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Exploring the rise of 3D digital visual art in rap album cover design: A cultural and technical analysis

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Abstract

This study provides an academic investigation of the widespread use and impact of 3D digital visual art in rap album cover design. By fusing the perspectives of culture and technology, this study is based on visual semantics, aiming to reveal the cultural background and technical elements of the rise and development of 3D digital visual art in rap album cover design. By comprehensively analyzing the development process and mainstream trends of 3D digital visual art, and exploring its interrelationship with rap album cover designs, this research aims to clarify the symbols and meanings embedded in these designs. In addition, this research will study the profound impact of 3D digital visual art on album cover design effect, so as to deeply understand the key role of 3D digital visual art in shaping the overall influence and meaning of rap album cover design. Ultimately, the findings of this study are expected to foster innovation and advancement in the field, bringing new design concepts and artistic expressions to the music industry.

Keywords : 3D digital visual art, rap music album, visual symbols

Introduction

This research aims to conduct an academic investigation into the extensive application and impact of 3D digital visual art in the design of rap album covers. By integrating the perspectives of culture and technology, the study will be grounded in visual semiotics to uncover the cultural context and technical elements contributing to the emergence and growth of 3D digital visual art in the realm of rap album cover design. Through a comprehensive analysis of the development process and prevailing trends in 3D digital



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visual art, alongside an exploration of its interconnection with rap album cover design, this research seeks to elucidate the symbolism and meanings embedded within these designs. Moreover, the research will examine the profound influence of 3D digital visual art on the effectiveness of album cover designs, thereby providing a profound understanding of the pivotal role played by 3D digital visual art in shaping the overall impact and significance of rap album cover designs. Ultimately, the findings of this study are expected to foster innovation and advancement within the field, paving the way for fresh design concepts and artistic expressions that will drive the evolution of the music industry.

Research Objectives

By analyzing cases and examples, the study reveals the practical application of 3D digital visual art in rap album cover design and its impact on design; at the same time, it explores its cultural significance, including conveying specific cultural values and personal images, It also studies the influence of the cultural identity and resonance of audiences and listeners; in addition, it also analyzes its technical characteristics and innovations, including the application of digital modeling, rendering technology and animation effects, and how to express musical themes and emotion.

Methodology

The research includes steps such as literature review, album case study, design element analysis, questionnaire and data analysis, aiming to reveal 3D The rise and influence of digital visual art in rap album cover design, and explore the cultural meaning and symbol selection through the perspective of visual semiotics.

Questionnaire

From Figure 1: The current respondents: 87.60% of rap fans and 12.40% of rappers.



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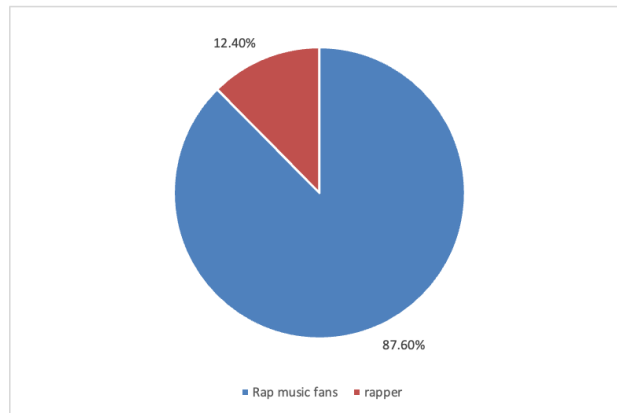


Figure 1 Are you a rapper or a rap music listener?

As can be seen from Figure 2, most people believe that the use of 3D visual art design in rap album covers is very capable of enhancing the uniqueness and visual appeal of the album, accounting for 47.11%. Only a small percentage of people, 1.65%, think that the use of 3D visual art design on rap album covers does not enhance the uniqueness and visual appeal of the album at all.

From these analyses, we can conclude that most people have a positive attitude towards the use of 3D visual art design in rap album covers, believing that it can enhance the uniqueness and visual appeal of the album. This provides strong evidence for the adoption of innovative design concepts and artistic expression in the rap music industry. For designers and music producers, the use of 3D visual art design may be an effective way to appeal to a wider range of target viewers and listeners, as well as promote innovation and development in the field of music cover design.



