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Exploring Character Expressions in Comics by Using Stream-Of-Consciousness as 2D Animation Production Method
Short Title: Stream-Of-Consciousness Digital Emoticons

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ABSTRACT

An increasing number of animations are now based on original comics. Some Japanese animations perfectly recreate original comics in their character expressions and symbols. However, when these symbols are used in comics, they remain in that scene. As Scott McCloud mentioned in his book *Understanding Comics*, the definitions of comics and animations differ. Therefore, we cannot conclude that "sequential visual art" interprets comics or animations. This study uses the fluidity of the stream of consciousness as a concept to create experimental animations with flowing character expressions. It combines comic and animation techniques; if the character's expressions remain the same, comic symbols are added to change them. It also examines whether the audience appreciates how small details can change a character's mood; or a character's expression constantly changes, but symbols that express this do not change; the study examines the kind of experiences that this will bring about. The results also suggest that alternatively, it creates new signs to express feelings and ascertains whether the audience understands the character's emotions. This research may benefit those studying or developing non-narrative, non-dialogue animations. Further, the study may be relevant for developing new language expressions and benefit those interested in studying stream-of-consciousness animation techniques.

Keywords: Stream-of-consciousness, comic symbols, 2D animation, Emoticons, experimental animations, multicultural factors

INTRODUCTION

American psychologist William James first proposed the concept “stream of consciousness” in his book *Principles of Psychology*. (1890) He believed that consciousness is not fragmented but a constant flow, and although people may be physically limited, their thinking is fluid. Some novelists have adopted this concept in their writings. For example, when psychological novels emerged in the 20th century, some writers strove to depict the entirety of their characters’ minds rather than limiting them to rational thinking. (Augustyn A, Gupta S, Lotha G, Luebering J, Tikkanen A 2022).

Comics have a long history of development. Owing to continuous innovation, comics have gradually become simplified and moved away from realism. The language of comics developed after people accepted a simplified method. In this respect, American cartoonist Scott McCloud has stated: “What we are seeing in the living lives of these pictures is the primordial stuff from which a formalized language can evolve.”(McCloud, 1993, p.127) We can now clearly understand the symbols, lines, and exaggerated display techniques of comics. Although far from realistic, they are all due to this innovative language.

Research Questions

This study draws on the stream of consciousness as a concept to explore and experiment with character expressions in comics in 2D animation. Specifically, the study aims to answer the following research questions:

- How are the expression techniques of comics realized and used in 2D animation?
- Why are viewers attracted to simplified cartoon expressions?
- How do non-mainstream animations based on the stream of consciousness highlight their unique features?
- How does animation, based on comics, improve the visual experience?
- Based on the Kuleshov effect and montage editing theory, how do different editing skills inspire new feelings and emotions?
- What innovations have occurred in the expression language of comics and animations, from realism to cartoons?
- Comparing the character expression methods in different regions through history, is there an opportunity to combine these methods or create new expression symbols (languages) to show emotion in 2D animation?

Research Fields

A difference exists between the expression methods of comics and animation; comics are flat and static creations. Suppose an artist wants the audience to feel the character’s emotions; in this case, they must analyze and update many features, such as exaggerated expressions, dialogue box design, storyboard arrangements, and the use of lines and symbols. Before readers know these icons and symbol expressions well, the artist must consider whether using these means is logical or easy to understand. The initial development process in animation is physical, emphasizing the dynamics; for example, magic lantern slides and projections in Rome. (The Henry Ford, 2020).

Another example is shadow puppetry that existed more than 2,000 years ago in ancient China,

India, and other regions. When animation began to develop, the audience's attention was not on the detailed character expressions but on the motion that dynamically explained a story. The modern animation industry produces more animations adapted from original comics; therefore, some exaggerated expressions and symbols from comics are recreated. Because of the dynamic advantages of animation, the audience has a better viewing experience.

Stream-of-consciousness production is not mainstream in literature or animation. Because it involves a relatively obscure and somewhat incomprehensible creative method, works utilizing this concept often challenge logic and require a plot outline, confusing the audience. However, when an article or animation is not focused on the story but on the character's perspective, a stream-of-consciousness narrative is one of the best methods to show the character's emotions (Krystal NC, 2022).

