

The trend towards hybrid animation (blending 2D and 3D) in 2018 - 2025

Abstract

This proposal examines the growing tendency of using hybrid style of animation which merges 2D and 3D in cartoons and why it became so widespread. This paper focuses on the hybrid techniques used to contribute to visual storytelling.

Introduction.....	2
Relevance.....	2
Literature review.....	2
Research objective.....	3
Research gap.....	4
Research question & Hypothesis.....	4
Methodology.....	4
1. Chapter 1: Historical Overview.....	5
2. Chapter 2: The Role of Style in Storytelling.....	5
Conclusion.....	6
Reference list.....	7
Bibliography.....	7
Animated series.....	7

Introduction

Relevance

Hybrid animation has been around for quite some time. It was used back in the last century, when, for example, 3D assets were created for the environment, while characters and animation were hand-drawn. However, it is worth noting that this work focuses on the complete merge of 2D and 3D techniques to create a complete visualization. Recently, more and more works have been using this hybrid technique. Now, in addition to 3D assets, 3D characters are also used, which are after textured by hand. Visual effects are also created not just in 3D, but with a 2D layer added on top to give them meaning, vibrancy, and color. Despite the fact that this style and technique was used already a decade ago locally, it never gained that amount of attention which “Spider-Man: Into the Spider-Verse” (Bob Persichetti, Peter Ramsey, Rodney Rothman, 2018) attracted. This cartoon has become a phenomenon.

It was a starting point for other big series to try and adjust hybrid animation as the main style for the shows. Over the past few years, it has become common to see at least one highly rated film a year being made using this hybrid technique.

Literature review

Literature review will be conducted in order to make a proper historical overview and to distinguish the research gap in this paper.

The first article is called “A Preliminary Study on the Visual Outcome of Hybrid Animation” (2022) by Farissa Eryna and Noorhayati Saad. This research examines the development of the animation technique as it became more complicated during the years. Authors explore whether merging 3D and 2D looks more appealing in the eyes of the audience. A variety of tools and systems designed to create particular animation art styles have been developed as a result of technological breakthroughs. They study how to combine different techniques and receive the right outcome. They also discussed softwares and tools which helped to produce animations. The article explores the tools and software used to produce both 2D and 3D animations, as well as the procedures and ways of combining these two media.

Paper “Hybrid Animation: The Process and Methods of Implementing 2D Style in 3D Animation” (2019) was written by Jerina Kivistö. The author stated that in recent years 3D

animation was used everywhere. This raised the question of the place of the 2D hand-drawing animation. The research explores if hybrid animation is beneficial and does serve the purpose of creating appealing animation yet not complicates the production process and development costs.

Another article used in this research paper is “Hybrid Animation: integrating 2D and 3D assets” (2012) by Tina O’Hailey. This research explains what hybrid animation is and where it was used. The author explores why one medium is used more than another. The paper gives an overview of what are the main challenges of combining 2D and 3D and how to evaluate the success.

Continuing this list, the article “The Impact of Hybrid Animation on the Future of Animation” should be mentioned. It was written in 2023 by Francisca Faria and Cátia Peres. The article identifies how the development of hybrid animation techniques has affected the animation production process due to the technical improvements. The study focuses on how artists in the animation business perceive hybrid animation's impact on their work as well as its benefits and drawbacks for the sector. In particular, the study looks at how 2D and 3D animation are produced differently and how combining them produces hybrid animation. The study uses a triangulated methodological approach: a literature review, quantitative techniques, and qualitative analysis to improve comprehension and to accomplish its objectives. The study's ultimate goal is to place hybrid animation methods inside the industry by providing information about their importance and prospective contributions to animation techniques.

Further work is called “Harmonizing 2D and 3D in Modern Animation” (Luntraru et al., 2022). The methods used today to create hybrid animations are highlighted in this survey. Although hybrid animation has been around since 1983, there is still space for advancement because there is little documentation on the techniques. The study examines prominent instances from the contemporary entertainment sector that highlight these methods, which are frequently used to foster innovation and satisfy time and money restrictions.

Research objective

The research objective of this paper is to study the rising trend of implementing hybrid animation in the production process in order to make more appealing animation. This paper focuses on hybrid animation as a tool which improves expressiveness of the animation works.

Research gap

While there exists a number of research which examines how hybrid techniques are applied in a particular animation, they always focus on a specific example. There is a lack of general research on how hybrid animation influences storytelling and culture in animation, why it has become so popular in recent years, and how this is technically replicated.

Research question & Hypothesis

The research question for this paper is “How does the style of hybrid animation technique contribute to the narrative and overall identity of the animations?”. The hypothesis is that the hybrid technique creates a unique style because it leverages the strengths of both 2D and 3D. This allows for greater visualization of characters and environments, making them more profound, detailed, and appealing.

