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АНАЛИЗ ПРИМЕНЕНИЯ ПРИНЦИПОВ ЦИФРОВОГО МЕДИА-ИСКУССТВА В КИТАЙСКОЙ КИНОИНДУСТРИИ С 2010 ПО 2020 ГОД

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Аннотация. Представлен обзор в статье обширном обзоре, исследуются теоретические основы, историческая эволюция и практика применения цифрового искусства в медиа с акцентом на его глубокое воздействие на киноиндустрию. Ученые, такие как Манович, Пол и Квастек, вносят свой вклад в понимание тонкостей цифрового искусства, его принципов и эстетических размерностей. Анализ охватывает период с 2010 по 2020 год, выделяя значительную роль цифровых медиа в формировании новых форм и языков кинематографа. В практическом плане, Ма Фангнан, Чжан Чжунмин и Цзин Хайянг углубляются в конкретные случаи, подчеркивая влияние цифровых медиа на дизайн сцен, анимацию и визуальное изображение. В целом, этот обзор подчеркивает трансформационное воздействие цифрового медийного искусства на кино, предоставляя понимание его теоретических основ и практических применений. Выводы: всестороннее исследование цифрового медиаискусства включает в себя теоретические основы, исторический контекст, практическое применение и трансформационное влияние на китайскую киноиндустрию, проливая свет на проблемы и возможности в этом развивающемся ландшафте.

Ключевые слова: цифровые медиа, киноискусство, цифровые медиатехнологии, цифровые технологии, китайский фильм, киноиндустрия, цифровой фильм, 3D фильм, CG-эффекты.

ANALYSIS OF THE APPLICATION OF DIGITAL MEDIA ART PRINCIPLES IN THE CHINESE FILM INDUSTRY FROM 2010 TO 2020

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Abstract. This extensive review explores the theoretical foundations, historical evolution, and practical applications of digital art in media, with an emphasis on its profound impact on the film industry. Scientists such as Manovich, Paul and Kvastek contribute to understanding the intricacies of digital art, its principles and aesthetic dimensions. The analysis covers the period from 2010 to 2020, highlighting the significant role of digital media in the formation of new forms and languages of cinema. In practical terms, Ma Fangnan, Zhang Zhiming and Jing Haiyang delve into specific cases, emphasizing the influence of digital media on scene design, animation and visual representation. Overall, this review highlights the transformational impact of digital media art on cinema, providing insight into its theoretical foundations and practical applications. In summary, the comprehensive exploration of digital media art encompasses theoretical foundations, historical context, practical applications, and the transformative impact on the Chinese film industry, shedding light on the challenges and opportunities within this evolving landscape.

Keywords: digital media, film art, digital media technology, digital technology, chinese film, film industry, digital film, 3d film, cg effects.

In the realm of digital media art, a profound investigation into its theoretical and historical underpinnings, along with the pivotal concepts and paradigms shaping its identity, forms a critical aspect of scholarly discourse. Pioneering figures have significantly contributed to this field, propelling our understanding of its nuances.

Manovich (2002) stands out among these scholars, advancing the concept of digital dialectics to unravel the intricate interplay between emerging technologies, novel media forms, and evolving cultural expressions. Notably, he delineated five fun-

damental principles characterizing new media: numerical representation, modularity, automation, variability, and transcoding[1].

Paul (2023) further enriched our comprehension by offering a comprehensive historical panorama of digital art's evolution. Tracing its roots from computer graphics, video art, and net art, Paul explored contemporary manifestations in interactive, generative, and software art. Her discourse delved into the foundational principles and prevalent paradigms within digital media, encompassing interactivity, algorithmic processes, simulation, and database structures[2].

Turning attention to the aesthetic dimensions of interactive media art, Kwastek (2013) scrutinized how these forms challenge conventional notions of authorship, reception, and interpretation. Key concepts such as feedback, participation, situation, and performativity were introduced, shedding light on the transformative nature of interactive media within the broader artistic landscape[3].

Transitioning from theoretical groundwork to the practical implications within creative industries, particularly in the domain of filmmaking, scholars have examined the profound impact of digital media art principles on both processes and products.

Dixon (2015) delved into the historical trajectory of digital performance encompassing drama, dance, performance art, and installations utilizing new media. His analysis illuminated the integration of interactivity, immersion, hypermediacy, and remediation within digital performance, giving rise to novel narrative forms, spectacles, and experiential dimensions[4].