Scope of Research

The stream-of-consciousness concept provides researchers with more opportunities to study how comics express characters and how that relates to 2D animation. Because we do not need to think about the entire story, we can boldly experiment with the expression language of comics in animation. Is there an opportunity to combine other methods or create a unique expression symbol to present character emotions? Alternatively, will we discover a new visual expression language if introducing the idea of the stream of consciousness removes all logical concepts and storylines (leaving experimental animation with only face or symbol changes)? Animation expresses emotion directly and clearly; the stream of consciousness is characterized by a constant flow, and emotions can be high or low. Combined with different comic expressions, can we experiment more with the new symbolic language to show characters' emotions in 2D animation? This study analyzes the history and development of comics and animation, and tests experimental animations based on existing data. It also examines cultural differences between the USA, Japan, and China.

LITERATURE REVIEW

As this study explores character expression in stream-of-consciousness comics and applies it to 2D animation, it is essential to understand the origin and history of comics and animation. Due to cultural differences, character expressions in various countries are very different. The creations of some countries are highly representative of their respective cultures. Therefore, it is necessary to investigate comics and animations from different countries. For instance, the literature and culture productions of some Asian countries are more exquisite in expression and tend to use metaphors and mono no aware (in Japanese form) rather than some explicit techniques. On the other hand, most of other culture productions in Europe and the United States are more prone to show their conceptions more intuitively. In this study, the stream-of-consciousness concept is incorporated into the 2D animation production method; in this process, an investigation is undertaken to understand the concept and become familiar with existing works.

Understanding Comics

Scott McCloud is a cartoonist and comics theorist from the United States. *Understanding Comics*, *Reinventing Comics*, and *Making Comics* are his best-known nonfiction books. (Scott McCloud, 2014) His books are a great inspiration for the comics field and have also inspired the current study. His three books present a step-by-step approach to studying and interpreting

comics. He described his books as follows: *Understanding Comics* presents the basic theory; *Reinventing Comics* is a more controversial look at comics and their revolutions in art, culture, and technology; and *Making Comics* involves an in-depth study of comics' narrative techniques. His books laid the foundation for the Making Comics 50 State Tour and the Google Chrome Comic. (McCloud, 2022). McCloud states that:

> "Comics----Juxtaposed pictorial and other images in deliberate sequence intended to convey information and to produce an aesthetic response in the viewer. For all the doors that our definition opens, there is one which closes. Our attempts to define comics are an ongoing process which will not end anytime soon." (McCloud, 1993, pp. 19–23)

McCloud believes that defining comics is a process and that people will continue to innovate and break existing norms. There are no right or wrong ways to develop comics, and the decision-making power is in the hands of the creator. McCloud has identified the vocabulary and language of some of the comics examined in this study, based on which some interesting questions emerge for reflection: Why are audiences attracted to simplified faces? When did the simplified method develop? Would more refined and realistic faces be better in comics? It is generally believed that reality is more complex and challenging than simple symbols. In fact, "when we abstract an image through cartooning, we are not so much eliminating details as we are focusing on specific details." (McCloud, 1993, p.30). Cartoon characters are more likely to give the audience a sense of identity. Their expressions are simple, but the audience feels empathy for them. Therefore, animations became increasingly prevalent during the development of comics.

In Chapter 6 of *Understanding Comics*, McCloud described a unique expression method for comics. Lines, symbols, and icons are the basis of language; no matter which artist uses them first, they are likely to be recognized and imitated by others. This visual language system dates back 5,000 years to Mesopotamia. Similarly, Chinese oracle bone inscriptions demonstrate the use of physical images to create new languages. The more the symbols amassed, the longer any artwork or idea may be regarded to have existed. Many modern aesthetic changes have spread quickly and are now accepted by audiences (Figure 1).

Figure 1. *Understanding Comics: The Invisible Art by Scott McCloud, 1993, pp. 129 (https://archive.org/details/understanding-comics/page/129/mode/2up)*

Word balloons are used in comics to express characters' communication and interactions, but they are rarely seen in animation. Special symbols and word balloons are areas in which comics and animation do not fully intersect. Word balloons can indirectly express a character's state and emotions. For example, some word balloons are sharply outlined so that the audience can guess whether the character is angry or excited without looking at their face. Therefore, this study used experimental animation to combine dynamic expressions and differently shaped word balloons to provide the audience with a new visual experience without dialogue.

