chosen from each country, all of which were produced after the year 2000, within the genre of science fiction. Within the four animations, *Darker than Black* (DTB, 2007) and *Blood Blockade Battlefront* (BBB, 2011) are of a Japan origin, and *Avengers Assemble season 2* (AA, 2014) and *Ultimate Spider Man season 3* (SPM, 2013) are from the US. Both DTB and BBB were produced by the same Japanese anime studio, Bones Studio; and both of the American animations were produced by Disney Studio in the US. The reason for choosing season 2 and 3 other than 1 is because AA's season 2 and SpM's season 3 are produced in the same time period and had a much better production quality than their first seasons.

The reason for selecting BBB and BTB from millions of Japanese anime was tied to the purpose of cultural comparison and semiotics. First of all, BBB's story set up in the very city of New York, although being a Japan-born animation. This location choice is the same with AA

and SpM, which will make the comparison clearer, as for how would two different cultures construct the same city from their point of view. What is unique about the "New York design" of BBB is that, the city not only became a miniature of the globalized world by having multiple race and ethnicity living in it, but it also expands the boundary of reality to include "creatures from other world." That is, the city of New York becomes the portal between two worlds; monstrous beings and otherworldly living things are walking side by side with humans.

On the other hand, for DTB, the location design is highly obscured. Although having a hint of Tokyo, Japan's Capital city, yet the environment setting and character appeared in the anime are more of a mixture of the globe. Technological props gained its insights from the F.B.I., MI6 and many other foreign agencies. Characters taking actions in the city came from all over the world, including but not limited to France, England, and Eastern Asia—not to mention the leading male character is in fact, Chinese.

Moreover, according to Bones Studio's original target audience for DTB, the show will be the most "mature" one among the four. Other than targeting audiences from 8 to 16 like the other three animations, DTB aims at gaining audiences ranging from 12 to 18, and even adults who are above 18 years old. Thus, if BBB can be used as a comparison tool for the physical background set up of New York, then DTB can be a great contrast when it comes to Environment set-ups. Additional distinguishing factors will be discussed further in the coding section.

Among the four animations, four episodes were chosen for each show. The chosen episodes included the very first two episodes of the show and the very last two episodes. The reason for such a choice was mainly due to the purpose of highlighting the differences of psychological expression between JpA and AmA, especially for the "premier" and the "grand

finale." More importantly, the end of most entertainment shows or descriptive works, whether fictional or not, usually contains a major upheaval point or the last turn of events. With the emotions at its peak by the end of the story, many differences on a psychological level will surface (Jordan, 2015).

The unit of analysis were screenshots taken for each show. As the plot went on, screenshots were taken for various scenes for the purpose of coding. Different screenshots included character's close-ups as detailed shots revealing their psychological movements; other screenshots included props, lighting, and shadings for the environment. A detailed definition was introduced in the coding section below.

Coding Categories

The major coding category focused on the psychological representations of characters in each animation. The paper separated this category into two big groups: 1) psychological depictions and 2) environmental set-ups. The former focused on how characters' mental changes were reflected in their physical appearances, since people tend to express their emotions and thoughts through detailed differences within their movements and postures. The latter paid attention to things happening around the character in each story, focused on finding out how the changes in lighting, shading, and coloring for each scene set up the underlying atmosphere of the show.

Psychological Depictions and Environmental set-ups were broken down further into 10 subcategories, in order to catch the difference in how psychological representations were displayed between animations from two cultures. "Voice of mind," face close-up, eye(s) close-up, lips close-up, hand(s) close-up, and "thinking poses" were the six subcategories for Psychological Depictions (see Appendix G).

Two categories here needed further explanation. “Voice of mind” is a common way of showing a character’s thought process in various shows. As if the character is not speaking out loud, his/her voice comes out just so that the audience can hear it, and thus can understand what the character is thinking (Hill, 2016). And of course, other characters in the show will not necessarily hear this thinking character’s “voice of mind”—unless there was a character with special mind-reading ability like in the *X-Men* series (2000-2016). “Thinking poses” might be an easier concept to understand because it directly relates to people’s physical posture while they are trying to figure out a problem within their mind. A good example of thinking pose can be “stroking one’s beard.”

For subcategories in Environmental Set-ups, two related to color themes, and another two focused on color saturations—in another word, the pureness of color in the environment. The two color theme categories were simply “cold” and “warm,” aimed at defining the mood of the story, and the degree of seriousness or happiness in the story. On the other hand, the subcategories for color saturation were modeled from the professional color-picking device on Adobe Photoshop to construct a clear method of determining “bright/strong contrast” or “gloomy/grey scale inclination” (see Appendix E). Saturation, as defined in art and color studies, shows the “pureness” of colors (Levkowitz & Herman, 1993). The original colors of red, green, and blue have the highest saturation within their own color groups (Manav, 2007). For example, red has a higher saturation than the color maroon, and thus to the naked eye, red appears to be “brighter” than maroon. The same situation is present in various shows including animation, where the producer uses higher saturation for a lighter mood, and lower saturation, near the black-and-white scale, for a more oppressed, serious tone.

Other categories, in addition to the psychological depictions, included gender and props. Subcategories for Gender include, male, female, and other, considering the genre of all the chosen animation are science fiction, and have different species other than human; subcategories for Props mainly dealt with weapons and accessories used in each show (see Appendix G).

Among the four selected animations, a total of 316 screenshots were taken for Psychological Depictions; 33 of them were for AA, 27 for SpM, 153 for BBB, and 103 for DTB (see Appendix A). For Environmental Set-ups, 61 screenshots were taken, and the ratio for each chosen animation is 6: 5: 18: 6, following the order in the former category (see Appendix A). Props category collected screenshots in a total of 50, in which weapons in AA, SpM, BBB, and DTB rated 13: 6: 5. The gender ratio for each show is 14: 3: 4 as male : female : other for AA, and 23: 4: 2 in the same order for SpM, 13: 6: 0 for BBB, and 15: 9: 0 for DTB (Appendix B).

Results

I carefully collected samples from 16 episodes of 4 different animations that resulted in a total of 427 screenshots that were analyzed. The average length of each of the shows was 22:56 ($M = 22.93$, $SD = 1.62$).

Among the 427 screenshots, 316 were psychological depictions, as defined in the previous section. BBB and DTB showed a tremendously higher amount of presentation in reflecting a character's state of mind, which was 153 for BBB and 103 for DTB. Within this coding category, the two subgroups of face close-ups and eye(s) close-ups ranged the highest for BBB and DTB. One hundred and one screenshots were taken for face close-ups for BBB, and 77 screenshots for DTB. Screenshots for eye(s) close-ups for BBB is 36, and 12 for DTB. In each of these two subgroups, AA and SpM both collected screenshots less than 20, where AA only had

16 for the face close-ups while SpM does not even have any eye(s) close-ups in the 4 selected episodes (see Appendices A & C).

The above results were used to answer the following research questions, where RQ1 was not answered individually but answered through 1a to 1d.

RQ1: What are the differences in visuals between AmA and JpA?

1a: How does the gender ratio of characters in AmA compare with JpA?

1b: How does the frequency of props like weapons and other high-tech accessories presented in JpA compare with AmA?

1c: How frequent is psychological-related facial presentation in JpA compared to AmA?

1d: How does JpA's use of environmental set-ups, such as color themes and saturations to reflect character's emotion and the overall mood of the anime, compare to that of AmA?

RQ2: What are the semiotic implications for the above visual differences between AmA and JpA?

How Does the Gender Ratio of Characters in AmA Compare with JpA?

RQ1a seeks to determine if there is any gender, or rather cultural preference of character's gender, when it comes to a published animation. Note that although the unspecified gender category of "other" was included in the coding, it was only for the purpose of clarification, as well as to avoid inaccurately counting ambiguous gender into the ratio diagram. Thus, the gender "other" will not be discussed further.

After the data collection, the results showed that all four chosen animations had a male leading character, followed by several supporting characters that were also mostly male. One exception in the four animations was DTB, which had two female supporting characters.

The gender ratio, on the scale of each chosen animation's country of origin, was 7:3 for male characters, where 7 was for AmA and 3 was for JpA (see Appendix A). The ratio of female characters is 3:15, where JpA showed a higher percentage of female character than AmA (see Appendix A).

The gender ratio for each individual animation also varies on a noticeable scale. For AA and SpM, there were considerably more male characters than female characters, each were 14:3 and 23:4 in ratio. Combining AA and SpM, the gender ratio was 2:1 for male and female characters (see Appendix A). For BBB and DTB, on the other hand, the gender ratio was rather equal—13:6 for BBB and 15:9 for DTB, which resulted in a nearly equal total ratio of 6:5 (see Appendix A).

How Does the Frequency of Props Presented in JpA Compare with AmA?

RQ1b examines the types and usage of weapons in each chosen animation. While this RQ may have granted little insight on the difference between JpA and AmA, since rarely has any research looked at the non-human part of a show for the purpose of communication, the data that resulted proved valuable. For AA and SpM, especially AA, weapons used in the aid of combat for characters are plenty and various. A total of 22 types of weapons were present in AA and SpM (see Appendix B). Within in them, 14 types of weapons were considered with high technology. Eight of the rest were recognized as cold weapons, such as Loki's scepter and Thor's hammer (see Appendix B).

By contrast, weapons in BBB and DTB were lower in quantity and variety, with only six types displayed in all of the chosen episodes; and the ratios for modern and cold weapons were both 1:1 (see Appendix B). AmA tends to present more weapons and devices with a strong connection to technology, such as metallic armor, robots, fighter jet and space ships (see

Appendix B). Especially for AA, the last two chosen episodes' content was highly related to space warfare and intergalactic species other than the Avengers, where technological weapons and related designs were demonstrated in majority with an "outer world" concept. Not only was the weapon design technical, but also was the origin of the product imaginary and alien. Moreover, one thing that stood out from the weapon collection was that, although displaying a lot of devices that links to battle and violence, there was no regular gun presented anywhere in either AA or SpM. Note that even characters like Black Widow, who habitually uses guns in the Avenger's movie series, had never used a gun in the chosen episodes – she chose to use the "Widow Stings" on her wrist instead (see Appendix B).

For the chosen JpA, there were far fewer displays of weapons in either modern or traditional categories. Armored cars, trucks, guns, and radios were the major technical devices. Weapons also appeared, and many of them were present for less than five minutes (see Appendix B). Blades, for example, although showed up regularly in both anime, still did not gain a strong presence, since the focal point of the two anime was not on weapons.

One thing worth noticing is that, as all the content was science-fiction, the chosen JpA tended to emphasize on the character's special ability than the aid of technology. Hei, the leading male character in DTB, can generate strong electrical current inside his body and use it as a "weapon" (Darker Than Black, 2007). Zapp, the supporting male character in BBB, can manipulate his blood into sharp blades (Blood Blockade Battlefront, 2015). Although there are characters in AA and SpM that have super abilities beyond human strength, it is not a major theme like in BBB and DTB. The reason for such a distinct weapon presentation will be further discussed in the Discussion section.

How Frequent is Psychological-Related Facial Presentation in JpA Compared to AmA?

The data for this RQ revealed the most surprising results. The results showed a large distinction between the overall frequency of psychological depictions for JpA and AmA, BBB and DTB. The two JpA took up 81.02% of the total psychological display. AA and SpM took up the rest 18.98% of the 316 screenshots for psychological depictions (see Appendix A).

