Research Article

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Audiovisual Narrative in the Age of Artificial Intelligence: Advances, Trends and Challenges: A Systematic Review

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Abstract

In the context of the growing influence of artificial intelligence (AI) in audiovisual narrative, several studies a re observed that have addressed its impact. Santiago D. analyzes how AI imitates aesthetics of the past witho ut contributing innovations, while Moya E. reflects on the ethical and creative challenges, and Franganillo J. explores the opportunities and risks of technology, such as disinformation and manipulation. The methodolo gy employed includes a systematic review of literature in key databases, using rigorous criteria to select relev ant studies. The results show that, although AI offers potential advances, its current use tends to reproduce n ostalgic and retro styles. The conclusion underscores the paradox of AI in audiovisual narrative: while promi sing innovation, in practice it reinforces aesthetics of the past. It is essential to establish regulatory framewo rks to harness its benefits and mitigate risks.

Keywords: *Artificial Intelligence (AI), Audiovisual Narrative, Trends, Challenges, Innovation, Ethics, Regulation*

1. Introduction

Artificial intelligence (AI) is transforming audiovisual narrative, being understood as the way to express in audiovisual media "Narrative refers to content in which the viewer recognizes, through the sequence of images and sounds, the events that build an argument and refer to a text that represents the story" By enabling more innovative and efficient creation, as in the making of content, AI facilitates script writing, animation and special effects procreation, promoting greater creativity and efficiency. It also democratizes access to advanced tools, allowing professionals and amateurs to explore complex narratives and visual productions.

Therefore, it is the reason for a review of the existing literature to show whether AI is innovative, efficient and allows humans to achieve professional content with its application,

comparing whether audiovisual storytelling through AI will replace human production. "The only way to make sure that a person doesn't lose their job with the advent of AI is to make something that AI can't create, and the only thing that AI can't do, but a human can, is to be original," he said. So creating something original will be something that no AI can replace. Diamandis (2022)

In audiovisual production, AI optimizes editing, resource management and filming planning, reducing costs; but it requires new skills and can displace traditional roles. In reception, it personalizes audience interaction, raising concerns about authenticity and ethics. In education, it is crucial to adapt curricula to include competencies in AI and digital storytelling. The reviewed literature explores how AI is transforming audiovisual storytelling, offering an updated vision and highlighting the need to integrate these technologies into vocational training to address ethical and social challenges. This review article has been written about the influence of AI on audiovisual storytelling, highlighting several key contributions and importance:

a. Advances and Trends: Describes how AI is transforming the creation, production and reception of audiovisual content, encompassing technological advances and emerging trends.
b. Challenges Identified: Recognizes challenges such as the need for new skills, changes in traditional roles, and ethical concerns, offering a critical perspective on AI in this field.
c. Educational Implications: Highlights the importance of updating educational curricula to include competencies in AI and digital storytelling, preparing future professionals for an evolving technological environment.
d. Social and Ethical Relevance: Examines the ethical and social implications of AI in audiovisual storytelling, emphasizing the need to train responsible and conscious creators on issues of authenticity and ethics.

AI is transforming audiovisual storytelling, providing new possibilities for the creation of automated content that is both personalized and dynamic, from the creation of scripts and characters to the treatment of image and sound. Advances that allow creators to explore innovative ways of expression and connection with audiences, enabling a range of opportunities for innovation in storytelling.

Innovation in storytelling. However, ethical challenges arise regarding authorship and representation, as the automation of production raises questions about human dominance in creative processes.

This article offers a comprehensive and up-to-date view of how AI is redefining the audiovisual narrative. It analyzes benefits, challenges, and ethical implications, providing a comprehensive framework for understanding its impact on this key industry. ¨It can contribute principles, well demonstrated, as well as discover laws or regularities in a process that previously had not been appreciated¨ González M, (2002)

This study reviews the scientific literature from 2010 to 2024 on audiovisual narrative in the era of artificial intelligence. The results indicate that AI is advancing in the creation of arguments, processing and narrative, improving the quality and efficiency of content. However, AI still faces limitations in generating complex statements and developing creativity in content writing.

> *"Knowledge is experiencing a remarkable growth in the use of AI, the current challenge is to incorporate AI into the creation and production phases of information and entertainment." Fernández A. (2023)*

The researchers Vidal M, Freire A, and Lopez Gonzalez, Jesés. In their article entitled "The representation in Spanish cinema of AI associated with robotics: Eva and Automata" published in 2023, they argue that the use of AI and its possible technological applications come more from narrative construction than cinema has imagined, and we can observe it in certain films such as "Terminator", "Yo Robot", "Garland" among others.