Reas and Fry (2006) introduced Processing, a programming language tailored for crafting digital sketches of electronic media. Their exploration illuminated the seamless integration of software concepts with design principles, empowering artists and designers to manifest visual, sonic, and kinetic expressions rooted in data and algorithms[5].

Moreover, Manovich (2015) extended the discourse by exploring the potential synergy between data science and digital art history. Delving into core concepts such as dimensionality reduction, clustering, classification, and visualization, he highlighted their application in the analysis and comprehension of extensive collections of digital cultural artifacts, encompassing images, videos, and texts. This confluence of disciplines presents unprece-

dent possibilities for unraveling the intricate tapestry of digital artistic expression and cultural heritage[6].

Researchers such as Xu Chi, Zhu Qingyuan, and He Mengxue have explored how digital media technology has transformed the audio-visual language, narrative techniques, creative methods, and aesthetic effects of films. They argue that digital media technology enhances the expressiveness, creativity, and communicative power of films while introducing new aesthetic challenges that demand constant adaptation and innovation from filmmakers and audiences. Xu Chi, for instance, delves into the aesthetic characteristics of films produced using digital media technology, emphasizing concepts like "collage recombination," "atmospheric layout," and the interplay between "illusion and reality" [7]. Zhu Qingyuan contends that digital media technology enriches film production methods, enhancing efficiency and quality, thereby catalyzing a shift from traditional to new film-making paradigms. Notably, between 2013-2015, six of the top ten highest-grossing Chinese films utilized digital media technology, including productions such as "Monster Hunt," "Furious 7," "Avengers: Age of Ultron," "Jurassic World," "Mojin: The Lost Legend," and "The Monkey King: Hero Is Back" [8, C. 118]. He Mengxue highlights the diverse applications of digital media technology in film, spanning the entire filmmaking process, from shooting to production and distribution. Leveraging digitized equipment, software, and platforms, filmmakers can enhance production efficiency, quality, and outreach, shaping virtual scenes and characters to heighten the attractiveness and emotional impact of films [9, C. 160].

In terms of practical applications, researchers like Ma Fangnan, Zhang Zhiming, and Jing Haiyang have examined specific instances of digital media technology in films, analyzing its impact on scene design, character modeling, color and lighting, special effects, and animation. They argue that digital media technology enriches films by intensifying visual impact, emotional expression, and artistic charm, allowing for the creation of new film forms and languages. Ma Fangnan draws parallels between contemporary digital techniques and the experimental film movement of 1960s America, highlighting attempts at computer-generated animation and video art, such as the visual experiments of William Kentridge and avant-garde movements like Fluxus, minimalism, structuralism, and incidental

art [10]. Zhang Zhiming points out the ability of digital media technology to use digital animation and computer effects to create dynamic changes in the visual imagery of film openings, providing audiences with aesthetic satisfaction and visual shock that facilitate emotional communication between the film and its audience [11, C. 135].

Regarding the impact of digital media technology on the film industry, scholars like Ding Fang, Hu Jinqiu, and Wang Hua have delved into aspects such as the film production process, costs, distribution, and consumption. They argue that digital media technology provides new platforms and opportunities for film production and dissemination, introducing fresh competition and challenges that necessitate continual adjustment, innovation, and the cultivation of high-quality talent and works within the film industry. Ding Fang, for instance, highlights the significant investment by the State Administration of Radio, Film, and Television (SARFT) in 2005, marking the growing importance of digital production in the development of film art. The production of domestic digital special effects films saw rapid growth, constituting nearly 20% of the total output of 263 films in a year. Utilizing digital technology to depict natural phenomena, especially in disaster films, became a prevalent practice, involving techniques like fluid and particle animation to simulate fire, explosions, oceans, gases, viscous liquids, as well as atmospheric effects like fog and rain or snow [13, C. 10-28].

Conclusions and comparative analysis

The studies on digital media art and its intersection with the film industry in China offer a multifaceted exploration of theoretical foundations, historical evolution, practical applications, industry impact, challenges, and future directions. The following conclusions and comparative analysis encapsulate key findings:

Theoretical Exploration:

Manovich (2002) lays the theoretical groundwork by introducing the concept of digital dialectics, framing the discourse on new media with five fundamental principles.