To break down categories of psychological depictions further, the frequency for Psychological Depiction's subcategories "voice of mind", "face close-ups" and "eye(s) close-ups" are calculated, indicating similar results. For face close-ups, BBB took up 51.01% and DTB for 39%, while AA gained 9.1% and SpM had only 1.51%. For eye(s) close-ups, BBB, again, took the crown for 58.06% of the total, and then DTB at 19.35%, AA at 6.45% and 3.23% for SpM (see Appendices A & C). One interesting turn-up was that, for the "voice of mind" category, SpM actually ranged the highest percentage among all of 48.72%. AA shared no percentage in this category at all, BBB took up 30.77%, and DTB for 20.51% (Appendix A). There is a reason for the high frequency of inner voice appearances in the Spider-Man series, which will be discussed in the next section.

Other subgroups under the psychological depictions followed similar patterns for JpA and AmA. Although occurring much less frequently, JpA still had a higher frequency in all the categories in psychological displays than AmA.

This result did show that scenes related to emotion and mind movements appear more often in JpA than in AmA. Relating psychological depictions to semiotics, the overwhelming percentage taken by BBB and DTB on the JpA side speak for the cultural codes underlying in anime. There is a reason for making anime with more intimate focus on mind and emotion, since

Japanese are more sensitive to detect negative emotions, and it is a culturally promoted belief to do so.

How Often Do JpA Use Environmental Set-ups Compare to AmA?

RQ1d deals with a topic similar to RQ1b. Although I mainly looked at environment set-ups such as color themes and saturation while moving away from the characters, the surroundings still revealed a lot about the psychological undertone of an animation. Most of the time, color, and saturation in the environment function as a major component for psychological rendering (Ichihara, 2006). The results did show a noticeable difference between JpA and AmA when it came to using saturations and color themes.

Color theme difference for JpA and AmA. First, the color theme of each animation was examined. As presented in the Method section, color themes were categorized into two basic groups: warm and cold. In AA and SpM, the color theme was considered to be warmer than BBB and DTB, since over half of the characters in both AA and SpM were wearing a costume or clothing that was red, yellow, or white. Very few characters were in green, blue, and black. Characters in BBB and DTB, on the other hand, wore mostly black, purple, and white. There were a couple of characters who wore red or blue, yet they were still in combination with black (see Appendix E). Moving on to the color theme apart from the characters, the environmental coloring was also distinct for JpA and AmA. The environmental coloring was similar to the costume coloring, where AA and SpM tended to have an environment that was sunnier and warmer, filled with yellowish sunlight, and the buildings were warm brown in tone (see Appendix D).

In contrast, BBB and DTB both had a cooler theme for the surroundings, including a lot of grey and white for BBB, and a lot of green and black for DTB. The last two episodes of DTB

even looked like there was a dark-green filter on the camera throughout the show, which strongly emphasized the overall mood of this animation (see Appendix D). Interestingly, for BBB, the color theme for environment seemed to vary from one extreme to another. While being surrounded by mist and fog all the time in the imaginary city of New York, the beginning moment of its very first episode and the very ending scene of the last episode actually displayed dramatic bright and vibrant coloring. Blue skies glowing with sunlight; seeds flowering upon grasslands; and citizens and tourists wearing numerous color while smiling in the beginning and end scene of BBB (see Appendix D). These were just for a few minutes, however. The remainder of the show was still greyish in tone, not as dark as DTB, but still let the audience get a clear idea of the gloomy mood.

Saturation difference for JpA and AmA. For saturation, AA and SpM stand on the "bright side" of the scale while BBB and DTB stand on the "gloomy side." With an indispensable connection to the color theme above, saturation works similarly, yet it was subtler. AA and SpM, compared to BBB and DTB, had stronger contrast for both its character and environmental coloring. Take an example of a day scene from SpM and DTB, the saturation of SpM's scene had a higher saturation than the DTB scene. DTB's day scene contains a lot of grey and blue, which made the contrast weaker; SpM's day scene was constructed with a lot of yellow and brown, which appeared to be in a "good weather" (see Appendix D).

For the character's color saturation, AA and SpM still had stronger contrast than BBB and DTB. Take two characters from AA and BBB for example, Iron Man and Klaus, the red armor for Iron Man was brighter and "purer" than Klaus' hair color, each is R = 159 and R = 119 on the Adobe Photoshop RGB scale—note that the higher the number, the stronger the contrast and saturation (Manav, 2007; see Appendix E). Lastly, the comparison of saturation was less

obvious when it came to the night scenes for the four animations, yet there was still a clear coloring difference, where AA and SpM featured blue-theme for nights, since both of their last two episodes occurred in outer space. DTB and BBB still stuck with the grey-and-green combination (see Appendix D).

Saturation and color theme in environmental set-ups can manipulate audience's emotion and can greatly impact an animation, yet may not be something audiences pay attention to. This change in audience emotion when watching animation happens silently and unconsciously. Using the surrounding environment to filter out a desired tone for the animation is very common in JpA, and different themes and degrees of saturation signify various meanings (Price, 2001).

Semiotic Differences Between AmA and JpA

After looking at the samples collected, it became obvious that JpA heavily emphasized the character's psychological development, while AmA tended to use brighter color for the story. The great amount of psychological displays in JpA was clearly alerting the audience to pay more attention to the character's mental development. By including many face close-ups and detailed shots for the eye(s), JpA was telling the audience to look for signifiers that signified the invisible process of thinking and emotional changes.

On the other hand, for AmA, the color choice for its superhero costumes speaks a lot for its theme. Red and yellow, being the two dominant color for superheroes, indicated the character's power and righteousness. Here, the color itself contains various meanings, but the character's action can determine precisely what kind of meaning should be assigned to the color they are wearing. For instance, the visually abstract concept, like justice or power, can be expressed through the color red (Westland, 2016). In AA and SpM, by doing good deeds while wearing red and yellow, the characters are sending a signal, implying their justice and good

nature (Kress, 2002; see Appendix H). By watching heroes act in such colors, the audience can thus relate red and yellow to positive personalities and concepts. A more detailed examination of semiotics in animation will be given in the next section.

Discussion

Gender Issues in Animation

After looking at the results, two major patterns have emerged. First, the two JpA selected tend to have more female characters in total, which makes the gender ratio more balanced than AmA. The gender imbalance issue happened in AmA, just like in many Western science fiction works in other media, such as film, novels, and television shows (Dehchenari, 2014). Female characters were highly underrepresented in AA and SpM, and while sharing a very tiny ratio on the chart, female characters, such as Black Widow of AA and White Tiger of SpM, also contributed far less to the story than other supporting male characters. Moreover, the individuality of the character is flattened. The role of Black Widow, although a strong and intelligent agent as the plot has showed, manifests her power mostly through violence – just like the other male characters in the show. The individuality of Black Widow was thus flattened, making her actions similar to other male characters.

Stereotypical displays of women of different ethnic backgrounds are an issue as well. Pressured by the request for diversity and the voice of minority, many AmA did consider adding characters that come from an exotic culture. White Tiger in SpM is of a Spanish origin, yet apart from contributing to the diversity of the show, her interactions with other character are still scarce. Especially in the chosen season of SpM, White Tiger's major purpose seems only to be to simply "stand there as a sign of diversity," thus to avoid questioning the animation from being

"all-White." White Tiger's interactions with other characters were very few in the chosen episodes, which was no more than 5 minutes combined for all the scenes.

One potential reason for why female characters are underrepresented in these shows could be that although their characters are lacking in individual personality they can very easily transform into a "pretty vessel." However, they are not indispensable to the plot.

On the other hand, women had a much higher presence in JpA, each with various personalities and individual stories to be told. The interactions between characters were also a lot more frequent. Amber of DTB, for instance, has connections with at least three major organizations as the plot indicated, and was the leader of Contractor's revolution. One can quickly tell from the moment Amber shows up that she is among one of the major characters of the story. Although she appeared late in the show, she quickly gained attention from other characters, as well as the audience (NightFrog, 2015). "White," or Mary Macbeth from BBB follows a similar path as a leading female character. Her character design has set her to be the vital savior of the city by the end of the show.

There are many other creative literature genres such as romance, family, fashion, and so on that portray unique female characters, but to marginalize gender groups into different genres can negatively impact an audience's perceptions about certain groups and result in a stereotypical impression (Rouner et al., 2013). On the other hand, there are creators who are aware of the issue and are trying to help more people realize it as well. This is where, in comic book stores nowadays, one can find American comics like *Super Girl* (2015) and *Wonder Woman* (2017) more often on the shelf – these two female leading characters both have a long history, and now they are reaching another height into the film and TV field to emphasize their feminist strength, while advocating gender equality in the genre of science fiction.

Differences of Psychological Depictions for JpA and AmA

The result showed a remarkable difference in the depiction of psychology-related aspects between JpA and AmA. JpA contains four times more psychological depictions than the eight episodes of chosen AmA. Also, there is a significantly higher presence of "Voice of mind" in the four *Spider Man* episodes selected.

The "Inner Voice" of Spider Man.

Spider Man, one of Marvel's popular superheroes, has been animated in comic books for many times throughout the century (Lee et al., 2012). Apart from being a popular super hero and a "friendly neighbor," another selling point of the Spider Man series is its humor. While being in a fictional world, Spider Man, like *Dead Pool* (1991), has the ability to "come out of the frame" and even start a virtual conversation with the audience (Priest, 1999). In another word, Spider Man can sometimes have his own "time zone." When Spider Man enters his own "time zone," as the audience sees it, every other character in the show freezes and Spider Man comes to the front and says funny interactive lines to the audience. During this special time period, no one in the show can hear Spider Man's voice, as if he is communicating to another dimension— to where the audience lives (see Appendix F). This is one of the most unique features of the Spider Man series, for both comics and animation. In the chosen Episodes of SpM, this feature contributed a very large portion to the "Voice of mind" subcategory in AmA's over all psychological depictions.

Psychological displays for JpA and AmA. Moving on to the vast distribution of psychological displays in JpA and its relation to AmA, it is safe to say that JpA puts more weight on the importance of Psychological status of their characters. By giving more close-ups and lines that reveal a character's thought processes and feelings, JpA tends to pay more attention on the

portrayal of the character's very own personality and emotion. The close-ups of the detailed face, eyes, and hands are believed to tell the most about a person's feeling, their determinations, loves, and fears.

By presenting those intimate moments in a character's actions, such as furrowed eyebrows, widened eyes, griped fists, and shivering fingers, audience can witness minor changes that were sometimes hard to notice in real life (see Appendix C). Audiences are nearly drowned with psychological expressions of the character, which would result in having a more drastic experience of what the character is going through. In this way, audiences can also get an illusion of a closer connection to the character in the animation. The emphasis on mind movements has always been a feature for Japanese animation and even other Japanese arts (Napier, 2016). This will be discussed later in relation to culture and semiotics. In some ways, spending time on psychological displays also controls the pace and length of the plot for JpA. A simpler way to explain this would be that, by adding more psychological and detailed depictions for the character, there will be more scenes dedicated to those moments and thus slow down the story. This is dramatically in contrast with AmA.