Comics to Animation

Each artist determines expression in the arts; therefore, many different art styles exist worldwide. Compared with other regions, the styles in the United States and Japan are distinctive and representative. Marvel's series of comics and animations are classic American works. The characters in Marvel's creations are realistic, but their developments and characteristics are simplified, even in realism. Therefore, we can analyze and compare their old and new works; for example, Spider-Man (Marvel Entertainment, 2022). From realistic comics to cartoons, the changes and simplifications of character styles are evident.

Most representative works in the United States tend to be realistic; however, the Japanese style (Japan is known for its comics and animation) often varies. Much ancient Japanese art, such as character styles, clothing, and ink painting, was learned in ancient China. With the continuous development of relationships and exchanges between countries, many innovative artists have emerged in Japan, including the influential Katsushika Hokusai (1760–1849). He greatly influenced Japanese art, as well as European art at a later stage. *Thirty-six Views of Mount Fuji*, a masterful example of ukiyo-e landscapes, is renowned worldwide. In addition to his works, he is recognized as the originator of modern Japanese comics. In the *Hokusai Manga* collection, Hokusai presented the method he used to depict different forms and conducted in-depth research on the expressions and movements of the characters.(Katsushika & Katano, 1878).

After the Meiji Restoration, Japan accepted much of Western culture, and its artistic creation underwent reforms. However, the Japanese still combine certain traditions with innovative designs.

Two illustrations by Kobayashi Kiyochika, *One Person, Six Faces a girl* and *One Person, Six Faces an Older Boy*, maintain a certain level of realism but change and exaggerate the characters' expressions, which is different from traditional Japanese art. Before the reform, traditional Japanese art was basically "one person, one face," with no expression changes, no active or exaggerated expressions, and having no emotional impact on the audience. (Figure 2)

Figure 2. *One Person, Six Faces a girl and an Older Boy by Kobayashi Kiyochika, 1884*

(https://wellcomecollection.org/search/images?query=Kobayashi+Kiyochika)

There are two illustrations by Kobayashi, Kiyochika *One Person, Six Faces a girl, and an Older Boy.* (1884) maintain a certain level of realism but change and exaggerate the characters' expressions, which is different from traditional Japanese art. Before the reform, traditional Japanese art was basically "one person, one face," with no active or exaggerated expressions and no emotional impact on the audience.

THEORETICAL FRAMEWORK

Outline of the Theoretical Framework

First, this study examines why creators and audiences are becoming increasingly interested in animations based on original comics. Historically, the developments of comics and animation have differed. Comics express aspects that animation cannot, which could be due to time constraints, the absence of special comic symbols, or the inability to recreate the style of the original comics. In this context, the following questions are raised: How do animation producers react to such problems? What methods do they use? Will their workarounds provide a solution for experimental animation? Second, this study seeks to explain why animation is created in a stream-of-consciousness form, the research status of the stream of consciousness, and the precise role that it plays. When this form first appeared in the literature, it was considered too casual and unrestricted, and as being based on people's thoughts. Animation using the stream of consciousness as a creative method is not mainstream. Indeed, highly abstract scenes confuse the audience and fail to capture their attention. Against this background, how do creators compensate for these shortcomings? Do they address these issues technically, through scene editing, or character settings? Alternatively, can a combination of these elements exist? What are the most unusual and effective methods of creating experimental animation and themes? This study also explores whether the stream of consciousness can be used to create character expressions as well as an enjoyable visual experience for the audience?

Editing Effect and Theory

As the current study involves displaying experimental animation, the editing method must also

be considered. Sergei Eisenstein's Soviet montage editing theory and the Kuleshov effect have inspired film editing throughout history. Eisenstein's montage editing lists five methods: metric, rhythmic, tonal, over-tonal, and intellectual or ideological. (Filmmaker IQ, 2014). The Kuleshov effect is a psychological filmmaking technique in which the spectator develops an emotional response to a film before seeing it. (Filmmaking Lifestyle, 2022). Kuleshov experimented with three short films with the same expressionless faces, which demonstrates how even when the scenes are the same, editing can elicit different meanings and emotions from the audience. Kuleshov used three shots in another experiment: an actor smiling, a close-up handgun, and the same actor appearing terrified. When the shots were shown to the audience, they interpreted that the actor is frightened. When the order was reversed, they interpreted him as becoming courageous. The shots were identical, but the arrangements altered their meanings and emotions.(Filmmaker IQ, 2014).

