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When the False Becomes Real: Reflections on How AIGC 'Generative' Documentary Creation 'Anchors Reality'

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Abstract: ***From documentary films to television documentaries and then to web-native documentaries, since the birth of documentary, each evolution of its form has been closely related to technological progress. With the advent of the virtual image revolution, computer-generated digital virtual imaging technology has increasingly penetrated into the documentary field, which regards "truth" as its lifeblood, and the complex relationship between "virtual images" and documentary "authenticity" has received widespread attention. This paper takes Artificial Intelligence Generated Content (AIGC) technology and the "metaverse" virtual space empowered by AIGC technology as the core of discussion, and reflects on how documentaries "anchor reality" through three aspects: the elaboration of documentary "authenticity," the application of AIGC technology in the documentary field, and the construction of "authenticity" in generative documentary creation.***

Keywords: AIGC; Metaverse; Generative Documentary; Authenticity; Digital Ethics.

1. INTRODUCTION

From Vertov's "Cinema-Eye" school to Flaherty's "realistic reproduction" to Grierson's "creative treatment of actuality"; from the participatory recording of "cinéma vérité" to the observational recording of "direct cinema" to "New Documentary Film's" questioning of pure objective truth, different periods of documentary creation concepts have different definitions and interpretations of "truth."[1] Each innovation in creative concepts represents a struggle between "truth" and "fiction," and these two seemingly contradictory elements of "truth" and "fiction" have never been clearly distinct. What constitutes "truth" and how to maintain "truth" are questions that documentary creators have been continuously pondering for a century. Under the wave of digital revolution, the rapid iteration of generative artificial intelligence models such as ChatGPT, Runway, and Sora, and the rapid development of extended reality technologies such as VR, AR, and MR, have made the boundary between "reality" and "virtuality" increasingly blurred. The penetration of virtual imaging technology into the documentary field has brought brand new extensions and connotations to documentary creation and experience. Can content generated using virtual technology in documentaries be included in the category of truth and reality? Do generative documentaries still belong to documentaries? Where exactly is the boundary of documentary truth? This brings new considerations to the definition of documentary "authenticity."

2. THE "AUTHENTICITY" OF AIGC TECHNOLOGY-BASED "GENERATIVE" DOCUMENTARY CREATION

Traditional documentary creation is the visual recording and reproduction of the objective world. Although limited by the subjective factors of creators and the objective conditions of filming subjects, it cannot achieve complete replication of the objective world, audiences have natural trust in this documentary visual form. However, unlike traditional approaches, the photorealistic images constructed by virtual imaging technology seem to run counter to the principle of documentary "authenticity." How to correctly understand "truth" is not only a principle of documentary creation but also a conceptual issue related to the essence of documentaries. The authenticity of documentaries can roughly be divided into two parts: recording truth and truthful recording, that is, the authenticity of recorded content and the authenticity of recording methods. This aligns with Kracauer's "material reality restoration theory" proposed in his work "Theory of Film." This theory reveals two functions of material reality reproduction: the "recording" function and the "revealing" function. The recording function involves objective tracking and recording combined with the specific development direction of events, objectively presenting the original appearance of events, which aptly explains the meaning of "recording truth" mentioned above. The revealing function corresponds to "truthful recording" mentioned above. The revealing function refers to the subjective participation of creators in revealing reality hidden beneath surface appearances. As Hungarian film

artist Béla Balázs said, “In documentaries, artists must discover the most characteristic, most interesting, most malleable, and most expressive things in the vast world of experience, and express their tendencies and ideological intentions exceptionally clearly.”[2] Therefore, truth in documentaries is the unity of objective truth and subjective truth, that is, the unity of recording truth and truthful recording.

Recording truthful content is the most basic requirement of documentaries. Only the authenticity of recording methods is controversial. As early as in Flaherty’s “Nanook of the North,” the technique of “non-fictional reenactment” appeared. Even though reenactment techniques are controversial in terms of documentary authenticity, it must be acknowledged that “non-fictional reenactment” has become a generally accepted method of truthful recording in the documentary field. Traditional documentaries mainly record changes in people, events, and objects through simple recording methods such as long shots and synchronized sound. Content that is difficult to record is presented through “non-fictional reenactment.” The emergence of virtual technology and virtual practice has led to major transformations in human practical methods, causing a shift from traditional cognitive paradigms to virtual cognitive paradigms. With the rapid iteration of virtual production and virtual technology, especially the emergence of AIGC, artificially intelligence-generated texts, videos, and audio are increasingly applied in documentary reenactments. This entirely new recording method generates videos and audio with high degrees of “realism,” largely eliminating traces of artificial processing. Although content generated under AIGC technology seems to align with the “truth” pursued by documentaries, whether this “generative sense of reality” can be included in the category of truth, and whether the intervention of “the other” breaks the authenticity of recording methods, requires understanding the working logic of generative artificial intelligence as a prerequisite for thinking about this problem.