In AmA, the near absence of psychological depictions, minus the special case for SpM, constructs another way of storytelling. By having only 60 scenes within the total 316 scenes collected, AA and SpM are pacing through the story rather quickly, left little time for the audience to slow down to breathe or empathize with characters involved. In this way, AA and SpM actually created a better tension for the story than JpA, providing a more sensational viewing experience for the audience. Compared to JpA, the focus on character interaction and presentation of story lines instead of an individual's psychological status creates a distinct style for AmA.

Environment-based psychological depictions. Similar to the psychological depictions, the environment build-up and coloring for JpA and AmA also have distinct features. AmA, as the result showed, has more colorful themes and higher saturations than JpA. In AA and SpM, characters are wearing various kinds of superhero costumes, and many of them fall close to the three primary colors of red, green, and blue on the spectrum. For JpA, on the other hand, the coloring for clothes are subdued, with black and white being two common themes. This leads to the difference in saturation of JpA and AmA.

Saturation, on some level, affects a viewer's perception and emotion greatly, yet unconsciously (Khoroshikh, 2012). Just like color temperature, saturation—or the "grey-ness" in the environment set up contributes to a show's undertone and mood throughout (Wei, 2004).

AA and SpM, on one hand, have a warmer, brighter tone, with a saturation generally higher than BBB and DTB. In other words, the RGB level of AA and SpM's scenes are closer to 255— which is the highest saturation level possible— compared to BBB and DTB's saturation reading for color red (see Appendices D and E). Higher saturation provided AA and SpM with a more colorful and positive atmosphere, which indicates the underlying tone of the show to be fun, relaxing, and hopeful.

BBB and DTB, on the other hand, lie on the other side of the spectrum. For BBB, the entire show is drowned in a pale mist, never to fade, yet never to be overly disturbing for watching (see Appendix D). This design of environment gives BBB an almost constant grey-ness, as if everything in the show was covered in a thin layer of grey, making the saturation lower, and dragging RGB readings closer to 0 than AA and SpM. This design also works as a reminder of the matchless location that the story took place in—an imaginary New York City that has been

invaded by aliens and monsters from another realm. The everlasting mist here is functioning as a mysterious veil, covering otherworldly species from human's sight.

For DTB, although the saturation is tested to be higher than BBB, it is still filtered through a strong tint of green throughout, casting the show with a gloomy and eerie atmosphere. Especially during the very last episode of DTB, inside the "Hell's Gate" area, nothing seems to be in its natural form, even the gravity is upside down, where characters can walk freely on vertical walls of buildings (see Appendix D). The green saturation worked as a plus to the strange design of the story, influencing the audience with an otherworldly feeling.

Weapon display in JpA and AmA. Another aspect that is worth noticing is the different habit of weapon usage between AmA and JpA. In AA and SpM, over 20 kinds of weapons and high-tech devices are found, and characters often utilize the weapons to solve a problem or resolve a crisis. For instance, in the first two episode of AA, Ironman programmed the state-of-the-art A.I. "Arsenal" to absorb power from the villain, Thanos (Avengers Assemble, 2014). Moreover, in the last two episodes of SpM, Spider Man used his own invention of a computer virus to destroy the Collector's spaceship data vault and ended up saving every hostage on board. Spider Man later used the spaceship's own defense system to fire at itself, defeating the Collector and banning him from invading the Earth (Ultimate Spider Man, 2014).

On the other hand, BBB and DTB, with only six weapons appearing in the animation, tended to emphasize a character's personal strength instead of the aid of technology. What's more, the chosen JpA embedded more super abilities onto the characters instead of giving them outside devices as support. Hei, the leading character of DTB, simply uses a blade throughout the show. He did not have many technical devices – not even a gun—for he has the ability to electrocute his enemy with currents generated from himself. Most characters in DTB follow a

similar pattern of utilizing one's own mutated ability like Hei (Darker Than Black, 2007). For BBB, similarly, characters fight mostly using their physical strength plus a little help from each of their special powers. Klaus and Zapp, the two male characters in the story are skilled in combat using their own blood (Blood Blockade Battlefront, 2015). By forming blood into different weapons, they are more likely to sacrifice themselves as the source during battle than use dispensable weapons.

Speculating on the reason for this difference suggests a relationship to the emphasis on psychological display of characters in the previous section. Since JpA likes to highlight each character's mind, emotion, and personality, it is probably best to have the character deal with conflict on his or her own, without the outside help of technology. For AmA, there is a strong sense of demonstrating power and technology development through the show, weapons and devices are often portrayed in more detail than the characters (see Appendix B).

Animation and Semiotics

Ever since *Astro Boy* was imported into the US around the 1960s, the American audience started trying to make sense of it. As time goes by, audiences in the US have developed a unique way of understanding anime based on their own culture (Kasa, 2005). In this way, anime is not only accepted gradually by a Western audience group, but also represents something new under a different culture's perspective.

Take BBB for instance, the story was set in an imagined New York City, which is already invaded by aliens and monsters from another unknown realm. Said's theory of imagined familiarity to unpack this situation: here, even though it is said to be a Western metropolis rather than a city in Japan, an audience's impression of New York will affect their cognitive process, whether or not they are actually familiar with something or not. After all, not all American

viewers are from New York City, and what the audience thinks it knows about New York will augment its appreciation and familiarity with the anime, thus find the anime more likable.

Apart from creating a sense of familiarity with an imaginary city, there are numerous other aspects that influence an audience's emotion and other psychological status while watching the animation. These aspects are not plainly displayed in the show, however, they are more abstract in nature, and require watchers to do a certain amount of decoding in order to get the meaning. A discussion of semiotics' function in animation is necessary at this point, especially for the use of psychological depictions, coloring, and environment saturation.

Semiotics and Culture Codes

As mentioned previously, signs and signifiers are used all over animation, especially in Japanese anime. The cultural background of the animator may result in him or her incorporating symbols that alter the meaning of existing signs in his or her specific culture background. The following part will discuss how the semiotics of coloring and psychological-related facial expressions work differently in JpA and AmA, and how these point back to the two distinct cultures lie behind.

Semiotics in Color and Saturation

Colors, as a perfect representamen for various emotions and artistic styles, work as a semiotic element in animation. People in different cultures use colors differently to convey mood or atmosphere, and have thus gradually developed generally accepted systems for color usage. As stated, colors contain various semiotic codes for different places in the world. For what color the American thinks represents guilt may be used to show a touch of nature in Japan (Lucyk, 2014). If combined with saturation, as mentioned previously, another set of semiotic codes will be at work, while giving a panoptic undertone to the animation.

The use of color in DTB. Take the example of the color green, DTB used different yet rather dark greens deliberately throughout the anime. As the result section showed, the majority of color themes for DTB contain green, black, and grey, where the environment set-ups with the vast amount of green can be both a reasonable choice and a contradictory one. On one hand, as Cheng's (2009) and other related studies showed regarding colors and emotions, green represents natural and peace in JpA, yet the usage for green in DTB is mainly for shading and coloring of artificial objects such as buildings, walls, roads, and vehicles. One usage for green on a natural subject is the sky—yet it is commonly agreed that the sky should be in no way green. This rather eerie way of using green actually has its unique function.

First, by going against the traditional coloring habit in JpA, DTB used green to present the difference of a sci-fi world, as well as to reflect the otherworldly-ness of the show's finale moments inside "Hell's Gate." Secondly, studies done by both Terwogt and Lucyk showed that green appears to be more favored by adults than children (1995). A color that contains lower saturation was rated as negative more among adults than children in the US (Lucyk, 2014). Relating back to DTB, as mentioned before, the target audience for this anime leans more toward young adult and teenagers above 16, unlike for AA, SpM, and BBB. Using a vast amount of green makes sense here, for adults tend to favor green and the negativity rated for green suits the overall tone of DTB's story (see Appendix H).

The use of color in AA and SpM. Examining the warm colors like red and yellow, the reason behind AA and SpM's color theme choice becomes clear. Children tend to prefer colors that are brighter and "purer" than colors that are perceived as cold and dark (Osgood et al., 1975). Among those, red and yellow are especially favored over warm colors like brown, pink, and orange (Normann & Scott, 1952). This explains why so many characters in AA and SpM, such

as Ironman, Spiderman, Thor, Falcon, Power Man and Nova, have a red or yellow theme in their superhero costumes. AA and SpM are dedicated toward a younger audience group, namely children from 8 to 12 and young teenagers below 16. Making such a choice in its color theme would fit the population better, compared to the use of green and greys.

Semiotics and Psychological Depictions

After studying the psychological effects of color on audience, psychological depictions and semiotics will be looked at here, mainly through the depiction of face close-ups in JpA and AmA. Since emotions are intangible, invisible and abstract nonverbal cues, it requires the receiver to decode, so that a meaningful interaction can take place (Parkinson, 1996). As mentioned before, Ekman categorizes emotions into six kinds: anger, fear, surprise, happiness, sadness, and disgust (1987). JpA and AmA treat these six emotions very differently. JpA emphasizes emotions a great deal, while emotions are almost absent for AmA. This phenomenon could be the result of the animation's culture of origin.

Culture codes and animation. For JpA, the vast amount of facial close-ups in animation showed Japanese's attention to details, such as the magnification on delicate emotions. Japanese tend to be more sensitive to emotional displays such as fear, sadness, and depression (Kleinsmith et al., 2006). Moreover, as mentioned before, Japanese tend to rate higher on the scale for emotional intensity, which could result in a little exaggeration of what others actually feel (Matsumoto et al., 2002). This exaggeration is especially noticeable in JpA, such as the very frequent facial close-ups, which aimed to intensify the character's emotion and emphasize their psychological status.

It has become a norm for JpA to include a vast amount of psychological depictions in anime, and it has been generally accepted by its viewers (LaMarre, 2009). All the close-up shots

in each scene work as a sign that signifies the emotion and mind movements of the character, signaling that the audience should "pay attention, something is happening in the character's head and they are struggling" (see Appendix H). For instance, an experiment showed that Japanese's recognition to the posture of "head bent" is seen as a sign of sadness, just like shown in BBB and DTB, yet for Sri Lankans, the gesture is rather perceived as being upset (Kleinsmith, 2006).

On the other hand, for AmA, it is okay for psychological displays to be absent, and the audience still finds it enjoyable. In the case of emotional display, the close-ups for characters mainly focused on negative emotions like fear or sadness, which were not preferred emotions for display for Americans (Safdar et al., 2009). In the US culture, display of powerful emotions are favored over display of negative emotions, while for Japanese, it is okay to display powerless feelings (Matsumoto, 1990). This phenomenon is also a result of the regulation of culture norms, for different cultures have different display rules (Elfenbein & Ambady, 2002).

There are many subtler culture aspects influencing an animation's production and audience acceptance; this study has looked at several major part of them.

Conclusion

The research aimed to peel off the superficial aspects of JpA and AmA to examine what was the major visual and semiotics difference and what were the probable causes. The paper first gave a brief overview of the history of anime and American animation, introduced their origin and growth, as well as their prosperity today. Then, the paper used the method of visual content analysis on four animations to discover the differences in between, targeted mainly on psychological depictions, gender ratios, and weapon displays.