Paul (2023) enriches the understanding of digital art's evolution, providing a comprehensive historical context that includes the roots in computer graphics, video art, and net art.

Kwastek (2013) contributes by delving into the aesthetic dimensions of interactive media art, introducing key concepts that challenge conventional artistic notions.

Practical Applications and Technological Integration:

Dixon (2015) and Reas and Fry (2006) emphasize the practical implications of digital media art in performance and sketch creation, respectively, showcasing the integration of technology with artistic expression.

Manovich (2015) extends this by exploring the synergy between data science and digital art history, opening avenues for analyzing and comprehending extensive collections of digital cultural artifacts.

Film Industry Impact in China:

Researchers such as Xu Chi, Zhu Qingyuan, and He Mengxue focus on how digital media technology transforms the language, narrative, and aesthetics of Chinese films, recognizing both its creative enhancements and challenges.

Ma Fangnan, Zhang Zhiming, and Jing Haiyang provide specific instances of digital media technology in films, highlighting its role in scene design, special effects, and animation.

Challenges and Considerations:

Dixon (2015) and Ding Fang (2015) draw attention to challenges in integrating technology with art, emphasizing issues of blurred boundaries, dependence on technology, lack of innovation, and talent scarcity.

Future Directions and Industry Evolution:

Hu Jinqiu (2020) indicates a maturation of research on digital media art in China, with a shift towards applications and academic development. The focus on emerging technologies like VR, AI, and XR suggests a continual evolution of the industry.

In comparative analysis, these studies collectively provide a holistic perspective on the dynamic landscape of digital media art and its influence on the film industry in China. The integration of theoretical frameworks, practical applications, and industry considerations contributes to a nuanced understanding of the challenges and opportunities in the digital era of artistic expression. The intersection of technology and art remains a central theme, with scholars offering insights into the transformative potential and complexities of this relationship.

Summary

The discourse on digital media art spans theoretical foundations, historical evolution, and practical applications, with influential scholars shaping our understanding of this dynamic field. Manovich's concept of digital dialectics and Paul's historical panorama set the theoretical groundwork,

while Kwastek explores the aesthetic dimensions of interactive media art. Scholars like Dixon, Reas, and Fry delve into the practical implications within creative industries, emphasizing the integration of digital media principles in filmmaking.

Shifting focus to the Chinese film industry from 2010 to 2020, researchers such as Xu Chi, Zhu Qingyuan, and He Mengxue examine the transformative impact of digital media technology on audio-visual language, narrative techniques, and aesthetic effects. They highlight both the enhanced expressiveness and creativity brought by digital media, along with the new challenges requiring constant adaptation. Notably, the top-grossing Chinese films during 2013-2015 heavily utilized digital media technology.

Ma Fangnan, Zhang Zhiming, and Jing Haiyang delve into specific instances of digital media technology in films, exploring its effects on scene design, character modeling, and visual imagery. They argue that digital techniques intensify visual impact and emotional expression, allowing for the creation of new film forms. Ding Fang, Hu Jinqiu, and Wang Hua focus on the impact of

digital media on the film industry, addressing aspects like production processes, costs, distribution, and consumption. Ding Fang particularly underscores challenges in the balance between technology and art in digital special effects, emphasizing issues like blurred boundaries, dependence on technology, and scarcity of talent.

Hu Jinqiu concludes the discourse by highlighting the application of digital media art in film, gaming design, and tourism branding, suggesting that this application enriches audience experiences and contributes to the development of the digital economy. Her analysis indicates a mature stage in research on digital media art in China, with a focus on applications and academic development, as seen in discussions on new aesthetics and the exploration of VR, AI, and XR technologies.

In summary, the comprehensive exploration of digital media art encompasses theoretical foundations, historical context, practical applications, and the transformative impact on the Chinese film industry, shedding light on the challenges and opportunities within this evolving landscape.

Конфликт интересов

Не указан.

Рецензия

Все статьи проходят рецензирование в формате double-blind peer review (рецензенту неизвестны имя и должность автора, автору неизвестны имя и должность рецензента). Рецензия может быть предоставлена заинтересованным лицам по запросу.

Conflict of Interest

None declared.

Review

All articles are reviewed in the double-blind peer review format (the reviewer does not know the name and position of the author, the author does not know the name and position of the reviewer). The review can be provided to interested persons upon request.

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