The aim of the publication is to compare and analyze the narrative discourse of films with scientific discourse in the context of the advancement of AI. The results highlight that although AI

can generate imaginative content, it cannot yet fully understand human thought, opening an ethical debate about the relationship between collective imagination and the advancement of robotics.In their study "Using Testimonial Narratives to Persuade People about Artificial Intelligence: The Role of Attitudinal Similarity with the Protagonist of the Message" published in 2022, Igartua, Gonzalez and Arcila investigated the factors that increase the persuasive impact of testimonial narrative messages on AI. The study analyzed how attitudes toward AI and prior beliefs affect identification with a protagonist in audiovisual messages, using an online experiment with 652 participants.

It was shown that messages with protagonists expressing positive attitudes toward AI generated greater affinity in participants with positive prior consent about AI. On the other hand, messages with protagonists with ambivalent attitudes toward AI generated greater identification in participants with negative prior beliefs. The research concludes that similarity to the protagonist and cognitive processing influence how prior attitudes and beliefs affect perception and intent to use AI, with implications for the development of narrative persuasion campaigns in data science.

In their 2023 study, Verano, Guilleminot and Reichenbach presented "AVbook: A High-Frame-Rate Corpus of Narrative Audiovisual Speech for Investigating Multimodal Speech Perception." The study underscored the importance of observing the speaker's face to improve auditory comprehension. Faced with the lack of high-quality recordings in audiovisual speech integration research, AVbook, a high-frame rate audiovisual speech corpus, was developed to advance cognitive neuroscience and multimodal speech recognition. In the summer study, a corpus of 3.6 hours of audiovisual recordings of two speakers (one male and one female) was developed, reading 59 narrative passages each at 119.88 frames per second. The corpus includes phonetic alignment, multiple-choice questions to assess attention, and a written summary per recording. Four taped videos provide audiovisual synchronization. It is publicly available for research in audiovisual speech neurobiology and development of speech recognition algorithms.

In 2023, Du et al. published the paper "AI-Generated Incentive Mechanism and Full-Duplex Semantic Communications for Information Sharing," which addresses computational power limitations in mixed reality (MR) devices. They propose an information exchange scheme based on two-way D2D semantic communications, which reduces computational burden by transmitting content and semantic data between nearby users. The study analyzed the performance of these communications and designed an AI-based incentive mechanism. where the proposed model outperforms two deep learning algorithms by reinforcement and is available on GitHub for evaluation by other researchers. Here is evidenced the use of AI, as a generative tool of content to narrate in audiovisuals that still maintains distance with human creativity.

In 2023, Lin et al. they published the article *"Blockchain-Aided Secure Semantic Communication for AI-Generated Content in Metaverse"*, It addresses the mass transmission of data in the metaverse. The study proposes a blockchain-assisted semantic communication framework to protect the transmission of AI-generated semantic data in virtual networks. It demonstrates the interaction between physical and virtual domains and protects against attacks that send malicious semantic data that could disrupt services and generate incorrect AIGC outputs.

The study introduces a defense scheme that uses blockchain and zero-knowledge tests to distinguish between authentic and adversarial semantic data, showing a 30% reduction in semantic similarity between adversarial and authentic data, which improves security in the Metaverse. At this point we can see that the utility of AI is considerable in allowing us to employ a content defence system that human capability would take time to manage. In 2023, Elkhatat et al. published a study on the effectiveness of AI content detection tools in distinguishing between AI-generated and human-written text. They evaluated fifteen paragraphs from the GPT-3.5 and GPT-4 models, and five control responses written by humans.

The method used AI detection tools developed by OpenAI, Writer, Copyleaks, GPTZero and CrossPlag. The study found that the tools were more effective at identifying content generated by GPT-3.5 compared to GPT-4, but had inconsistencies when evaluating human texts, with false positives and uncertain classifications. It concludes that improved AI detection tools are needed to

maintain academic integrity and address plagiarism in an increasingly sophisticated text environment.