3. AIGC TECHNOLOGY-BASED GENERATIVE DOCUMENTARY CREATION PARADIGM

Physical time has one-dimensionality, and things develop linearly. Documentaries cannot film at the first moment and first space when events occur. Therefore, early documentaries often used “reenactment” methods to recreate scenes for those images that no longer exist or are difficult to capture. However, with the improvement of audience aesthetic consciousness, existing technology could no longer meet audience aesthetic needs. Continuous technological updates and constantly rising aesthetic demands have driven documentary creators to attempt to apply AIGC technology to documentary creation, using artificially intelligence-generated content to “reproduce reality.” Generated virtual images not only dissolve the temporal and spatial boundaries of documentaries but also eliminate the gap between humans and machines, placing audiences in the surreal “real world” constructed by AIGC. The form of documentaries has also undergone fundamental transformation in the “metaverse” space composed of VR, AR, and other technologies, deconstructing the narrative logic and audiovisual language expression system of traditional documentary images, and reconstructing independent spatiotemporal dimensions composed of digital model combinations.

3.1 AIGC Technology Constructs Virtual Scenes

Before the application of generative artificial intelligence in the film and television field, the traditional creation process for making a three-dimensional scene model included design, modeling, UV unwrapping, UV texture painting, and finally importing into a rendering engine for rendering and export. In today’s AI technology explosion, generative AI is developing rapidly, with technologies such as text-to-image, text-to-video, 3D model generation, animated scene generation, and video style transfer becoming increasingly mature. AI models such as ChatGPT, Midjourney, DynamiCrafter, Make-A-Video, Runway, and Sora are rapidly iterating, bringing new vitality to the film and television industry. Creators both domestically and internationally continue to apply cutting-edge technologies to documentary creation. “Planet Zebulon Five,” created by the Curious Refuge team, is an AI-produced “extraterrestrial” nature documentary. The film’s production process involved multiple AI generation tools, including: Midjourney (AI painting tool), Runway ML (AI video generation platform), and Elevenlabs (AI audio generation platform). The alien landscapes and animals in “Planet Zebulon Five” were all imagined and generated by AI. The domestic documentary industry has also actively explored AIGC technology. In November 2023, China’s first historical AI animated documentary “War God: Rise of Heroes” was launched on Youku. This film pioneered the domestic documentary industry by extensively using AI for animation-assisted creation during the production process. The creative team explored presenting historical scenes through AI scene restoration combined with live-action filming while respecting historical facts, vividly recreating authentic ancient battlefields and the magnificent romantic heroism of the protagonists. At the “Documentary 2024 Content Creation Conference,” Youku announced the large-scale historical documentary “Chinese History” produced

using AIGC (Artificial Intelligence Generated Content) technology. This film will use AIGC technology to participate in the construction of historical scenes, maximally restoring historical figures and historical scenes [3]. This shows that the application of AIGC technology in domestic and international film and television industries is currently in the auxiliary content generation stage and has not yet reached the stage of AI autonomous content generation. AI productivity still needs to be released.

3.2 AIGC Technology Generates Algorithmic Imagination

Through a review of relevant theories domestically and internationally, AIGC can be summarized as any form of digital resources generated by AI as a creator, including artificial intelligence technologies that enable AI to become a creator. As a content production method, its creator is mainly AI [4].

AIGC has attempted to promote or explore applications in multiple fields including text generation, image generation, audio generation, video generation, and multimodal generation. AIGC technology possesses the ability to simulate human thinking and perception. Through technologies such as Deep Learning and Neural Networks, it can automatically analyze large amounts of data and images and generate high-quality images based on learned patterns and rules. The most controversial aspect in the documentary field is video generation technology. Autonomous video generation can be applied to image-to-video generation (given a reference image, generate a motion video) and text-to-video generation (given descriptive text, generate content-matching video). Representative models include Deepfake, videoGPT, Gliacloud, Make-A-Video, Imagen video, and the Sora video generation model released on February 16, 2024.

Content generation can be understood as experiential imagination and evolutionary imagination according to stages. Experiential imagination refers to using deep learning technology to simulate human creativity and imagination by training models, thereby generating new and creative content. This process relies on past relevant "metadata" and is essentially big data computation. Xu Bing's "Artificial Intelligence Infinite Film" project demonstrated the essence of this "algorithmic" imagination. By presetting models for scripts, videos, subtitles, and audio, the realization of "interactive" AI films is essentially "a feedback from a control loop."[5] Evolutionary imagination uses technologies such as deep learning and reinforcement learning to give AI models self-learning and evolutionary capabilities. This evolutionary imagination transcends simple imitation or replication, enabling AI to continuously create entirely new content based on existing knowledge and experience. However, current technology has not yet reached this stage.