A Fusion of Comics and Animation

Japanese anime and comics are developing faster; character expressions are becoming more simplified, and countless works exist. The most significant factor for most comics and animations is the character. For instance, *Demon Slayer* is a popular anime in Japan, which is based on the comics of Koyoharu Gotouge. *Demon Slayer* was produced in modern times. To a certain extent, some researcher may consider that prevalent anime and manga are inappropriate for academic reference, however, on the other hand, why it is popular and accepted by the public? The methods and expression in modern creations are worth lucubrating since the epoch are constantly improving. Gotouge's style is unique and her characters' expressions are vibrant and exaggerated; audiences have sometimes reported to never have seen such faces or expressions. Japanese producer Yuma Takahashi collaborated to develop the anime for *Demon Slayer*; he stated that the most significant challenge was translating the detail in Koyoharu Gotouge's comics into motion:

> "I would say the biggest challenge was translating the uniqueness of Gotōge-san's art style. Their imagery has much impact, with very distinct facial expression lines and striking visual choices. So, I wondered how we would naturally translate that from the manga into motion."(Jacob, 2019).

The current study also considers this question for experimental animations while translating static images and symbols into fluent 2D motion. The characterization of the *Demon Slayer* has been very successful; the adaptation of the anime expression has also sublimated it compared with the original comics. Comic is a static creation. Even some authors depict imbued with tension, their expression of dynamics are limited. Animation fills the static defect. In *Demon Slayer,* colors, voices, and music that do not appear in the original black-and-white comics all portrayed in the animation. The various manifestations of animation are essential reasons behind why numerous cartoonists cooperate with animation studios.

Another reason that this anime is remarkably faithful to the original manga is that the manga's original author, Koyoharu Gotouge, was involved in the entire production process. As Takahashi mentioned, Gotouge's style is distinct, and the characters are complete. The expressions of the characters that she draws in her comics impact the reader visually, and many readers agree that they can hear them by looking at static comics. Koyoharu Gotouge, the author of *Demon Slayer*, knows her creations best, and collaborates with the production team to create a new visual feeling.

Stream-of-consciousness Anime

This study used stream-of-consciousness as a production method, and explored related comics and animations employing this approach. While many manga-based animations have been developed, animations using the stream of consciousness as a production method are still rare. As mentioned earlier, the stream of consciousness is an abstract concept, and most works produced based on this concept do not have a complete or precise storyline. Given the absence of a compelling storyline, a smaller audience group is interested in such works, compared to other animations that are more popular among audiences.

Japan has continuously innovated through animation. It is not easy to control the stream of consciousness in animation; however, Japan has developed many classic and well-received animations that use it as a production tool. We now examine how these works use the concept to create attractive animations. For instance, Satoshi Kon, a well-known producer, blurs the boundary between reality and dreams. His shots switch quickly and are imaginative. Although some scenes do not have a remarkable story, his unique scene editing draws audiences to his animations. Similarly, in *Shin Seiki Evangerion*, producer Hideaki Anno has remarkable dynamic control of the camera;(Sadamoto, 1995); this animation also incorporates ideas from many psychological theories. Interestingly, there have been differing audience reactions: some think that the work is outstanding, whereas others think that it is incomprehensible; in response to these reactions, Anno expressed:

> "Shin Seiki Evangerion is like a puzzle, you know. Any person can see it and give his/her own answer. In other words, we're offering viewers to think by themselves so that each person can imagine his/her own world. We will never offer the answers, even in the theatrical version. As for many Evangelion viewers, they may expect us to provide the 'all-about Eva' manuals, but there is no such thing. Don't expect to get answers from someone. Don't expect to be catered to all the time. We all have to find our own answers." (Eng, 2009).

An example of this is the *JoJo* series; a short story from the fourth part of Araki's series *JoJo's Bizarre Adventure*, titled *Thus Spoke Kishibe Rohan*, leaves a lasting impression. The animation was adapted from manga and had four short episodes; however, the beginning, middle, and end of each episode were unexpected, leading to questions such as why does this happen and why does this result? The audience thinks it is unusual but cannot completely refute it. The creator does not limit his imagination to the audience, which is the charm of a stream-of-consciousness production. Instead of presenting the audience with a story, they allow them to think for themselves and imagine the ending. Applying psychology and stream-of-consciousness techniques to animation creates a unique story with unlimited potential. (Araki, 1997; Oomori et al., 2017).