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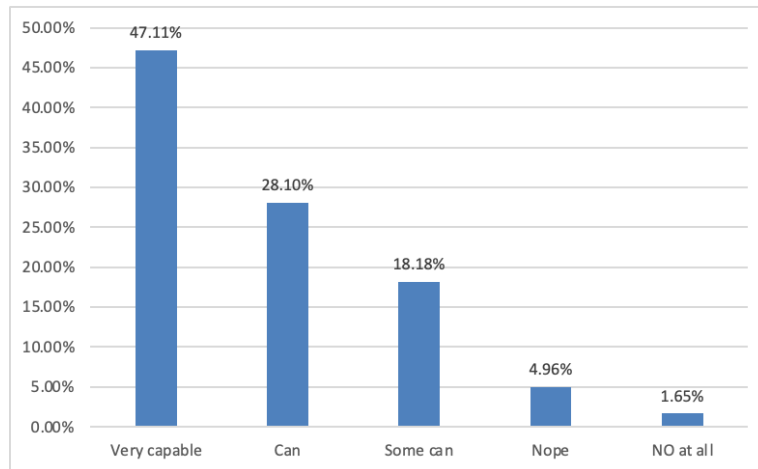
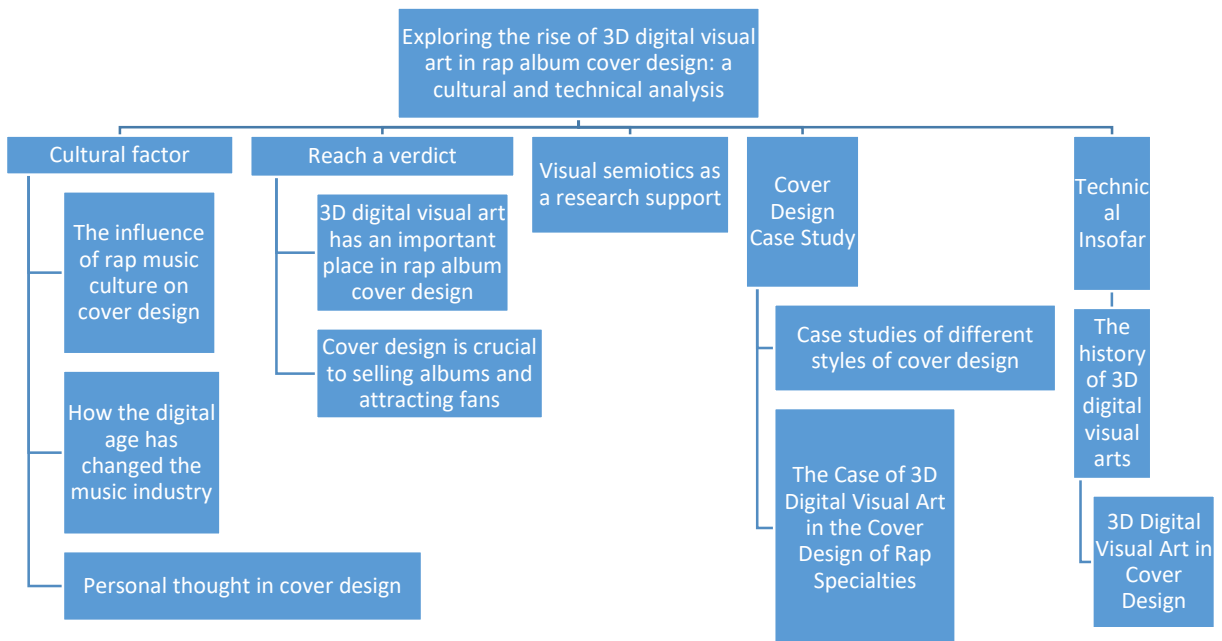


Figure 2 Do you think the use of 3D visual art design on rap album covers enhances the uniqueness and visual appeal of the album?



Result

1. Introduction to visual semiotics and its role in design

Visual semiotics is a subject that studies symbols and symbolic meanings in images and their relationship with culture, society and individuals, and plays an important role in interpreting and conveying the meaning of design works in design. By analyzing the selection and application of symbols, images and visual elements, visual semiotics helps designers



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deeply understand and express the themes, emotional and cultural connotations of design works, as well as their influence on the emotional resonance and triggering methods of viewers.

2. The characteristics and commonalities of rap music and 3D digital visual design

Rap music and 3D digital visual design are characterized by emphasizing creativity and personalized expression, and attracting the audience's attention through unique forms and contents. They jointly pursue innovation and artistry to express emotion, thought and cultural significance, shape personal images and arouse the emotional resonance of the audience.

3. Comparative analysis of artist cases

Travis Scott's "Days Before Rodeo" (Figure 1) and "ASTROWORLD" (Figure 2) album cover design, through 3D digital visual design and graphic illustration design comparison

"Days Before Rodeo" is designed with graphic illustrations, showing rich details and use of color to create a unique visual effect. In contrast, the 3D digital visual design of "ASTROWORLD" uses computer-generated 3D models and rendering technology to create realistic and three-dimensional image effects, which have a strong visual impact and a sense of immersion. Through comparison, it can be found that 3D digital visual design has advantages in terms of fidelity, three-dimensionality, visual impact and modernity. It fits with Travis Scott's music style and represents the development trend of modern technology and digital art.

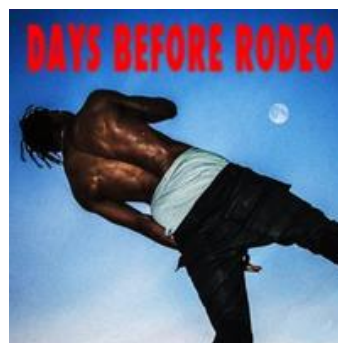


Figure 1 : I Travis Scott "Days Before Rodeo" <https://music.163.com>



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Figure 2 : I Travis Scott "ASTROWORLD" <https://music.163.com>

4.1 Introduction to personal research works

Choose a rapper's album, and re-use 3D vision to design the album cover according to the ideas conveyed by the entire album.