The realization of AIGC means no longer visualizing imagination that exists in the human brain through AI technology, but visualizing what the human brain has never imagined. Generally speaking, AIGC produces a kind of imagination. Content generated in the documentary field can be called imagined reality. To ensure the authenticity of generated content and balance the boundary between reality and imagination requires collaboration between creators and intelligent generation models, evolving imagined reality into human-machine consensus.

3.3 AIGC Technology Realizes the Transition from "Other" Imagination to Human-Machine Consensus

The degree of AIGC participation in content generation is divided into three stages: local participation stage, collaborative participation stage, and full participation stage. The local participation stage is dominated by human imagination, with AI serving humans as a tool; the collaborative participation stage involves human imagination and AI imagination occurring collaboratively, with AI serving humans as an assistant; in the full participation stage, AI possesses creative capabilities equal to human creators, with all content generated by AI imagination, and AI holds a dominant creative position.

Currently, most AIGC technologies domestically and internationally are in the first and second stages. The most representative is OpenAI's recently released Sora model, which can generate highly realistic, high-quality videos through text descriptions. This shows that "other" imagination is gradually deconstructing humanity's central position in film imagination. The application of AIGC to documentaries is an unstoppable historical trend. To ensure the authenticity of generated content and guarantee truthful recording requires establishing a new type of human-machine relationship—human-machine consensus.

The key to human-machine consensus is that the work process is led and controlled by humans. Regardless of the context in which AI exists, AI itself always retains two non-transferable attributes: first, it is artificial. Second, it has the connotation of "other." Among these, "artificial" points to the technological dimension, reflecting

humanity's creation and empowerment of this form of existence.[6] Therefore, regardless of how far AIGC technology develops, human thought always occupies the leading position. Truth in documentaries is the unity of objective truth and subjective truth. Therefore, in documentary creation, human authentic feelings about objective reality should become the standard for intelligent model generation. It can be seen that AIGC-generated videos themselves, as "other" imagination, do not possess authenticity. Only by reaching consensus with creators' thoughts can they create "factually authentic" content. As documentary master Joris Ivens once said: "Documentaries cannot fabricate, but they must imagine." Documentary creators should adhere to the "Pareto optimality principle" in embracing rational choices to achieve human-machine consensus, using technological advantages to construct documentary authenticity.

4. CONSTRUCTION OF "AUTHENTICITY" IN AIGC TECHNOLOGY-BASED GENERATIVE DOCUMENTARIES

Although AIGC technology has blurred the boundary between reality and virtuality, it is fundamentally a fictional strategy in documentary creation. Therefore, while maintaining their authenticity and value, documentaries appropriately adopt artificial intelligence virtual technology for creation, bringing brand new extensions and connotations to documentary creation and experience, and providing a completely new way of interpreting the relationship between images and reality. Documentary creators should firmly grasp the dominant position in human-machine relationships under the wave of artificial intelligence, using technology to empower the construction of documentary authenticity.

Documentaries bear the historical task of disseminating humanistic concepts and are carriers of humanistic spirit and ultimate concern. Therefore, in this competition between human and machine roles, documentary creators should regard humanistic spirit as their guiding principle, establish human subjectivity, achieve "AI + humanities," integrate humanistic spirit throughout technological applications, and maintain humanistic care and humanistic thinking before, during, and after AI content generation. This achieves unity between instrumental rationality and value rationality, providing a cultural sanctuary for returning to life's authenticity in the metaverse future.

4.1 Using "Truth" as Foundation, Establishing the Life Foundation of Generative Documentaries

Truth means pursuing authenticity. Documentaries before AIGC technology authentically restored the original appearance of things through production methods such as on-site filming and in-depth interviews. However, the "phantom-real" visual style in generative documentary creation under AIGC technology is not equivalent to the truth pursued in documentaries. Therefore, in the development and application of AIGC technology, creators should play a leading human role, providing instructions with clear authenticity orientation to ensure the authenticity of AI-generated content. To achieve this goal, systematic fact-checking and historical verification mechanisms should be constructed before content generation. For example, when involving historical subjects, creative teams need to comprehensively compare multi-source documentary archives, physical evidence, and oral history records, using natural language processing technology to assist in cross-verification of historical materials, identifying and excluding information with obvious contradictions or questionable sources. Meanwhile, vector databases and knowledge graph technologies can be introduced to structurally organize and annotate the credibility of raw data input into AI models, ensuring generated content has a reliable empirical foundation. Human expert teams (including historians, domain experts, and documentary directors) should intervene for review at key generation nodes, especially conducting multiple rounds of verification for key scenes, character dialogues, and historical plots output by AIGC, maintaining documentary authenticity and authority through technology empowerment rather than technology replacement.