The current study analyzed the methods employed in these works; complicated technical lens switching was considered beyond the scope of this research. Unable to spend additional efforts on lens switching processing due to time constraints and personal equipment conditions. Similar to Hirohiko Araki's approach in *Thus Spoke Kishibe Rohan*, this study adopted a mixed technique incorporating theory and innovation. The experiments in this research drew on the Kuleshov effect and Soviet montage editing. It was hypothesized that unexpected expression changes or innovative expression symbols can show the advantages of a stream of consciousness and do not limit the imagination.

METHODOLOGY

Research Method

This study was based on both theory and practice. The aforementioned theories and specific cases form the basis for this practice. Several artists have used experimental animation to create diverse exciting and meaningful works, among which include “LOST” by YaSha (2019) and Sensory Dimension by Bo (2016). This study analyzed different cultures and works and found that each creation was unique, distinctly applying exaggerated expressions, techniques for adapting cartoons to animation, and psychology and the stream of consciousness, leaving room for audience imagination, which is the inspiration for the current research.

Study Case

Most of the works encountered in this research were creations based on contemporary aesthetics. In this work, character design accounted for a large proportion. However, instead of complex and interesting characters, this study focuses more on the details of characters’ personalities and expressions. Different characters with various expressions and contrasting superficial images and personalities are created by this work. Before commencing the experiment on the stream-of-consciousness animation, this study gained inspiration from the Noh mask production method and an experiment with light and shadows (Figure 3).

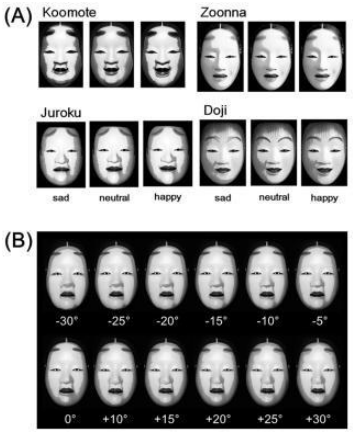

Figure 3. *Shadows Alter the Facial Expressions of Noh Masks (https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0071389&type=printable)(Kawai et al., 2013)*

Detailed changes tend to alter the character expressions. When a specific style is created, it is readily considered monotonous by the audience. These characteristics need to be more prominent; otherwise, the audience will feel that the characters lack uniqueness. It is impossible to understand their characteristics by looking at them, although they have different hairstyles and are of different sexes. This study case did not aim to change the existing characters completely, with slight adjustments to the characters' eyes, such as size, shape, eyelash length, and whether the end of the eye was upturned. This study also tried different expressions and added auxiliary symbols and actions. These changes (subtle expression changes, common postures, and characters' actions) were significant to enable the viewer to guess the characteristics of some characters without looking at the character overview (Figure 4).

Figure 4. *Character expression design with subtle changes and different comic symbols.*

Abstract character design and animation have been attempted in some previous animation projects. It was not an entirely stream-of-consciousness project, as it had a specific theme, which introduced certain limitations, especially related to the focus on character dynamics, morphological changes, and interactions rather than expressions. However, with the assistance of After Effects and live 2D software, frame-by-frame animation was utilized. The pattern of deformation can be used as a reference to the characters' expressions.

Stream-of-consciousness as the animation production method

The rapid development of the Internet has brought about a new definition of expression. Before this development, it was widely accepted that facial features such as the eyes, nose, and mouth must be depicted to convey different expressions. However, in modern comics, the use of simple shapes such as circles and lines can effectively communicate a range of emotions.

In experimental animation, a gradual process of character expression exploration was established utilizing the stream of consciousness production method. This involved transitioning from a single expression to combining multiple elements such as symbols, lines, and icons with expressions, and moving from gentle to rapid changes. Owing to the fluid nature of the stream of consciousness, it was essential to ensure smooth transitions between different experimental animations to avoid abrupt disconnections. The final production comprised four expression test animations (Figure 5).

Electronic expressions were used to introduce and conclude the experimental animation, with an electronic channel serving as the background. This experimental animation can be considered a distinct channel, with editing aimed at achieving a complete stream-of-consciousness work rather than an independent and fragmented experimental animation.

