Animation in Media: How technological context constructs cultural meaning

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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Introduction

The international animation industry has been steadily growing over the past two decades (Clare, 2021). This growth, which saw an increase during the Covid-19 pandemic, is not a phenomenon isolated to the US alone, the market leader in animation. Non-western countries also produce animated media, specifically Japan, which has a large audience in many other countries. Despite the global increase in popularity, there are significant cultural differences in the interpretation of animation as a form of media and technology. The cultural role of animation is exemplified through the content represented and the formation and usage of animation technology. Through the examination of content and usage, animation technology can be shown to be a social construct, or artifact of a distinct group.

The social construction of technology is an STS framework which will be used to defend the socially constructed facets of animation. (Klein, H. K., & Kleinman, D. L., 2002). Western animation utilizes three-dimensional animation technology to convey realism and detail, whereas Japanese and non-western animation tends to focus on stylization and artistry (Shen, 2007). Western animation places value on technological prowess, whereas non-western animation places value on artistic interpretation and classic skill. Through examining the difference in emphasis in animation styles, it becomes evident that animation is classified as a socially constructed technology. The cultural significance of the content and techniques used in animation will be examined through the lens of the social construction of technology to determine how animation is varied in western and non-western countries.

The Social Construction of Technology

The social construction of technology, or SCOT, is one of many theories which examine the specific relationship between technology and society. SCOT is described as the shaping of technology through its relative social context. Relevant social groups are an important tenant of SCOT, and can be viewed as any group of people adhering to similar cultural or circumstantial conditions and beliefs. These groups can exist at different scales, either an entire geographical/cultural population, or smaller defined subsets of a population possessing unifying factors. Relevant social groups must share a consistent understanding or interpretation of the artifact or technology to be considered a group. These social groups possess agency under SCOT, either actively or passively, and determine how a technology will be formulated and interpreted.

SCOT assumes that technologies serve to meet social needs or are constructed to progress social values. Under SCOT, technologies do not possess specific agency and do not initially influence the social group (Klein, H. K., & Kleinman, D. L., 2002). SCOT's antithesis, Technological Determinism, argues that technologies possess the agency to influence society, and is another predominate STS framework. Both frameworks are limited in their comprehension of the advancement of technology in social contexts. However, in the context of animation technology, the influence of relevant social groups is apparent in the modern discrepancies between animation interpretations.

A component of SCOT relevant to this analysis is the concept of interpretive flexibility. This is the concept that one technology or artifact may have different interpretations, depending on the social group which constructs and views it. These interpretations may refer to the usage and practices surrounding a particular technology, or the social significance of the technology.

Animation falls under interpretative flexibility in a number of ways, evident in both practices and general cultural significance. (Klein, H. K., & Kleinman, D. L., 2002).

Animation as a Social Construct

SCOT was chosen for the analysis of animation amongst social groups due to the varying interpretation of animation as a technology. Animation in eastern and western cultures has notable differences in the aspects which are prioritized, now further enumerated by a growing number of technical recourses available. The usage of these technologies can be examined in a cultural context, shedding light on why animation has diverged into distinctive forms of media depending on of country of origin. In the last few decades, many of the computer animation technologies available have impacted how animation can be created, but there is still a clear of difference in the cultural significance of animation amongst social groups. Non-western animation has risen in popularity in other countries, pushing some western animation to emulate non-western animation to some capacity, but it is far from reaching a convergence in cultural significance.

Interpretive flexibility is a relevant feature of SCOT which will be used to elaborate on the understanding of animation within social groups. *T*he understanding of what animation is and what role it takes in media is critical to the development of varying animation techniques. The marketing and target audiences of western and nonwestern audiences diverge in a number of ways, pointing to the role it takes culturally. SCOT will be used to examine the cultural significance of animation, drawing from the public perception and cultural role of animation as a form of media to analyze the different usages of animation technology now available. To

understand how this technology has diverged in relevant social groups, an understanding of the origins of animation as well as the current predominant animation techniques is needed. Animations can then be viewed in the context of the relevant social groups which produced these animations.