The time frame is set from 2018, which covers the production of the “Spider-Man: Into the Spider-Verse” one of the revolutionary cartoons using hybrid technology that brought critical success and led to the production of series using similar technology, and until the last year, 2025.

Methodology

In terms of methods, case study was used in this work as it allowed to examine the most successful applications of hybrid techniques in animation. Using specific works as examples, it also discussed the specific techniques used and how they influenced the visuals.

The primary limitation of this work is that there is no single definition of hybrid animation as such. This makes it very difficult to assess the extent to which hybrid animation is used in all works. A second limitation is the restricted number of case studies. This paper focuses on specific works in which hybrid animation is most successfully employed, but this does not provide a complete picture of its full application, leading to biased conclusions. The last limitation is that there are no specific statistics demonstrating that each specific example of hybrid animation received such high praise or became so popular specifically because of its use. This conclusion can be drawn from various reviews and comments. However, there is no statistical basis that would clearly confirm that the phenomenon of hybrid animation was the key to its success.

1. Chapter 1: Historical Overview

The first chapter focuses on the concept of hybrid animation, defining what it is, and how it originated. Although the timeframe for this work is 2018 – 2025, the first version of hybrid animation emerged long before that, so it is important to mention the roots of this technique.

Hybrid animation means a complete fusion of 3D and 2D techniques to create a more colorful visual image. It has also become more common today because, apart from the reasons already mentioned, our technology is much more advanced and offers a wealth of new tools that were simply impossible to replicate before. Technically, hybrid animation is now easier to use than it was in the past.

2. Chapter 2: The Role of Style in Storytelling

There are various techniques used in hybrid animation to create a more expressive environment. One such example is “Spider-Man: Into the Spider-Verse” (2018). This cartoon stands out from the crowd due to its comic-book visual effect. Previously, no animation had so clearly presented itself as 3D while incorporating an obvious 2D style. However, to give the cartoon even more atmosphere, they changed the traditional frame rate. When animation is created by hand, only 12 frames out of 24 are drawn to save time and effort. In 3D animation, this problem does not exist, as the computer automatically fills the empty space between frames. However, in “Spider-Man: Into the Spider-Verse” (2018), the creators applied a traditional 2D frame rate system to 3D. “Stylistically speaking, dropping frames allows the designed poses to get more focus and screen time” (Óskarsson and Chazot, 2023, p.1). This was done to enhance the feeling of the viewer reading an animated book rather than watching a cartoon.

Conclusion

To conclude, hybrid animation has been around for a long time, but it became a phenomenon only recently with the release of the “Spider-Man: Into the Spider-Verse” (2018). Hybrid animation helps to create a unique visual experience while watching a show.

Reference list

Óskarsson, M. and Chazot, M. (2023). Spider-Man: Across The Spider-Verse - How to build a pipeline for variable rate animation. In *Special Interest Group on Computer Graphics and Interactive Techniques Conference Talks (SIGGRAPH '23 Talks)* [online]. Available at:
DOI: 10.1145/3587421.3595413

Bibliography

Eryna, F. and Saad, N. (2022) A Preliminary Study on the Visual Outcome of Hybrid Animation, *KREATE* [online], 02, pp 1-7. Available at:
https://thedesignschool.taylors.edu.my/Kreate/volumes/volume_2/KREATE_Vol_2_Issue_2_202102.pdf

Faria, F. and Peres, C. (2023). The Impact of Hybrid Animation on the Future of Animation, *Springer Nature*. [online], pp. 271-29. Available at:
https://doi.org/10.1007/978-3-031-28993-4_20

Kivistö, J. (2019). Hybrid Animation : The Process and Methods of Implementing 2D Style in 3D Animation, *Theseus* [online]. Available at:
https://www.theseus.fi/bitstream/handle/10024/265116/Kivisto_Jerina.pdf?isAllowed=y&sequence=3

Luntrarur, C. et al. (2022), Harmonizing 2D and 3D in Modern Animation, *RoCHI 2022* [online]. Available at:
DOI: 10.37789/rochi.2022.1.1.11

O’Hailey, T. (2012). Hybrid Animation: integrating 2D and 3D assets. *Routledge eBooks* [online], pp 1-27. Available at:
<https://api.taylorfrancis.com/content/books/mono/download?identifierName=doi&identifierValue=10.4324/9780080958422&type=googlepdf>

Animated series

Spider-Man: Into the Spider-Verse (2018). Directed by Bob Persichetti, Peter Ramsey, and Rodney Rothman. Sony Pictures Releasing