In 2022, Chubb, Reed and Cowling published the article 'Expert views about missing AI narratives: is there an AI story crisis?' which aimed to explore the missing narratives about artificial intelligence (AI) that are not represented by mainstream technology companies, popular media and science fiction authors. The study found that mainstream stories can mislead audiences, and concludes that more inclusive and nuanced narratives need to be developed to provide a balanced view of the future of AI. It analysed academic perspectives on the 'crisis of stories', where diverse narratives compete to influence public discourse on AI. The findings argue that prevailing narratives can mislead public perception, highlighting the need to create more realistic and diverse narratives. The conclusion is that creating inclusive and nuanced stories, considering storyteller, genre and communicative purpose, will offer a balanced view of the future of AI and inspire new thinkers and storytellers.

In 2024, Watts and Bode published 'Machine guardians: The Terminator, AI narratives and US regulatory discourse on lethal autonomous weapons systems', exploring how Terminator films influence perceptions of Lethal Autonomous Weapons Systems (LAWS) and their regulation in the United States. It found that depictions of 'machine guardians' in Terminator have influenced US statements, presenting LAWS as precise and protective tools. These narratives can be used to both support and oppose LAWS regulation, reflecting how the popular imagination impacts international AI policy.

In 2023, Cave, Dihal, Drage and McInerney investigated the underrepresentation of women as AI researchers in film. They found that only 8% of AI characters were women and no films were directed by women. This finding highlights gender inequalities in film and the need for more inclusive representations. The study entitled: 'Who makes AI? Gender and portrayals of AI scientists in popular film, 1920-2020'. It aimed to investigate the underrepresentation of women in the field of artificial intelligence (AI) in film. The hypothesis was that women are underrepresented as AI researchers in influential films. The analysis of 142 AI films (1920-2020) revealed that only 8% of the 116 AI researcher characters were women, and no film was directed exclusively by a woman. This reflects gender inequalities in the film industry and in reality, with male tropes reinforcing the image of the AI scientist as a man.

In 2017, Guerini et al. published the article 'Interactive Film Recombination', in which they present an innovative application called 'Interactive Movietelling'. This approach, derived from Interactive Storytelling, uses artificial intelligence (AI) to generate alternative narratives from base film content. The technique combines narrative planning with video processing using shared semantic attributes. User tests with the prototype showed great potential, although the system is still in the proof-of-concept phase. The article suggests that future development could face several research challenges where AI is gaining ground by reducing the production time of audiovisual narratives, which a human cannot achieve. However, it is just this point that AI has not produced innovation, which is characteristic of scriptwriters and audiovisual producers.

In 2024, Du et al. published the paper 'Diffusion-based Reinforcement Learning for Edge-enabled AI-Generated Content Services'. They propose an AIGC-as-a-Service (AaaS) architecture that uses edge-enabled wireless networks to distribute content in the Metaverse. They introduce the AGOD algorithm, based on diffusion models and Deep Reinforcement Learning (DRL), highlighting the new D2SAC algorithm for its superior efficiency over seven other DRL algorithms. The new algorithm, Deep Diffusion Soft Actor-Critic (D2SAC), shows superior efficiency and effectiveness over seven other DRL algorithms. The AGOD methodology can be applied to optimisation problems in wireless networks and is available for future research, which is a breakthrough and a trend in audiovisual storytelling.

In the article 'The Japanese film AI Amok (2020) and the collapse of the realistic view of AI', De Masi and Li S (2024) analyse the representation of AI in AI Amok, directed by Yu Irie, using Bordwell and Thompson's framework. They compare the film to Blade Runner 2049 and Her, highlighting that

AI Amok offers a more tangible and up-to-date vision of AI in areas such as healthcare and urban development. The film narrates the integration of AI immediately into everyday life and addresses real ethical dilemmas about its implementation. The research concludes that AI Amok offers a detailed and credible depiction of AI in healthcare and government, using subtle visual effects to reflect its pervasiveness. This approach enriches the science fiction discourse and brings a distinctive perspective to the debate on the ethical development of AI in the real world.

In the article 'A unified framework for integrating semantic communication and AI-generated content in Metaverse' (Lin et al., 2023), an ISGC model is proposed that optimises resource allocation and improves content quality in the Metaverse. The study reviews current solutions and a case study based on a diffusion model, showing that the ISGC framework improves immersion and suggests areas for future research. The study analysed existing solutions and a case study based on a diffusion model, highlighting an effective strategy for semantic extraction and content generation. It concludes that the ISGC framework improves immersion in the Metaverse and suggests areas for future research.