Historical Context/Background

Animation refers to the act of giving movement or gesture to inanimate objects. In the Glossary of Filmographic Terms, Jon Gartenberg describes animation as, "the arts, techniques and processes involved in giving apparent movement and life to inanimate objects by means of cinematography." In the context of this analysis, 2D and 3D animation will be considered, as they are the predominate animation categories in film and television. Computer Generated Images (CGI) can also be categorized as an animation technique with some overlap with 3D animations, but it is often an intersectional technology with other forms of media, and thus will not be considered. 2D animation has a wide degree of interpretations, often colloquially referred to as "cartoons" in American media and "anime" in Japanese media.

One of the earliest examples of 2D animation was a French short film by Emile Cohl entitled "Fantasmagorie" created in 1908. Walt Disney would then rise to predominance in animation, releasing shorts such as "Steamboat Willie" and the first animated feature film Snow White and Seven Dwarfs in 1937. These features were hand-drawn animation, notably focusing on the movement of characters and expressive gesture. Animation in the US, particularly in film, would then be usurped by 3D animation in the 90s', studios like Dreamworks, Pixar, and Disney capitalizing on the rising technology (Payne, 2019). 3D animation relies on computer-generated

3D models and environments to generate animation (Jordan, 2020). Some of the gestures of hand-drawn animation are sacrificed when using 3D animation; however, the characters and environments could be rendered to appear three-dimensional, including more detail and depth. Recent Pixar films such as “Moana” and “Frozen” illustrate the expressiveness of earlier work by Disney, but maintain the focus on realism and detail of the era of 3D animation. The large majority of 2D animation in the US has been allocated to television, cartoons marketed towards children and younger teenagers. There are animated programs marketed toward adults, such as “Family Guy” and “South Park”, which do not prioritize the prowess of animation, and use very simplified characters and spaces; however, the majority of 2D animation in the US is focused on a young audience.

Animation in Japan commenced somewhat concurrently with the rest of the world. One of the earliest forms of animated media in Japan was a film entitled “Shingachō: Meian no Shippai” released in 1917 created by Ōten Shimokawa, Jun’ichi Kōuchi, and Seitaro Kitayama, though earlier animations may have been created. Early Japanese animation used various techniques such as cel animation, the process of hand drawing stills onto a transparent sheet. Later, feature films were released, such as “Chikara to Onna no Yo no Naka” in 1933 by Kenzō Masaoka, later followed by government sponsored films and propaganda during WWII such as “Momotaro’s Divine Sea Warriors” (Litten, 2015, McPherson, 2021). The formation of the modern concept of “anime” can be accredited to a number of influential animations created in the latter half of the 20th century. Notably, Astro Boy, a television program released in the 1960s, which introduced a style of animation less focused on the fluidity of characters, efficiently capturing motion with a limited number of frames (McPherson, 2021). Astro Boy and other works in its time still had a clear influence from previous Disney animations, a trend which

would change in later decades. This animation style allowed hand-drawn 2D animation to prioritize the details in each frame, capturing details and movement without much of the complexity of western animation in order to be serialized. Later animations such as the influential 1988 classic "Akira" created by Katsuhiro Otomo would continue to use cel animation while improving the quality of the character movements. Otomo's Akira is still credited as one of them most influential animated works, pioneering the use of animation to convey serious and mature subject matter (Covill, 2017).

The 1980s began an era of animation in which themes and aesthetics began deviating from western influences. The precedent for fluid cel animation continued in the work of Hayao Miyazaki, the creator of Studio Ghibli, whose films in the past few decades have reached worldwide audiences. Miyazaki's body of work is held in high appraisal by animators around the world. Japanese animation became prolific in television, with a wide array of genres and themes represented, largely retaining the traditional method of cel animation though now done *in part* with computer assistance.