4.2 Using "Order" as Framework, Constructing the Normative Dimension of Generative Documentaries

The use of AIGC in documentary production needs to be embedded in a standardized and ethical full-process management system. Its core is achieving audience awareness and critical viewing through technological transparency. From an academic perspective, transparency is not only about technological ethics but also a media narrative strategy—by clearly identifying AIGC-generated parts, such as using watermarks, end credits, or dynamic metadata, audiences can be guided from passive immersive visual experience to reflective cognition of the image construction process, thereby understanding the narrative intent and human dominance behind technology. In specific practice, technical application white papers should be formulated in the pre-production phase, clarifying scenarios and boundaries for AIGC use; during production, human-machine collaborative review mechanisms should be established, such as using generation logs and algorithmic interpretability tools to trace key

decisions; in post-production, AIGC usage should be incorporated into the film's annotation system. This complete process not only helps establish industry consensus and supervision mechanisms but also builds a buffer zone between technological rationality and humanistic values, consolidating documentaries' credibility as social institutions.

4.3 Using "Sublime" as Mirror, Highlighting the Humanistic Dimension of Generative Documentaries

Since their inception, documentaries have carried the mission of recording truth, exploring the unknown, and observing society, and are important cultural carriers that unite collective consensus and participate in social narrative. In the context of AIGC technology, documentary creation should not only strive to express sublime themes but also use technology to achieve cross-cultural "commensurability" of sublime experience, that is, seeking common human spiritual responses in multicultural contexts. The sublime, as a transcendent aesthetic experience, is rooted in the essential power of humans as "species beings" and presents itself as confirmation of subjectivity and spiritual communion. AIGC can leverage its powerful data processing and cultural computing capabilities to excavate and integrate expressions related to the "sublime" across different historical periods and cultural traditions, revealing the universal power humanity displays when facing nature, fate, and moral choices, thereby transforming abstract spiritual pursuits into perceptible visual narratives.

Cultural tradition is a context in which the sublime occurs and is displayed [19]. Understanding the sublime must be based on specific cultural contexts. Geertz proposed using "thick description" to solve the problem of understanding other cultures [20], emphasizing revealing the world of meaning behind behaviors and symbols through meticulous cultural interpretation. This method has important implications for AIGC participation in sublime narrative. Technological applications must avoid simplifying and spectacularizing other cultures, and should strive to establish balance between authenticity and interpretive power. Creators should always maintain subjective consciousness, guide algorithmic decisions with humanistic spirit, and use AIGC for systematic organization of cultural elements, intelligent reconstruction of historical events, and visual concretization of national spirit, making technology truly an assistant to rather than replacement for "thick description." For example, AI can be used for visual reconstruction and meaning interpretation of multi-ethnic rituals, epic narratives, and traditional crafts, presenting cultural uniqueness while revealing the universal humanity and ethical heights contained within.

Furthermore, AIGC technology can break through the cultural boundaries of sublime expression through intelligent adaptation and cross-linguistic communication, achieving more inclusive and dialogic documentary narrative. For example, using semantic analysis and generative translation to translate and reproduce sublime imagery from different cultures, achieving cross-cultural resonance while maintaining original contextual meaning. Ultimately, AIGC documentaries should return to observing human essential power, recognizing life dignity, and pursuing common human values through the integration of technology and humanities, making the "sublime" no longer limited to within a particular cultural tradition but become a spiritual mirror connecting different civilizations and illuminating universal humanity.

5. CONCLUSION

The rise of AIGC technology has pushed documentary creation into a new stage of virtual-real intersection and human-machine collaboration, also posing profound contemporary questions about "truth," the core proposition of documentaries. This paper discusses three aspects—authenticity definition, technological pathways, and humanistic construction—demonstrating that AIGC has not dissolved truth but expanded its connotation and realization methods. Although generative technology reshapes image language and narrative logic, truth remains the ethical baseline and life foundation of documentaries. In technological applications, humans must maintain subjectivity and value leadership, achieving unity between instrumental rationality and value rationality. Future documentary forms will continue to evolve with technology, but their fundamental mission of observing reality, questioning truth, and protecting humanism must not waver. Only by establishing dialogue between the virtual and real and injecting ethical consciousness into technology can documentaries continue to serve as mirrors of the times and windows of civilization, maintaining the value and spirit of truth in digital contexts.

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