The first experimental animation was executed with a focus on detailed changes to identify the various visual outcomes stemming from alterations to character expressions. Given the utilization of the stream of consciousness as a creative tool, the first experiment required a higher degree of logical consideration. Therefore, the character was limited, and no additional elements were added to aid in the understanding of the shots. In the first test, the corners of the character's mouth were torn, akin to revealing a disguised smile. Although this shot brought about slight changes in the corners of the mouth and eyebrows, its visual impact was underwhelming. In the second test, the entire face was torn instead of the mouth only. On a face lacking in facial features, changes in the curvature of the eyebrows were employed to convey anger and dissatisfaction. The addition of a background related to the character and depiction of the character's potential environment was incorporated into this experiment.

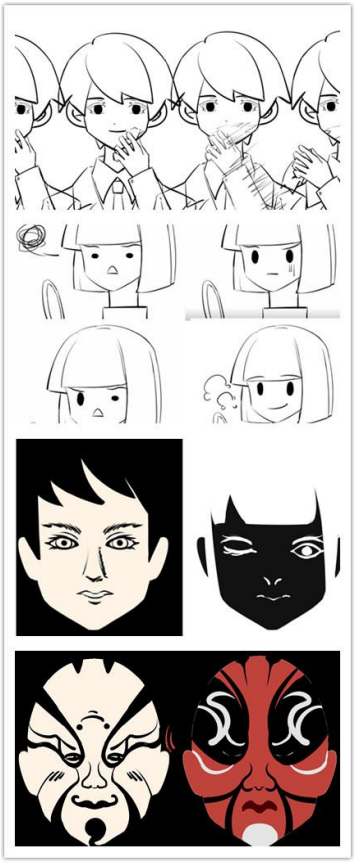

Figure 5. *Animation 'Self' different scenes and experiments (https://youtu.be/oWOzicODfHU)*

In the second experiment, the character's face was observed in a mirror. As the camera approached, the character turned to face the audience, displaying various expressions. The character's facial features were simplified, but an increase in various expressions was observed. Symbols were incorporated to emphasize emotions, which deviated from the theoretical frameworks mentioned earlier. The symbols and lines in this scene were dynamic, changing in conjunction with the character's expressions.

In the third experiment, a semi-realistic expression style akin to American comics was utilized instead of regular characters. Animation editing, based on the Kuleshov effect was attempted, wherein the same face was edited with various elements to convey different emotions. The shot comprised continuous expression changes, leading to sensory confusion. To address this, several shots of different characters were included to better reflect why the first character experienced such emotional changes without any narrative. During scene editing, auxiliary lines were employed, and they moved in tandem with the characters. The surrounding auxiliary lines changed correspondingly when the character's expression became intense and excited.

In contrast to the rarity or lack of publicity of Chinese cultural connotations in anime or games, Chinese culture deserves to be studied. As it is challenging to fully comprehend, the stream-of-consciousness method was used. The method necessitates neither intricate plots nor dialogue, and therefore modern comic symbols, familiar to all, were combined to convey the character's persona. Beijing opera masks' colors represent different personalities, with each character

having a distinct mask, although the color is the same. Nevertheless, characters represented by the same color are generally similar. The experiment did not employ textual descriptions or dialogue, only altered the expressions, patterns, and symbols. Can audiences unfamiliar with Beijing operas deduce some of these characters' personalities?

Figure 6. *International Museum Day Online Cultural Event*
（https://m.weibo.cn/status/4770377232024680）

After this experiment, the research discovered an interesting online event held by the official People's Daily News in China on May 18, 2022 (People's Daily, 2022). They added emoticons and phrases popular on the Chinese Internet to cultural relics. Although the resulting meanings were completely different from what the relics represented, this approach aroused public interest in viewing cultural relics.

DISCUSSION

The stream-of-consciousness concept was utilized in this study to experiment with character expressions in comics in the 2D animation field. Unique features of previous research were drawn upon and methods were applied. McCloud's books contain many creative ideas that allow an understanding of the history of comics and animations. Innovation and development always occur through experimentation, and there must be focus on rationality and audience recognition For example, in the experimental animation, a new character expression was created, and examination conducted to determine whether the meaning set coincided with what the audience understood. Cultural factors were combined with the character's expression, and the representative role of this cultural element was examined. The animations mentioned above were adapted from the manga that was studied. The characters' expressions in Demon Slayer are unique and exaggerated, whereas the characters in Shin Seiki Evangelion and Thus Spoke Kishibe Rohan have more realistic expressions. These works draw on psychological theory and use the stream of consciousness as a production method, and while they are whimsical, they aim to elicit different sensations from the audience. This study examined innovation in character expressions and the application of the stream of consciousness concept in these works and presented some distinct findings. However, the influence of other elements such as editing

methods, plots, and camera movement can be explored in future research to validate the current findings. This will provide a more comprehensive understanding of the impact of these elements on the overall animation production process.