STS Analysis

The apparent divergence in prioritization of 2D verses 3D animation are indicative of the priorities of the relevant social groups. Western – particularly American – animation focuses on a level of realism and depth, achieved through the advancement of 3D animation techniques. Studios like Pixar, Dreamworks, and Disney exemplify this focus in their work following the 90s. Japanese animation, in many cases, prioritizes the detail of character and environmental design through 2D animation as a means to convey the subject matter. The target audience of

Japanese animation is far more varied than American animation, encompassing programs intended for children alongside those for older audiences (Sage, 2019). There are a number of productions which are aimed toward older audiences in the United States, though typically not reaching the level of commercial success as large productions aimed at children.

The top 10 highest grossing animated movies in the United States from 1980 to 2020 are, in increasing order: Despicable Me 2, The Secret Life of Pets, Frozen, Toy Story 3, Toy Story 4, Shrek 2, Frozen 2, Finding Dory, The Lion King (2019), and Incredibles 2, all of which together have an average age recommendation of 6.3+ on common sense media from reviewers. (Navarro, 2021). The 10 highest grossing animated films in Japan are: Jujutsu Kaisen 0, Evangelion 3.0+1.0, The Wind Rises, Weathering With You, Ponyo, Howl's Moving Castle, Princess Mononoke, Your Name, Spirited Away, and Demon Slayer: Mugen Train, with an average age recommendation (by US reviewers) of 11.6+, with ratings ranging from 5+ to TV-MA (Gintoki, 2022). In addition to the varying target demographics, all of the mentioned high grossing US films were made with some form of 3D animation, whereas all of the top grossing Japanese films were largely 2D animation, though some computer animation was included, secondarily.

The differing intended demographics between each social group indicates that there is a divergence in the interpretation as a form of media, at least towards what content is or has come to be represented. Western animation has come to be synonymous to some capacity with cartoons, perpetuating the interpretation that it is for young viewers. The shift towards 3D animation can be attributed to a desire to improve the realism of animation, developing further technologies in lieu of expanding in a narrative sense, placing value in the ability to display prowess and technical improvement. Contrarily, the interpretation of value in Japanese animation

can be seen in the ability to capture expression and narrative through character design and environments (Shen, 2007).

To claim an artifact as socially constructed, it must have a shared interpretation under its social group. Japanese animation is often viewed as a separate category of media from other animation types in the US, despite not being technologically distinct from other 2D animation. It has become distinct through interpretation, and thus is socially constructed. As the animation industry as a whole grows in popularity, some convergence of interpretation is beginning.

Discussion and Counterarguments

It is difficult to label any technology as entirely socially constructed. Technologies arise from a complex combination of historical and social factors, convoluting the nature of their role to relevant social groups. Technological determinism is often viewed as the response to SCOT, offering the concept that technologies can shape the behaviors of people. The availability of animation techniques could be argued to have shaped the way animation was done in various circumstances. However, despite the availability of computer animation in both western and non-western cultures, 3D animation rose to dominate American markets while Japanese animation remained largely hand-drawn. The distinctiveness of Japanese animation as a media form set a precedent for how animation would be viewed, creating a category of media which exists only in small quantities in the United States.

Other forms of media outside of television and films use animation technology differently. Notably, 3D animation is prolific in the video game industry, and is used in the US and globally to convey a varying degree of themes and catering to different demographics.

Though video games may depict various themes not directed at younger audiences, they are not interpreted as the same technological category as animation at large.

Conclusion

Animation is largely a socially constructed technology which has been separated into distinct media categories through interpretation. The different usages of 2D and 3D animation further exemplifies the individual interpretations of animation in different relevant social groups. Though it can be argued that no technology is solely socially constructed, animation technology originated ubiquitously in the early 1900s and diverged as a media form in the late 1900s. The intended audiences, themes, and animation techniques used are indicative of the socially constructed nature of animation. As animation is growing field, understanding the cultural significance which has shaped the technology used today will improve the context for the media produced in coming years.

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