In the article 'AI in audio storytelling' (Yaguana H, Arrobo J, Rene A, 2022), the impact of robotic TTS on audio storytelling is evaluated using the podcast 'Historias de a Lata'. The study reveals that while robotic voices are valued by listeners, they can also cause indifference and distraction. Experts suggest that AI has potential in sound production, but its integration must be done carefully to ensure its effectiveness and acceptance. The researchers used surveys and interviews with sound production experts. The results showed that while listeners appreciated the artificial voices, they were also indifferent and distracted. The experts believe that AI will be crucial in sound production, but its integration must be careful to achieve effectiveness and acceptance.

The article 'Generative artificial intelligence and audiovisual storytelling' (Encinas A., 2024) explores how ChatGPT is integrated into creative writing for audiovisuals. Although AI can assist writers, it falls short of originality and innovation. Using Ricoeur's three mimesis methodology (mimesis 1: prefiguration, mimesis 2: configuration, and mimesis 3: refiguration), the study explores the poetic limitations of AI, such as its lack of genuine creativity and its tendency to imitate rather than innovate. The conclusion is that, despite its usefulness, AI cannot replace human creativity in the creation of original narratives.

In 'Audiovisual narratives generated by artificial intelligence: between pastiche and cancellation of the futures' (López S., 2023), we examine how AI-generated audiovisual narratives on platforms such as YouTube, Twitch and Twitter tend to recreate nostalgic aesthetics rather than innovate. The study analyses content that mimics visual styles of previous decades without bringing novelty where these narratives replicate aesthetics of the past, perpetuating a culture of nostalgia and regression, rather than exploring the innovative potential of AI. This reflects a paradox in the use of AI, which, instead of advancing, stagnates in the imitation of previous cultural artefacts. The study concludes that these narratives act as pastiches that mimic styles of the past, perpetuating a culture of nostalgia and limiting the innovative potential of AI.

Víctor Lope Salvador (2019) in his article 'Challenges for audiovisual research with artificial intelligence' addresses the challenges of audiovisual research in the face of datification and the automatic processing of images and sounds. The article uses advanced technologies and neuroscientific approaches to understand how these elements affect the perception of audiovisual content. It concludes that these updates will enable a deeper understanding of the viewer's experience.

Buil P and Buil P (2023) in their article 'Audiovisual Narrative and Spectrograms' explore the role of sound and music in two AI scenes: the Black Mirror episode 'Be Right Back' and the film Her. The study uses sound spectrogram analysis of these scenes to examine how sound and music affect viewers' perception and reinforce thematic and emotional context. It concludes that sound and music are essential for building cultural associations with AI, enriching the narrative and enhancing the emotional and thematic impact of audiovisual content.

Santiago D. (2023) in 'Audiovisual narratives generated by artificial intelligence: between

pastiche and cancellation of the futures' analyses how AI-generated audiovisual narratives on platforms such as YouTube, Twitch and Twitter imitate visual styles from previous decades without offering innovations. The method analyses AI narratives that uncritically reproduce retro aesthetics. The study concludes that, rather than fostering creativity, these narratives perpetuate a nostalgic aesthetic by replicating the past without providing novelty in language and storytelling.

Moya E. (2023) in 'Freedom of thought and artificial intelligence: automatisms and thought generation' explores how advances in AI are affecting content creation, traditionally a human capability. The article explores the ethical and social challenges that arise with these technologies, considering their potential for social progress and the risks of social manipulation. It concludes that it is crucial to implement preventive measures and ethical regulations to ensure that AI contributes positively to collective well-being and to avoid harmful uses in the construction of audiovisual narratives.

Franganillo J. (2022) in 'AI-generated content: opportunities and threats' explores how advances in AI are revolutionising content creation in a variety of formats, from text to audiovisual. He examines both the opportunities for automation and personalisation and the ethical risks, such as misinformation and privacy violations. It highlights the need for regulatory and ethical frameworks to mitigate these risks and tailor education for future professionals.

This research details how artificial intelligence transforms audiovisual storytelling, addressing technological advances and emerging trends. It examines opportunities, challenges such as the need for new skills and ethical implications, highlighting the importance of adapting education for future professionals. Based on data from Scopus, Web of Science and Dialnet from 2010 to 2024, the literature review analyses the impact of AI on the creation, production and reception of visual content.