CONCLUSION

The assessment and admiration of animation are influenced by subjective factors, which render some of the research questions inconclusive. Nonetheless, this study provides interpretations for certain research questions. The adoption of unconventional techniques, such as stream-of-consciousness, to innovate animation constitutes a promising approach. Furthermore, there are various methods within this niche field that warrant further exploration. This study focused on the utilization of the stream of consciousness as a 2D animation production method to examine comic character expressions. Based on feedback from the audience after viewing the experimental animation, viewers could comprehend the emotional changes and abstract concepts depicted in the animation, although they were unfamiliar with the specific character, story, or culture. The novelty of the new digital emoticons was considered to be intriguing and entertaining. This research aimed to investigate the reasons why viewers are attracted to simplified new expressions, as symbols, icons, and expressions are more straightforward and easily understood than tedious narratives. Novel elements also pique individuals' curiosity in a short duration.

The findings suggest that by analyzing the history, culture, theory, and creative methods of existing works, it is possible to create a character's expression in the comic language in 2D animation; however, a major issue lies in whether subsequent new expression is reasonable and whether the audience can understand its meaning completely. This study considered the stream of consciousness as a creative method because it is not the most popular animation method, and there remains scope for further research. Another issue to be noted is that with the development of new media technology, an increasing number of spectators are likely to pay more attention to the simulation of 3D technology and virtual special effects rather than 2D animation. Therefore, more reliance on 3D technology may limit innovative ideas, or creators may ignore creative possibilities. To address such issues between traditional 2D and 3D techniques, creators must find a balance between considering the audience's feelings and using innovative methods, whether they try to maintain the traditional 2D form or combine 3D and 2D technologies.

The main purpose of this study was to create a representative and novel character expression and determine whether an experimental animation technique would help maintain the audience's interest. This study would be valuable to future research exploring non-narrative, non-dialogue animations, as the critical aspect examined is not the character's conversation but the character itself. This study may also be relevant to those seeking to create new expression languages. Finally, it may be helpful for those who wish to study stream-of-consciousness animation techniques (e.g., how can stream-of-consciousness techniques drive innovation?). They can extract methods from the existing literature and the cases summarized in this study to highlight the uniqueness of their animations and capture the audience's attention. Although the stream of consciousness does not focus on logic or stories, editing can enable the audience to better understand abstract concepts, which is also a direction worth considering.

DECLARATION

I certify that this work is my individual research, conducted as part of my master's degree in

animation, games, and interactivity under the guidance of my supervisors. This thesis does not contain other individually or collectively published or written works. The supervisors of this research have been notified by email that their names will appear in the Acknowledgments section. The author has no conflict of interest to declare. This study did not reproduce any work of other authors. All references except for the experiments in this study are original works of other authors and researchers, duly cited. Moral and legal standards have been followed, and I will bear the consequences of any related issues. The data are available in Figshare and can be accessed via the DOI links shared in the Appendix. This research received no specific grant from any funding agency in the public sector; did not involve any experiments that violate any moral ethics and does not reproduce any materials from other creators or authors.

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APPENDIX

Video Essay of this thesis: https://youtu.be/weiVzN6OwO8

Experimental animation 'Self': https://youtu.be/oWOzicODfHU

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Figure legends

Figure 1. Understanding Comics: The Invisible Art by Scott McCloud, 1993, pp. 129 (https://archive.org/details/understanding-comics/page/129/mode/2up)

Figure 2. One Person, Six Faces a girl and an Older Boy by Kobayashi Kiyochika, 1884 (https://wellcomecollection.org/search/images?query=Kobayashi+Kiyochika)

Figure 3. Shadows Alter the Facial Expressions of Noh Masks (https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0071389&type=printable)[20]

Figure 4. Character expression design with subtle changes and different comic symbols.

Figure 5. Animation Titled "Self," Different Scenes and Experiments (https://youtu.be/oWOzicODfHU)

Figure 6. International Museum Day Online Cultural Event

(https://m.weibo.cn/status/4770377232024680)