4.1.1 Introduction of original works

SASIOVERLXRD is a rapper from China. Although he has debuted for a long time, he has not received the attention of the audience until the past two years. The album "CHENG DAOLIANG" (Figure 1) is named after the protagonist of the comic "Army Chicken". Through the dark tune and the image on the album cover, it expresses the anger towards the original family and social injustice, and at the same time heralds the coming of light.



Figure 1: I SASIOVERLXRD "CHENG DAOLIANG" <https://music.163.com>

4.1.2 Reason for selection:

The original album cover has too little connection with the song. The tune of the whole album is: Although you are in the darkness, you also fight against the darkness at the same time, strive to work hard for the light, and finally rely on the efforts of SASI to obtain the light brought by hope . The inner seed breaks free from the shackles and finally blooms in the light.



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4.2 Design process and introduction of researchers

When designing the album cover, the researchers first chose the shackles and blooming flowers created with 3D modeling software as the main visual symbols, representing "darkness" and "light". And highlight dark and light visual elements by adjusting shape, size and detail, choose metal material and adjust its surface effect to achieve realistic effect. An edge lighting setup enhances the mood and emotion of the scene. In the final adjustment of the layout, for the "shackles" element, they mainly convey emotions through graphics and reduce the use of text to highlight the dark and depressing atmosphere; while for the "flower" element, they blend text with flashing elements to showcase the album. The name symbolizes the effect of clearing the clouds and seeing the sun.



First cover1



First cover2

Questionnaire and Data Analysis

5.1 Questionnaire survey:

This questionnaire is divided into three parts, the first part is personal information, the second part is the status quo of the audience's perception of rap albums, and the third part is the influence factors of 3D visual art design on the cover of rap albums. Most of the respondents this time are rap enthusiasts, accounting for 87.60 %, and the rest are rappers. Most people think that the use of 3D visual art design on the cover of rap album can enhance the uniqueness and visual appeal of the album, accounting for 47.11 %. Only a minority feel that the use of 3D visual art design on rap album covers does not enhance the uniqueness and visual appeal of the album at all.



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5.2 Reliability analysis

The Cronbachs Alpha reliability test was carried out on the questionnaire. If the value is higher than 0.8, the reliability is high; if the value is less than 0.6, the reliability is not good. The Cronbachs Alpha reliability test was carried out on the questionnaire. The statistical results are shown in Table 1. All scales of the questionnaire are greater than 0.7, indicating that the data reliability is high and can be used for further analysis.

Table 1 Reliability Analysis

Dimensions	number of items	Cronbach's alpha
space and perspective	5	0.889
dynamics and movement	6	0.912
creativity and individual expression	5	0.899
Emotional resonance and attraction	6	0.912

5.3 Validity analysis

The validity analysis of independent variable and mediator variable scale was tested by KMO and Bartlett ball test. If the value is higher than 0.8, it means that the research data is very suitable for extracting information, and the validity is very good; if the value is less than 0.6, it means that the data validity is average. The test results are shown in Table 2. The KMO result is 0.945, which is greater than 0.6, and $p < 0.001$ in Bartlett 's sphericity test, indicating that there are correlation factors among variables, which are suitable for factor analysis.

Table 2 KMO and Bartlett ball test results of the scale

KMO value		0.945
Bartlett test for sphericity	Approximate chi-square	2453.328
	df	231
	p value	0



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Result

The research findings demonstrate that 3D digital visual art plays a significant role in enhancing the design of rap album covers. By leveraging computer-generated three-dimensional models and rendering technology, 3D digital visual art achieves more immersive and realistic visual effects. In contrast, traditional graphic illustration design tends to focus on flat graphic expression, lacking the dynamic and three-dimensional qualities present in 3D digital visual art. The application of 3D digital visual art in rap album cover design allows for the creation of unique and captivating visual elements. This includes realistic objects, dynamic scenes, and intricate light and shadow effects, all of which align with the style and themes of rap music. As a result, rap album covers utilizing 3D digital visual art effectively convey the artist's persona and cultural identity, eliciting emotional resonance from the audience. Moreover, these covers reflect the influence and innovation brought about by technology and the digital age on the field of music cover design. The importance and significance of the research lie in the combination of theoretical knowledge from visual semiotics. By employing visual semiotics, the research successfully interprets the symbols and meanings embedded within the album cover designs, leading to a deeper understanding of cultural identity and values. This, in turn, fosters better communication between designers and their target audiences.

In conclusion, the synthesis of 3D digital visual art and visual semiotics yields unique and captivating visual effects that foster innovation and advancement within rap album cover design. The research sheds light on the transformative impact of technology and digital art in the music industry, highlighting the potential for further exploration and creative expression in this field.

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