Within the over 400 samples collected, the paper related semiotics to the findings. Major aspects found by this study are fourfold. The first one dealt with gender inequality issues in both

JpA and AmA. The second finding showed that AmA tend to display more weapons and technological accessories than JpA, while JpA is more likely to focus on the physical strength of character. The third finding was that while the chosen AmA was being bright and colorful in color themes and saturation, selected JpA were more subdued in color and lighting, which contained more grey and greens, as well as a darker theme for character's coloring. The last finding revealed a huge difference in the way AmA and JpA depicting psychological related aspects. Over 2/3 of the samples collected for psychological depictions belong to the two JpA chosen, indicating that AmA contained very few emotional displays, while JpA emphasized a lot on a character's mind.

Limitations do apply to the research. First of all, the sample size was too specific. With only two animation chosen for each country, there was a high chance for exceptions in other works. Also, as being a rather subjective art form, animation produced by different directors can vary on their manors of expression—namely not all JpA may contain a great deal of facial close-ups, and not all AmA do not care about character's mind movements.

As the study moved near the end, two ideas of possible future research emerged. The first one could be to examine features of animation that have a shared culture background. To be more specific, an anime produced by an American born Japanese, or an animation made by an American who lived decades in Japan. One suitable example for this is the animation *RWBY* (2014), which is made by an American born Japanese, and if one looks at the animation, it is very easy to find out traits in both Japan anime and U.S. animation.

The other idea relates to a popular new media platform called "Danmaku," a concept in animation transformed from the military term "barrage/bullet screen." Users can send instant comments right onto the screen where the show is ongoing, constructing a live message board

and communications with others who are also watching the animation (see Appendix I). Different animation sites' user and their comments vary a lot from one another, which can be a good place for studying different user behavior by using discourse analysis.

There are still many undiscovered areas in the field of animation. By relating communication and animation, this study hopes to become one tiny brick in building up the bridge between the two fields. Furthermore, by conducting a comparison between animation productions from two distinct cultures contributes to how these cultures communicate through such media platform. By noticing the major differences in psychological depiction for the two cultures, one may find a balance point in between the drastically different displays, and thus inspire new ideas.

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Appendix A

Charts and Tables

Table A1

Gender Ratio for AmA

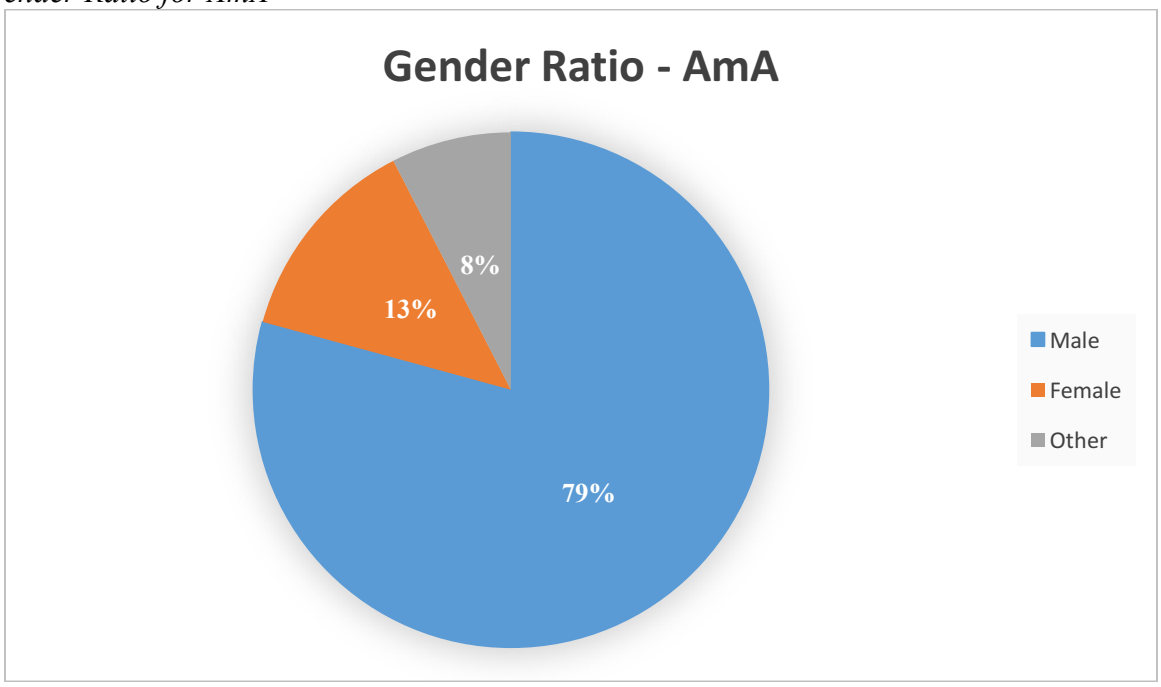


Table A2

Gender Ratio for JpA

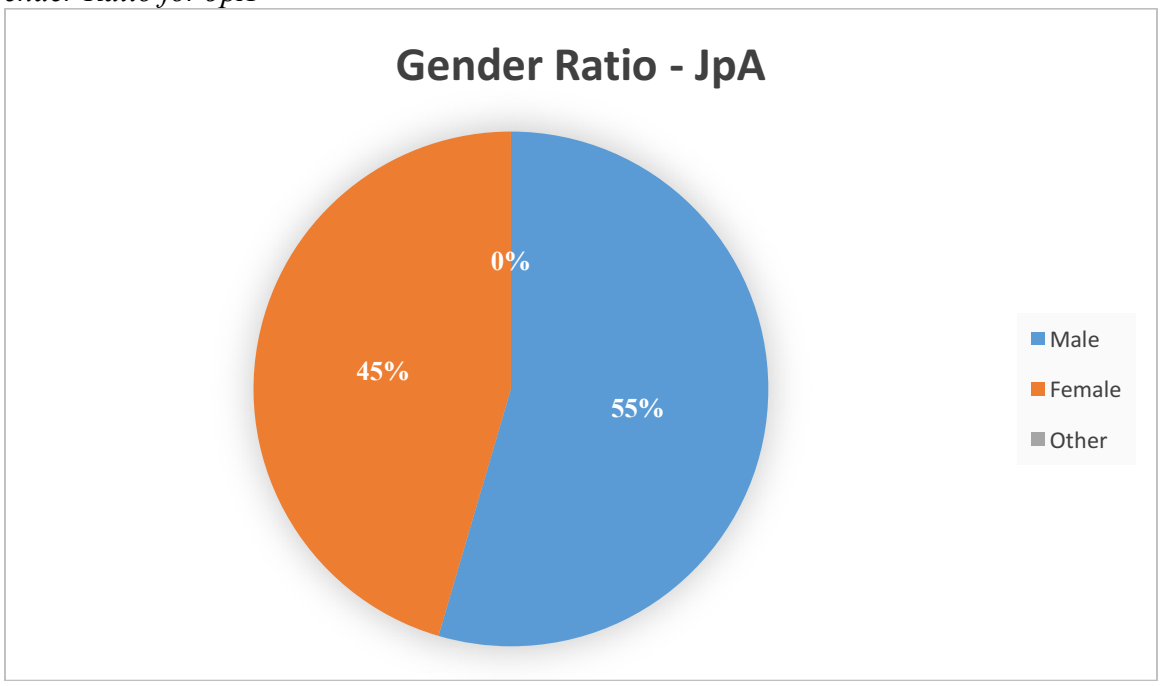
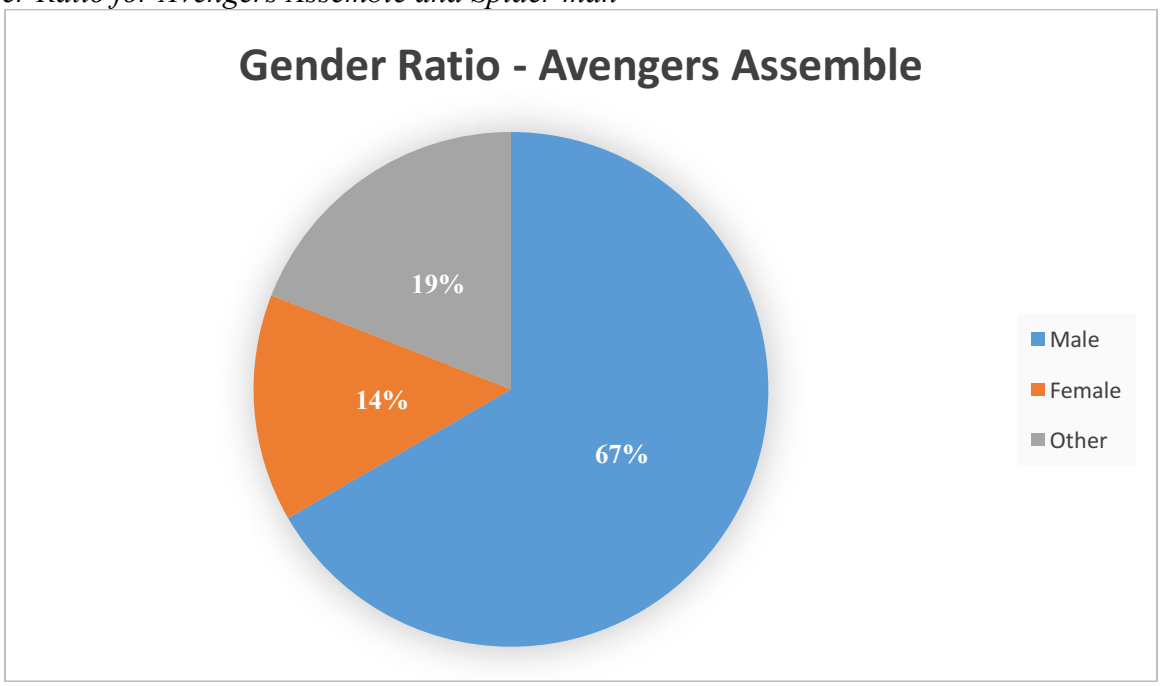