Audiovisual productions such as Terminator have had a significant influence and impact on how the public and governments perceive lethal autonomous weapons (LAWS). Watts and Bode's (2024) study highlights the representation of AI in stories as an out-of-control threat, fostering the idea that this digital tool is capable of escaping human control, creating the complicated political debate about its regulation and increasing the gap between the actual abilities of AI, which are currently more limited, and people's perception. On the other hand, there are narratives that increase the acceptance of new digital tools.

AI is constantly transforming audiovisual storytelling in different approaches with different impacts depending on the region and industry at the time of its application. In North America, for example, AI has had its main integration in the film industry with the application of tools for the creation of deepfakes, editing optimization and generating personalized experiences, such as DeepFaceLab, opening space for the new virtual form of storytelling. Unlike Asia, where AI is used in the development of the metaverse, using technologies such as blockchain or semantic algorithms for the purpose of regulating the security and personalization of data in virtual media. This approach reflects the orientation towards a vision beyond traditional audiovisual storytelling. On the other hand, if we talk about the use of AI in Latin America, we can focus its approach in cultural and educational fields. New technological tools are developed and discovered to transform learning models, facilitating educational experiences.

2. Methods

The study 'Audiovisual Storytelling in the Age of AI: Advances, Trends and Challenges' uses a systematic literature review to analyse the impact of AI on audiovisual storytelling. A comprehensive search of relevant databases with key terms on AI and storytelling was conducted, selecting studies that encompass experimental and qualitative approaches. The data analysis employs qualitative and quantitative techniques to identify technological patterns such as machine learning and computer vision. The non-experimental, intersectional methodology allows for a single moment evaluation, facilitating a comprehensive understanding of how AI transforms the creation and reception of audiovisual content.

2.1 *Research question*

'How is artificial intelligence transforming audiovisual storytelling in terms of creation, production and reception?' This question covers several key aspects: the influence of artificial intelligence on the generation of audiovisual content, the changes in production processes due to intelligent tools and algorithms, and how these changes affect the way audiences engage and consume visual stories.

1. Specific questions: What are the main AI technologies used in audiovisual content creation and how are they redefining traditional storytelling techniques? (See table 3)
2. How are AI tools and algorithms transforming audiovisual production processes, and what are their impacts on the efficiency and creativity of production teams? (See table 4).
3. Selection criteria: Inclusion and exclusion: Regarding the protocol to be followed in the research of the category scientific studies, in the case of the inclusion criteria of the selected scientific articles, the following have been considered: primary articles on advances in AI in audiovisual production, on quality and diversity of audiovisual narratives, on changes in audiovisual production methods, and on the perception and experience of the public in relation to content generated by AI, articles published in English, Spanish and Portuguese, articles that belong to the Scopus, WOS and Dialnet databases, articles published in the period from January 2010 to July 2024.

In the exclusion selection, the following were considered: documents such as reviews, conferences, chapters of and/or books or letters to the editor, documentary studies, systematic reviews and conferences, unavailable texts, research belonging to a context other than advances, trends and challenges, scientific articles in languages other than English, Portuguese or Spanish, scientific articles that are not Latin American studies.

2.2 *Search strategy:*

The search strategy included the selection of journal articles in the Scopus, WOS and Dialnet databases, covering publications from 2010 to June 2024. Boolean operators (AND, OR, NOT) and descriptors such as 'Interculturality', 'Intercultural Education' and 'Basic Education' were used.

The combinations of descriptors for the searches were:

- In Spanish: "narrativa audiovisual" AND "inteligencia artificial" AND "experiencia de usuario" AND "contenido generado por IA".
- In English: 'Quality and diversity of audiovisual narratives' AND 'changes in audiovisual production methods' AND 'public's perception and experience of content generated by AI'.
- En portugués: "Qualidade e diversidade das narrativas audiovisuais" AND "mudanças nos métodos de produção audiovisual" AND "percepção e experiência do público com o conteúdo gerado pela IA".

The keywords considered were: Audiovisual narrative, Artificial intelligence, Content production, User experience.