Table B

Gender Ratio for Avengers Assemble and Spider man



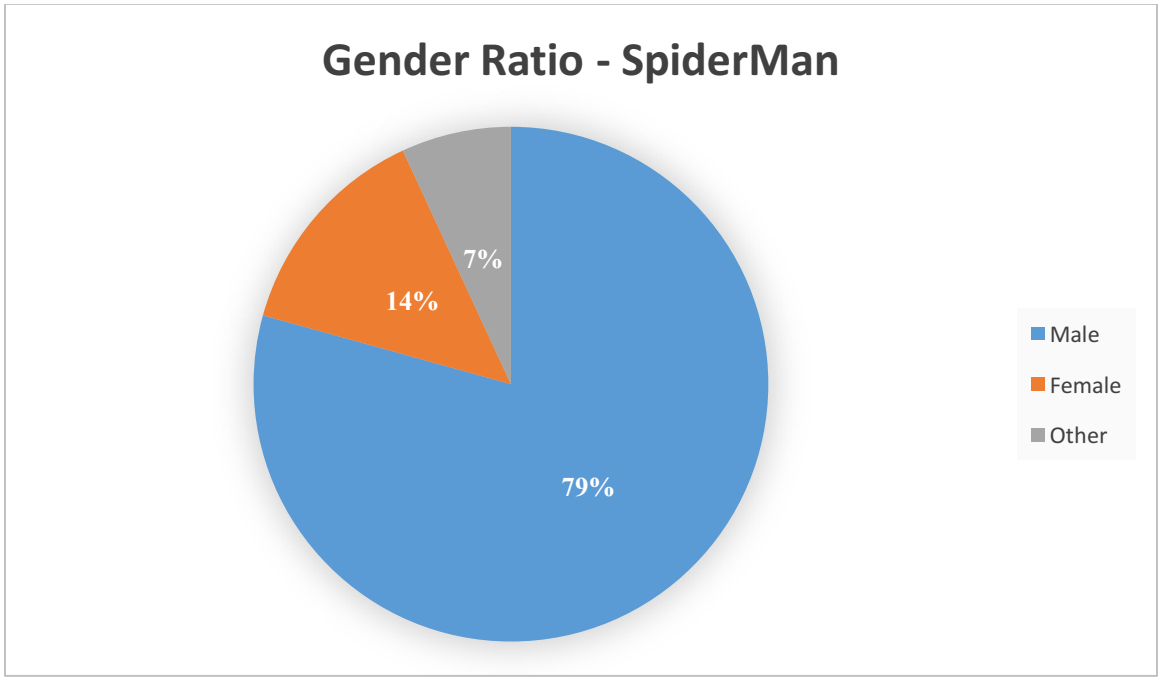
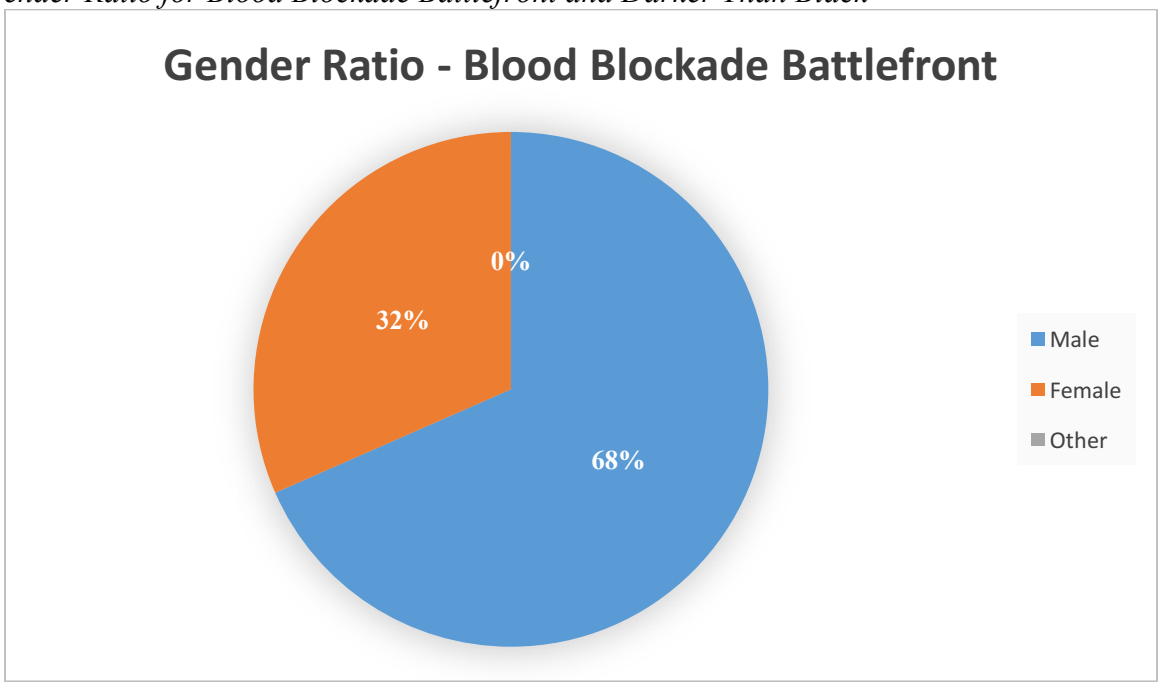


Table B2

Gender Ratio for Blood Blockade Battlefront and Darker Than Black



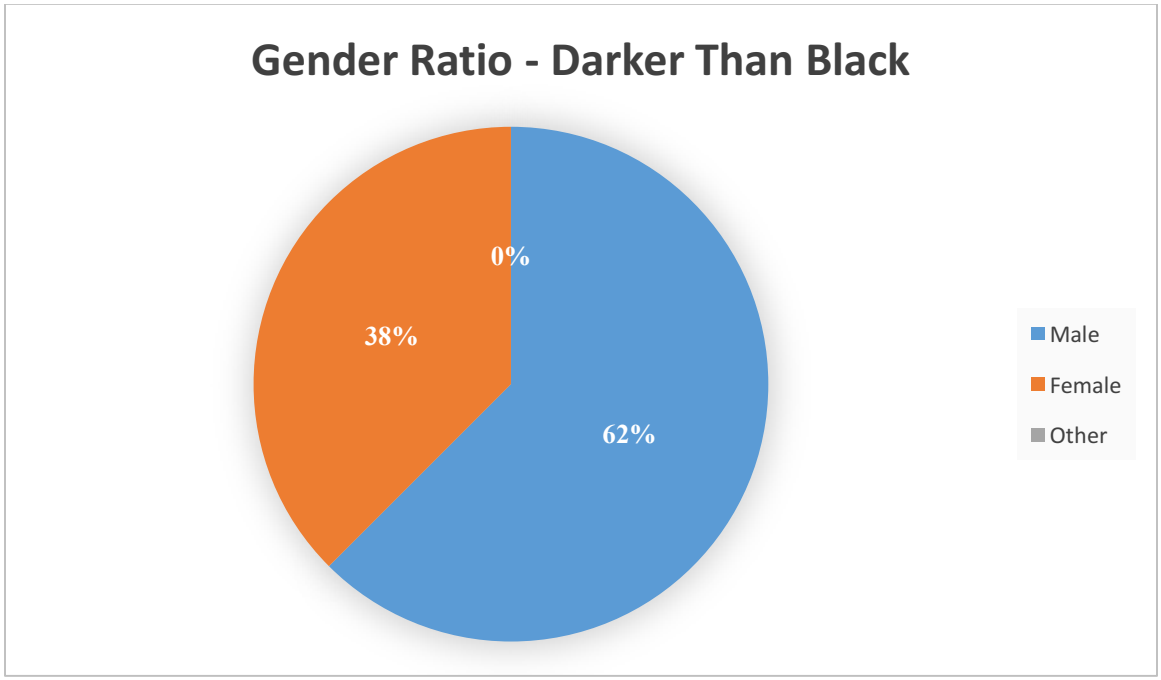
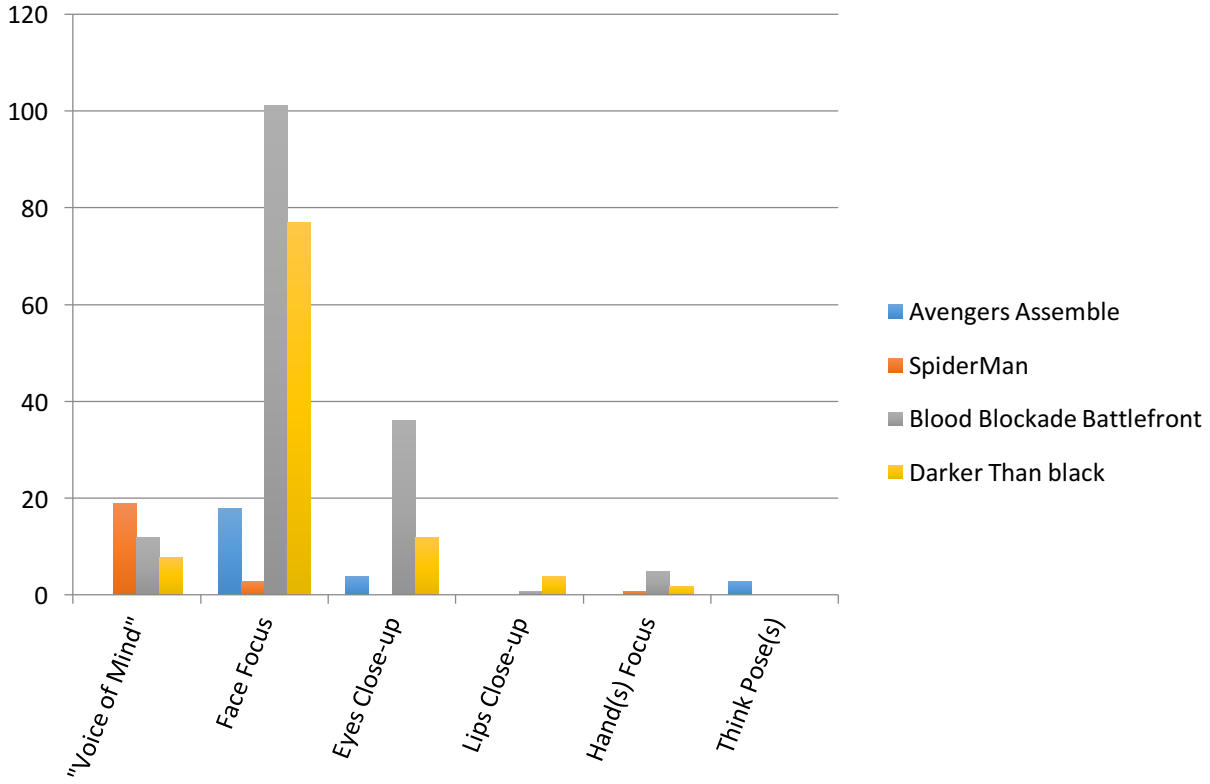


Table C1

Psychological Depictions – Overall



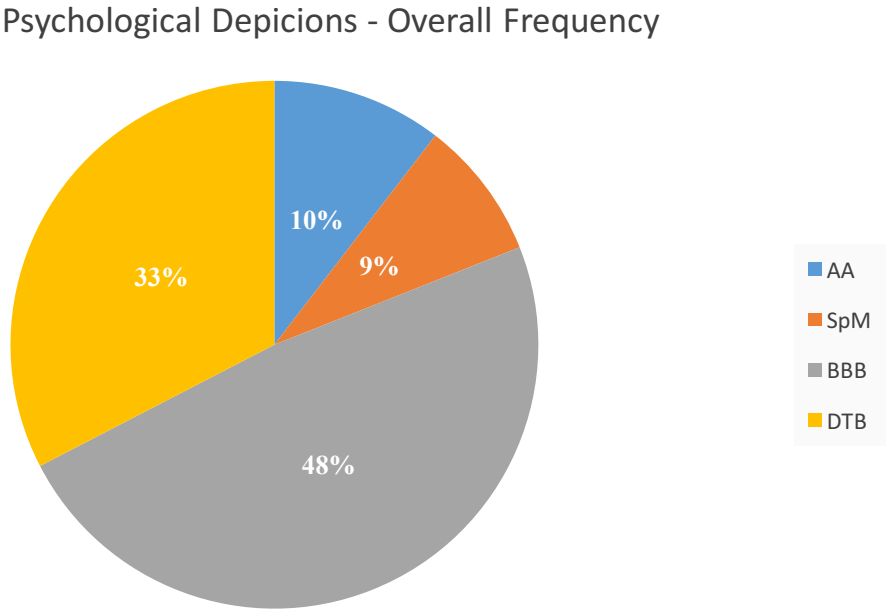
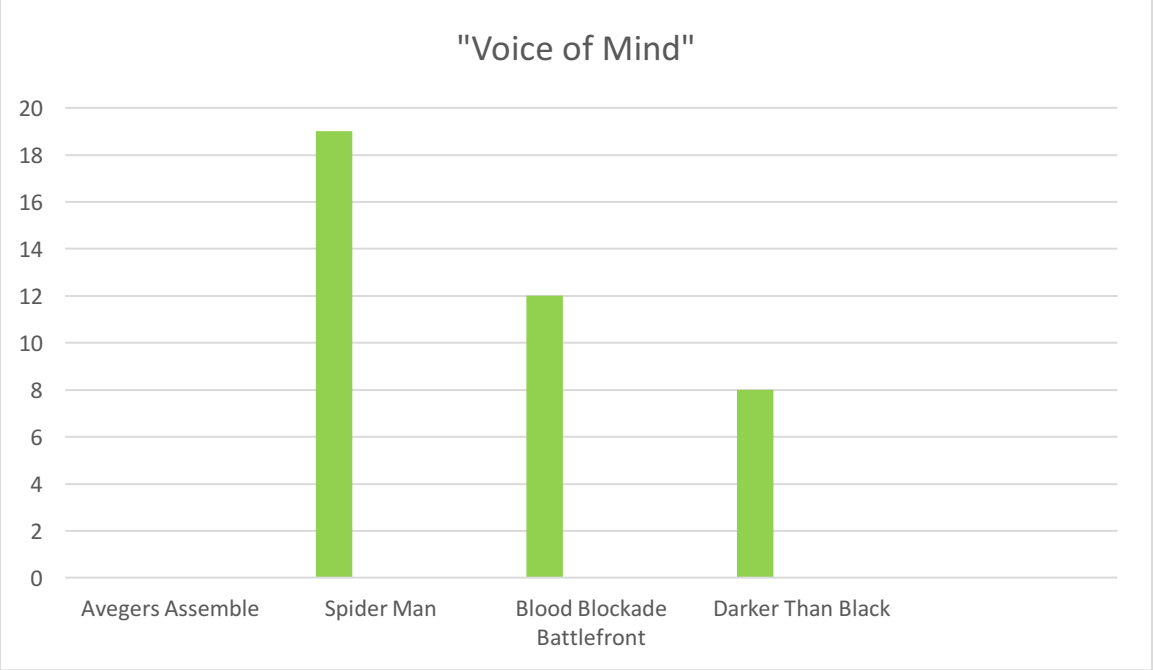
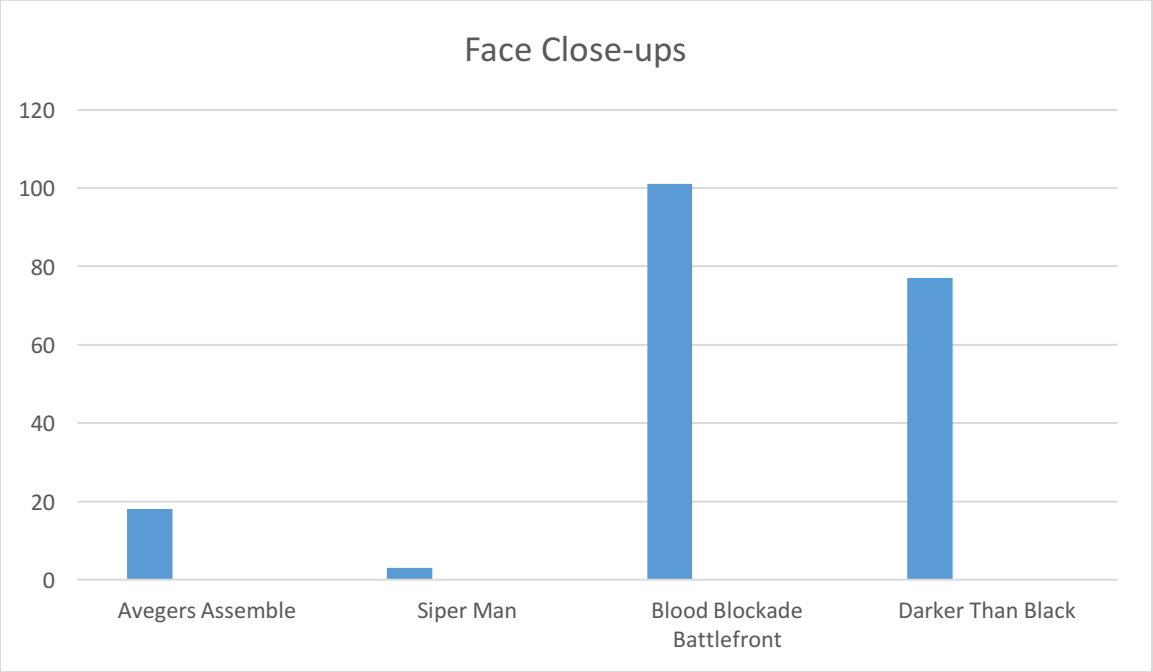
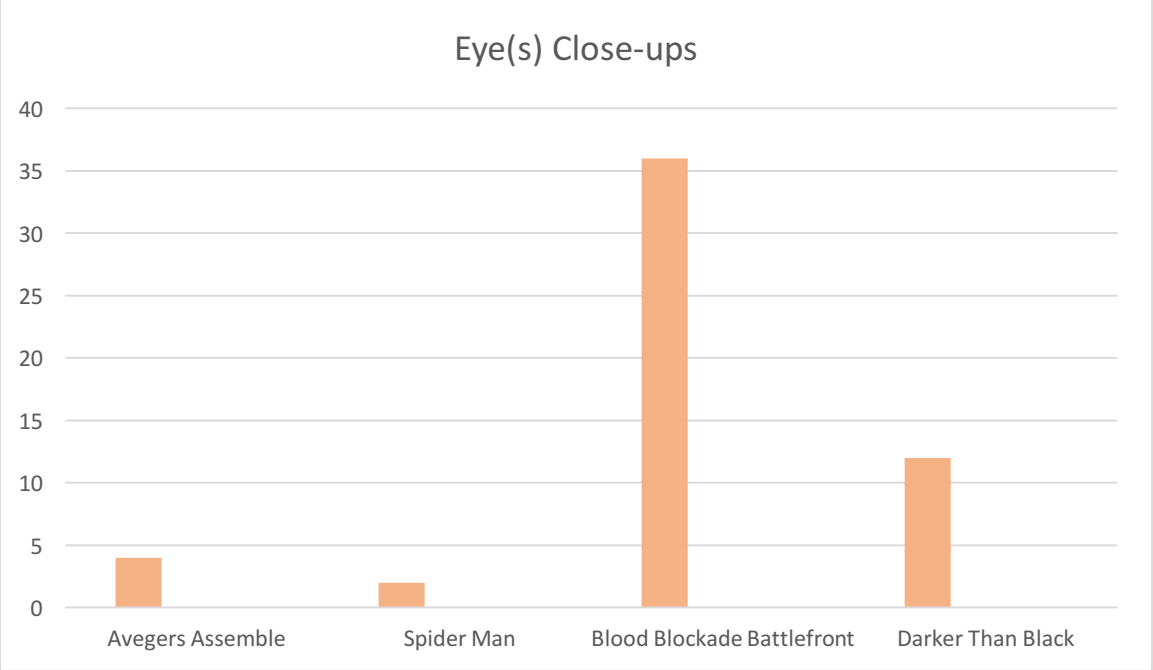


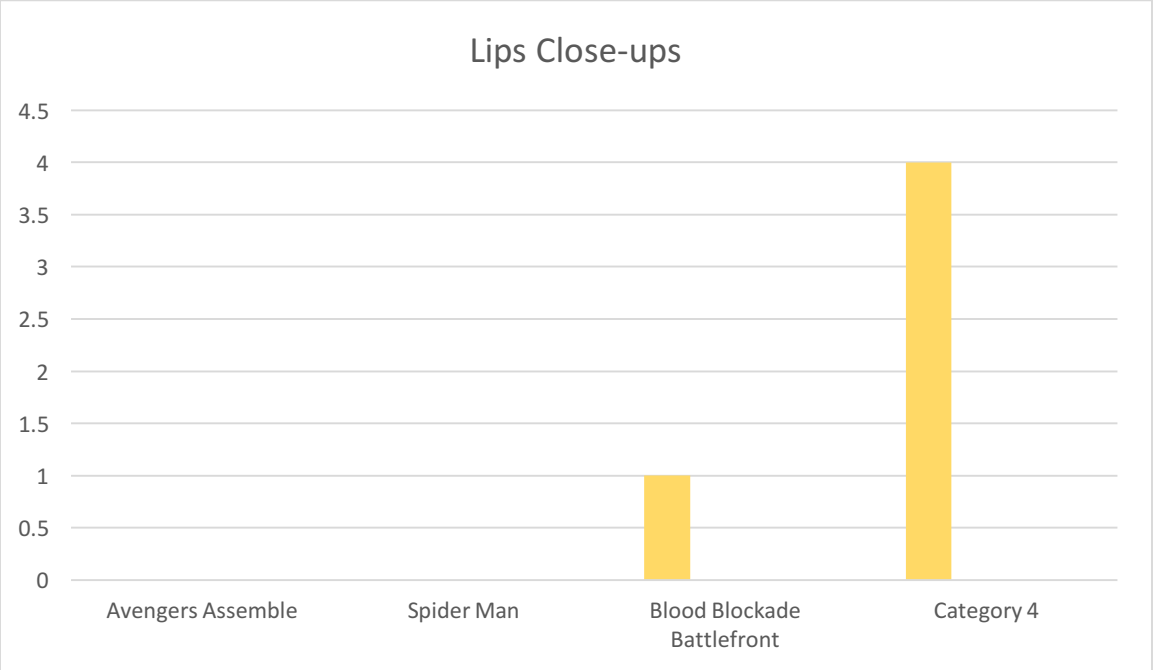
Table C2

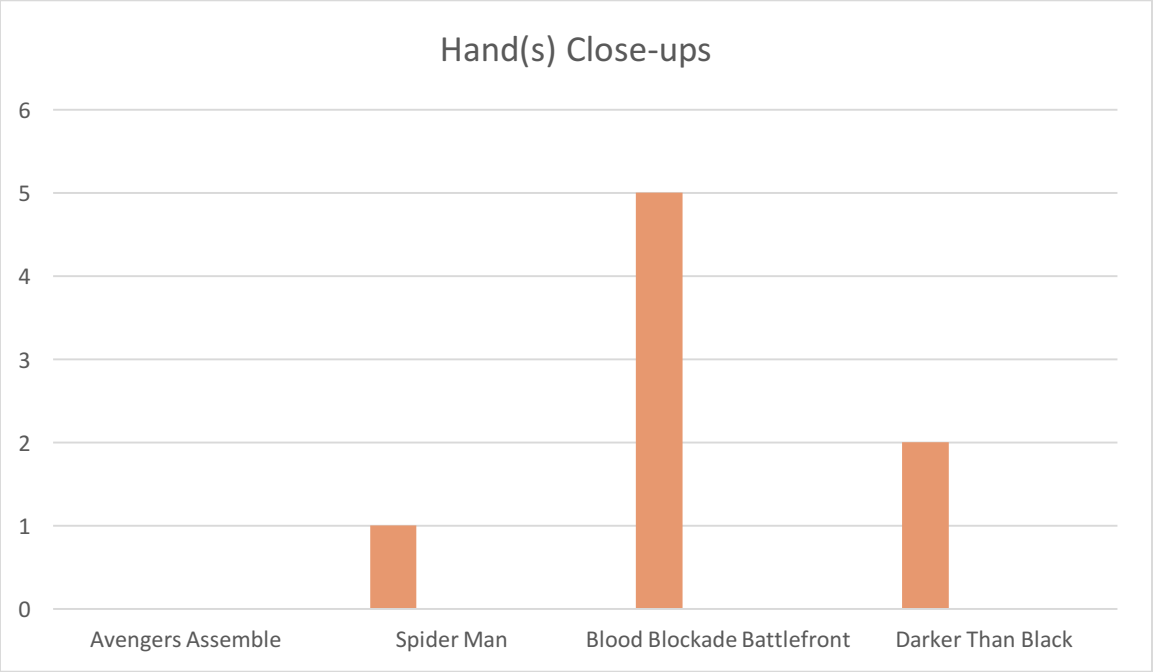
Psychological Depictions – Breakdown






Eye(s) Close-ups
40
35
30
25
20
15
10
5
0
Avegers Assemble
Spider Man
Blood Blockade Battlefront
Darker Than Black