Table 1: Preliminary search results in database

Combined word	Search string	Initial results without filter	Initial results with filter	Scopus including	Web of science including	Dialnet including	Total
"audiovisual narrative" AND "artificial intelligence"	*TITLE-ABS-KEY ("audiovisual narrative" AND "artificial intelligence"*	*646*	*89*	*0*	*2*	*5*	*7*
"user experience" AND "AI-generated content"	*TITLE-ABS-KEY (user AND experience AND ai-generated AND content) AND PUBYEAR > 2019 AND PUBYEAR < 2025 AND (LIMIT-TO (DOCTYPE , "ar"))*	*1445*	*139*	*2*	*3*	*2*	*7*
"film narrative" AND "AI"	*TITLE-ABS-KEY ("film narrative" AND "AI") AND PUBYEAR > 2018 AND PUBYEAR < 2025*	*961*	*133*	*1*	*5*	*0*	*6*

Total: 20

2.3 *Selection of relevant articles (selecting articles according to inclusion and exclusion criteria)*

For the selection of articles for review and synthesis, the full texts were accessed and a review of abstracts and titles was carried out according to the established inclusion and exclusion criteria. Articles that met the criteria and objectives of the study were selected, and those that were not aligned were purged (see figure 1).

2.4 *Data collection of selected articles*

The process of collecting the selected articles was organised in an Excel table as a review protocol. The fields recorded were: (a) author, (b) title, (c) year of publication, (d) methodology, (e) country of study, (f) sample and (g) main result. With this information matrix, we proceeded to the analysis of the selected documents.

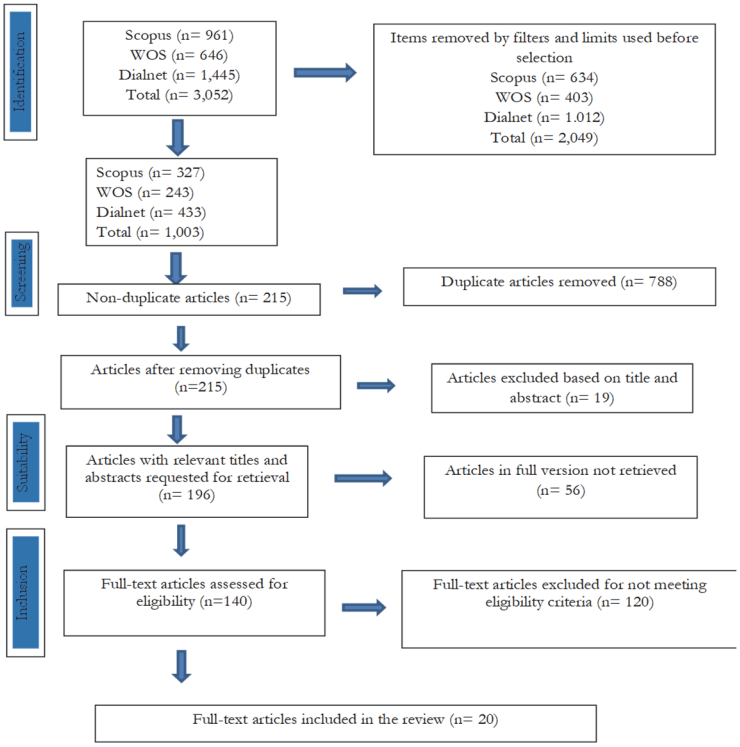

Figure 1: Identification of studies via databases

3. Results

After selecting 20 articles on 'Audiovisual Storytelling in the Age of Artificial Intelligence', the study reveals that AI can enhance the creation of audiovisual content, although it does not yet introduce significant innovations and tends to mimic styles of the past. Technological advances in AI offer opportunities, but also present ethical and creative challenges. The need for regulatory and ethical frameworks to mitigate risks and promote societal benefits is highlighted. Furthermore, the analysis of the influence of AI on sound narratives and creative writing highlights the importance of

developing concepts based on high-quality reviews. It is noted that the variety of the sample is crucial to obtain a complete picture of the researched topic, which I summarise below:

Table 2: Challenges (from selected articles)