Lips Close-ups
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Avengers Assemble
Spider Man
Blood Blockade Battlefront
Category 4


Hand(s) Close-ups
6
5
4
3
2
1
0
Avengers Assemble
Spider Man
Blood Blockade Battlefront
Darker Than Black

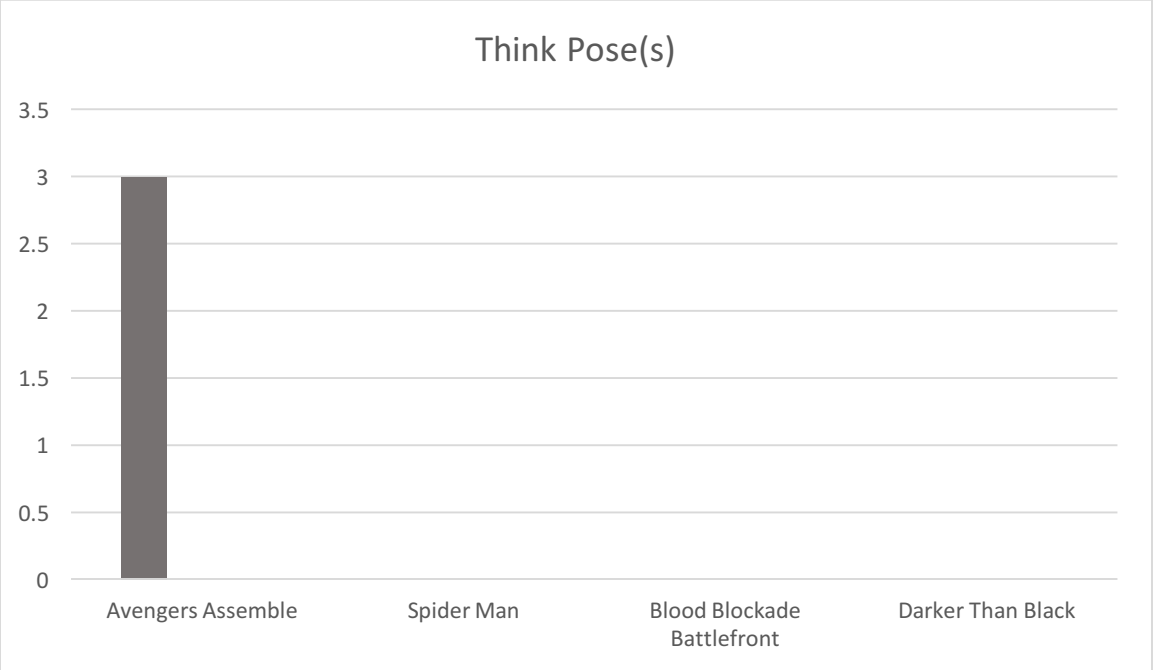

Think Pose(s)
3.5
3
2.5
2
1.5
1
0.5
0
Avengers Assemble
Spider Man
Blood Blockade Battlefront
Darker Than Black

Table D1

Psychological Depictions – Overall Frequency

Overall collections	Number of appearance	Frequency
Avengers Assemble	33	10.44%
Spider Man	27	8.54%
Blood Blockade Battle Front	153	48.42%
Darker Than Black	103	32.60%
Total	316	100%

Table D2

Psychological Depictions – Break-down Frequency

"Voice of Mind"	Number of appearance	Frequency
Avengers Assemble	0	0%
Spider Man	19	48.72%
Blood Blockade Battle Front	12	30.77%
Darker Than Black	8	20.51%
Total	39	100%

Table D3

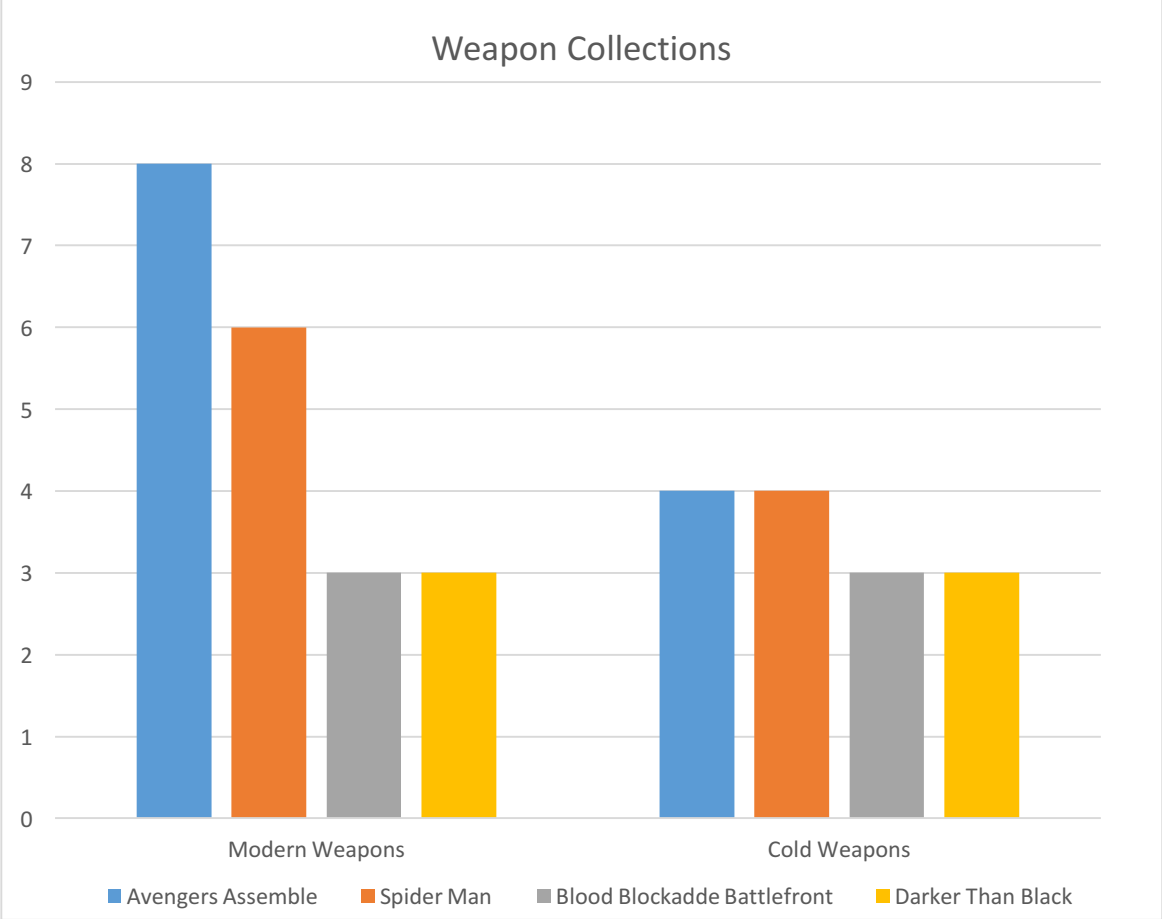
Face Close-ups	Number of appearance	Frequency
Avengers Assemble	18	9.1%
Spider Man	3	1.51%
Blood Blockade Battle Front	101	51.01%
Darker Than Black	77	39%
Total		100%

Table D4

Eye(s) Close-ups	Number of appearance	Frequency
Avengers Assemble	4	6.45%
Spider Man	2	3.2%
Blood Blockade Battle Front	36	58.06%
Darker Than Black	12	19.35%
Total	62	100%

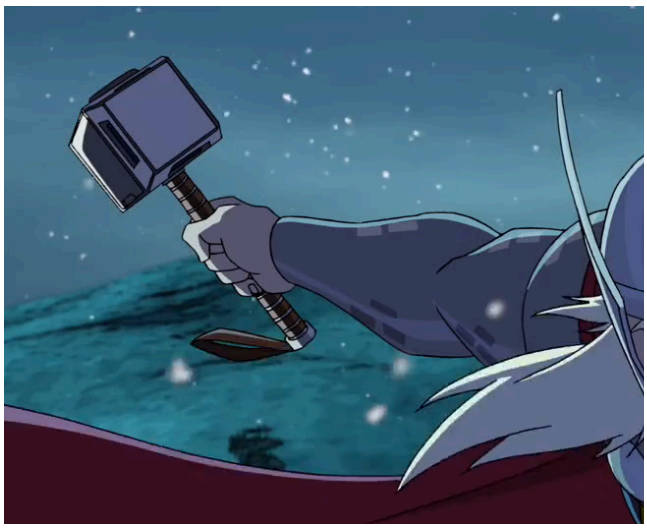
Appendix B

Props/Weapons



Character's Weapon Display for AA and SpM

Thor's hammer



Loki's spear

Widow Stings

Spider Man Weapon Selections

Avengers Assemble Weapon Selections

Blood Blockade Battlefront and Darker Than Black Weapon Selections

Appendix C

Character's Psychological Depictions

Spider Man & Avengers Assemble

Blood Blockade Battlefront

Darker Than Black

Appendix D

Saturations

Saturation for Avengers Assemble and Spider Man

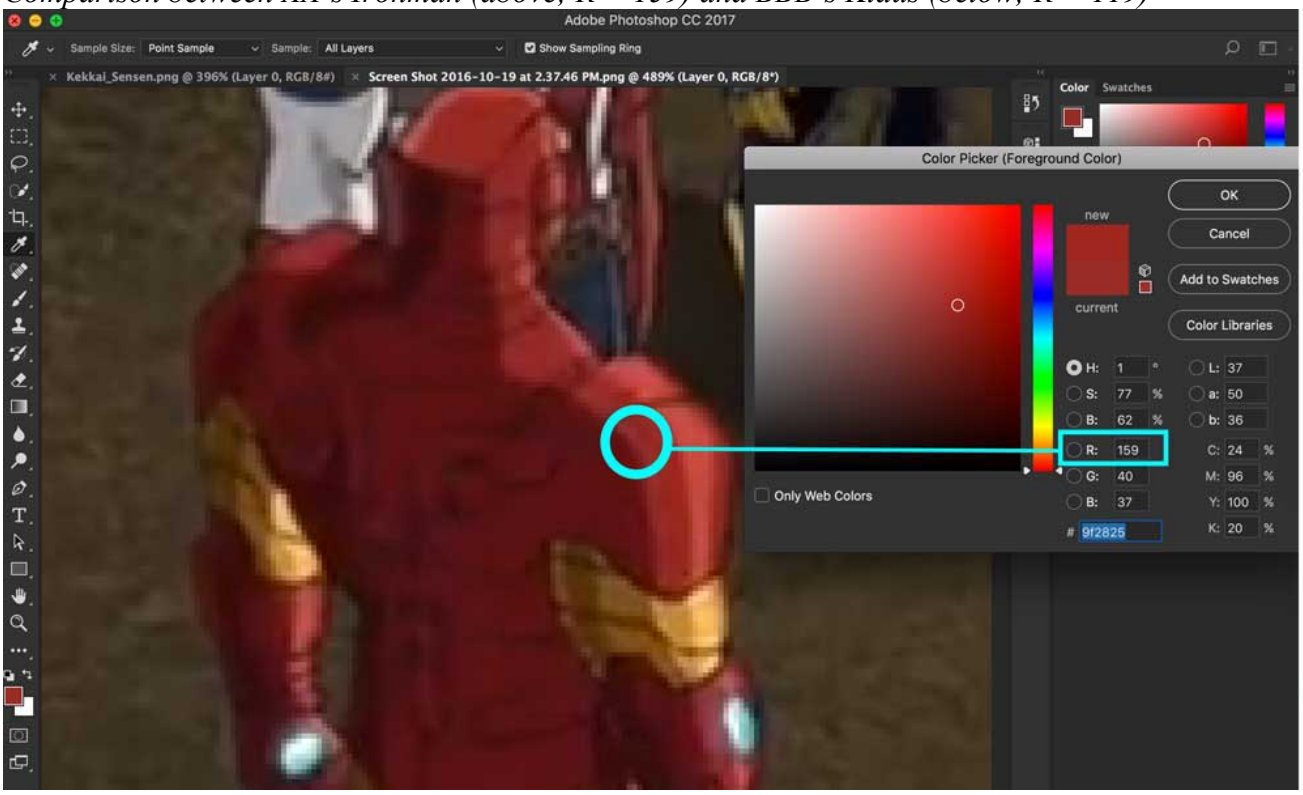
Saturation comparison for Blood Blockade Battlefront, Beginning and End Scenes

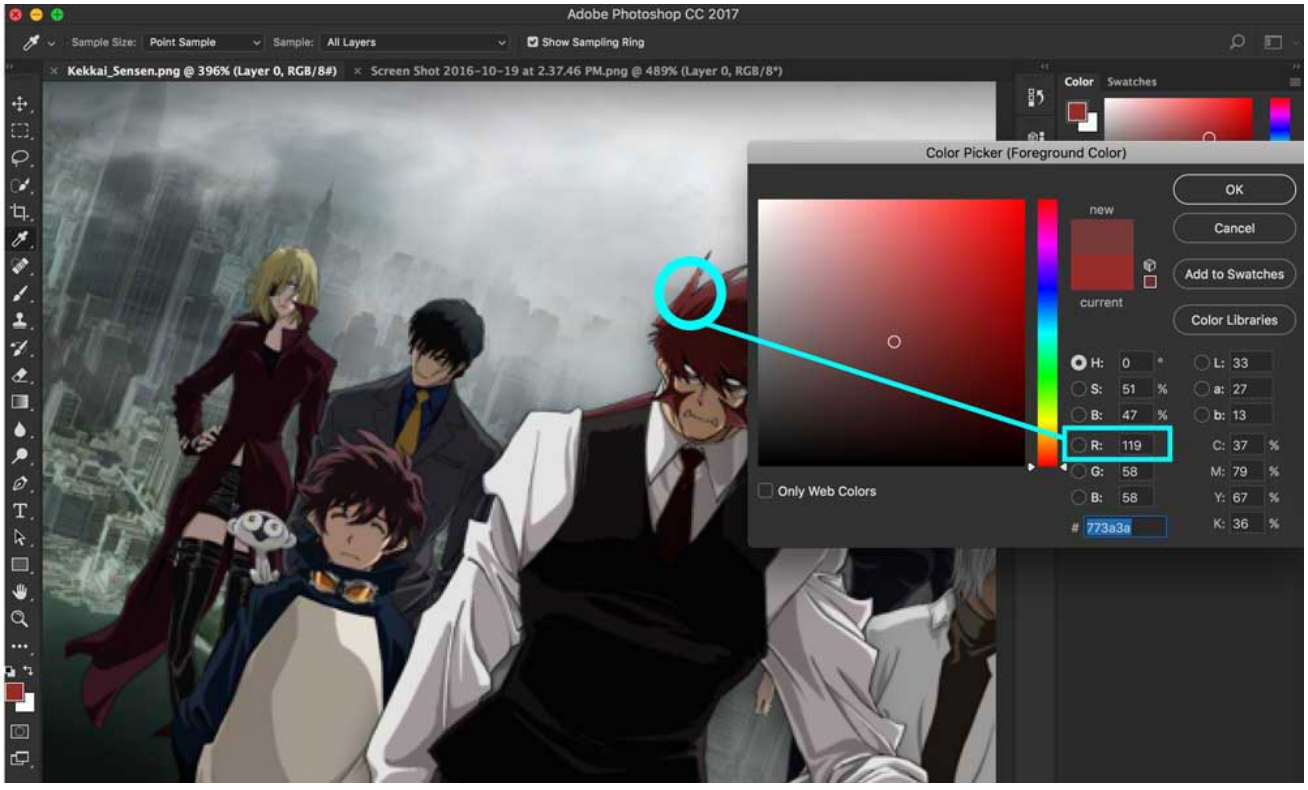
Saturation for Darker Than Black

Appendix E

Color themes for all four animations

Comparison between AA's Ironman (above; R = 159) and BBB's Klaus (below; R = 119)





Appendix F

"Voice of Mind" of Spider Man

Appendix G

Code Book

Gender	Male	Biologically male, as indicated on the official cast list of characters showed.
	Female	Biologically female, as indicated on the official cast list of characters showed.
	Other	Biologically undefined or cannot define, may due to species difference or physical structure ambiguity. The official cast list also may not specify.

Props	Weapons (Considering the chosen animations are all in the sci-fi genre, weapons and related technologies plays a big role in them, thus this category is created.)	Weapons - modern	Modern weapons are defined by technology, post-industrial revolution products, such as gun, gun powder, flame thrower, missile, nuclear weapons and so on.
		Weapons - cold	Cold weapons are pre-industrial revolution designs, neither explosive nor power-based, like swords, blades, bows and arrows and so on.
	Special props	High-tech devices	Because the selected animation often deals with conflict and fights, this category is aimed at collecting all the combat-related technological devices, such as GPS tracer, AI,

			micro-chips and so on.
		Large-sized accessories	Other non-daily props are included here in the aid of war, such as a fighter jet (i.e. Quinn Jet in *Avengers Assemble*), panzer (armored automobile), modified motorcycle (in BBB) and so on.

Psychological Depictions Character-based	"Voice of mind" focus	With this category, the frame often appears frozen with thinking characters standing or sitting still. The scene's focal point is the "inner voice" thinking. This is a common usage in motion pictures when it is necessary to show what the character is thinking.
	Face close-up	A close-up of the character's face can easily reveal their emotions and feelings. Thus this category seeks to determine how many close-ups appear in each episode and to see if the show illustrates "what is going on inside".
	Eye(s) close-up	Similar to the definitions above, eyes are the most telling part of a person's emotion and feelings. Normally this kind of close-up will not appear unless the character is in deep fear or rage or sadness.
	Lips close-up	Similar to face and eye close-ups, lip movements can represent wordless

		feelings, thus a detail like biting one's lip can show a lot of their feelings such as anger, resent, or enduring.
	Hand(s) close-up	Similar to the above three, a detailed depiction of hands is often used in Japanese Anime to show that the character is either determined (making a fist tightly) or frustrated (loose fist, things dropping from a hand).
	Thinking poses	Similar to the above four, people tend to make certain poses when they are thinking. Even if the "voice of mind" or none of the above showed up, an action such as stroking one's beard or scratching one's head can mean they are thinking hard, whether it is a troublesome errand or a profound issue.

Psychological Depictions Environment-based	Color Theme - Cold (Blue, Purple, Green, etc.)	Different kind of animations use different colors set to emphasize the basic tone of the story. Cold colors are often used to represent a more depressed, serious or mature tone.
	Color Theme - Warm (Red, Orange, Yellow, etc.)	Warm colors, on the contrary, often indicate happier situations, up-rising story directions and a more relaxed, less serious tone. (For example, sitcoms use brighter colors than thrillers)
	Saturation - Gloomy/Grey	Similar to color, less lighting is favored when depicting danger, horror and depression. Lighting influences the environment in the show on a

		psychological level. The greyish tone indicates low color saturation.
	Saturation - Bright/Strong contrast	Similar to low saturation, a bright environment indicates the animation is drawn with a high color saturation, and also stronger contrast, making everything more distinct and the color range closer to RGB (original color range).

Appendix H

Table 1

Semiotics for Character-based Psychological Depictions

Signifier (Marker)	Type	Signified (Meaning)
"Voice of mind"	Mind process	The character is thinking privately, not telling their ideas to others.
Face close-up	Facial movement	To reveal intensified fear, sadness or excitement of a character, while indicates the nature of the event the character is in.
Eye(s) close-up	Facial movement	To show intense fear, rage or despair of a character, while emphasize on the character's psychological status.
Lips close-up	Facial movement	To highlight resentment, hatred or fear of a character, while implying the character's personal feeling to the opposite character(s).
Hand(s) close-up	Body movement	To tell the character is determined, frustrated or nervous, while indicating what might happen next in the plot, according to the character's decision.
Thinking pose	Body movement	The character is thinking, and others can notice they are thinking, since there are visible physical postures showed.

Table 2
Semiotics for Environment-based Psychological Depictions

Signifier (Marker)	Type	Signified (Meaning)
Bright red	Color Theme	Indicates themes like strong, righteous, heroic and alarming. Red stimulate viewer's attention, and in American culture, it is a popular theme for superhero costume such as for Ironman and Superman.
Bright yellow	Color Theme	Indicates similar themes like color red for superheroes, stimulate viewer's attention and shows a hint of outstanding power and a sense of rare intelligence, such as for Ironman, Nova and Powerman.
Black and white	Color Theme	Add mature and gloom to the character, as well as intelligence and seriousness. Black may also imply a tragic past of a character, while white emphasize on innocence. If in a Noir, they will give a nostalgic tone.
Low saturation – dark green in DTB	Saturation	To create a dull, dark and gloomy atmosphere for the entire show, let audience feel the pressure in the air and the negativity and struggling of the story (and the character).
Low saturation – grey and white in BBB	Saturation	To create a mysterious, wondrous and gloomy atmosphere around the show. A hint of the character's mood being depressed or lost.
High saturation – red and yellow in AA and SpM	Saturation	To construct a happy, relaxed and up-beat atmosphere. the brightness and pureness provides joy and optimistic feelings to the plot.

Appendix I

"Danmaku/弹幕/Bullet-screen/Bullet curtain"