Autor	P.G. How is artificial intelligence transforming audiovisual storytelling in terms of creation, production, and reception?	P.E. 1 What are the main artificial intelligence technologies used in the creation of audiovisual content, and how are they redefining traditional narrative techniques?	P.E. 2 In what ways are artificial intelligence tools and algorithms transforming audiovisual production processes, and what are their impacts on the efficiency and creativity of production teams?
Vidal M, Freire A y López J (2023)	It inspires new themes, optimizes production, automates tasks, improves editing, and personalizes content, allowing creators to adapt their works to the audience more efficiently. These ideas are represented in productions like *Terminator* or *I, Robot*.	Machine learning, natural language processing, and automated content generation enable the development of complex scripts and characters, improve visual effects, and adapt stories to audience preferences, combining creativity with data accuracy and fostering experimentation in traditional narratives.	AI enhances editing and special effects, facilitates project management, personalizes content on streaming platforms, and helps creators adapt their productions to audience preferences, redefining the creation, production, and reception of content with greater efficiency and thematic exploration.
Igartua, Gonzaléz y Arcila 2022	Machine learning and natural language processing enhance scripts, characters, and visual effects, while AI-based automation and management increase efficiency and reduce costs. Algorithms personalize content and adapt stories according to preferences, improving the viewing experience.	Natural language processing (NLP), generative adversarial networks (GANs), and facial recognition enable the automated creation of personalized content and the generation of interactive stories, redefining traditional narrative techniques through the use of user data.	It improves efficiency by reducing time and costs. Additionally, AI opens new creative possibilities, offering tools to generate innovative content and explore new forms of audiovisual storytelling.
Verano, Guilleminot y Reichenbach (2023)	AI is revolutionizing audiovisual storytelling by enabling greater personalization in content creation, optimizing production through data analysis and automation, and enhancing reception with more accurate recommendations tailored to individual tastes.	Natural language processing (NLP), voice recognition, image and video generation, and machine learning allow for greater personalization and automation in storytelling. These technologies facilitate interactive stories and help analyze data to create more relevant and engaging content.	AI tools are transforming audiovisual production by automating repetitive tasks, analyzing large data for informed decisions, and generating personalized content. This improves team efficiency by streamlining processes and reducing costs, while fostering creativity by offering new ways to explore and experiment with storytelling.
Du Y, et al. (2023)	Allowing greater content personalization, optimizing production with data analysis and automation, and improving reception with more accurate recommendations tailored to individual tastes.	They include natural language processing (NLP), voice recognition, image and video generation, and machine learning.	They automate repetitive tasks, analyze large data for informed decisions, and generate personalized content.
Lin Y, Du H, Niyato D, Nie J, Zhang J, Cheng Y y Yang Z (2023)	It creates personalized content according to the viewer's preferences, optimizes production through task automation, and improves reception with more precise and personalized recommendations.	Natural language processing (NLP), AI-generated content (AIGC), and machine learning. These technologies redefine narrative techniques by enabling content personalization, task automation in production, and the creation of more immersive interactive experiences.	Video editing, special effects generation, and post-production. This saves time and resources, increasing efficiency in content creation. Additionally, AI provides insights and creative suggestions based on data, boosting the creativity of teams with new perspectives and approaches.
Elkhatat A, et al. (2023)	AI and machine learning accelerate the creation of scripts and plots, optimize editing and effects in production, and personalize content on streaming platforms. This reduces costs and time, improves aesthetic quality, and enhances interactivity and the viewer's experience.	Tools like GPT-3.5 and GPT-4, along with platforms like Writer and Copyleaks, accelerate script and plot creation and explore new narrative approaches. However, they face challenges in accuracy when distinguishing between AI-generated content and human text, highlighting the need to maintain academic integrity and address plagiarism.	AI tools optimize editing, special effects, and project management in audiovisual production, improving efficiency and reducing costs. They automate repetitive processes and personalize content, but face challenges in distinguishing between AI and human text, emphasizing the need to develop these technologies to balance efficiency and creativity.
Chubb J, Reed D y Cowling P (2022)	It automates content creation, optimizes production with predictive analytics, and personalizes the viewer experience with precise recommendations. These advancements enhance creativity, efficiency, and audience interaction, but pose challenges regarding control and prioritization of narratives in public discourse.	Natural language processing creates scripts and subtitles, image and video recognition facilitates analysis and categorization, and machine learning optimizes recommendations and workflows. These technologies enable rapid and personalized content creation, adapting interactive narratives to audience preferences.	It automates script generation, scene analysis, and optimizes workflows. This improves efficiency by reducing time and costs, while boosting creativity by enabling experimentation with new formats and content personalization. These advancements allow teams to innovate more quickly and better adapt to changing market and viewer demands.
Watts T y Bode I. (2024)	It offers tools to create advanced visual effects and automate creative processes such as scripting and editing. However, it also raises ethical and aesthetic challenges regarding authenticity and humanity in contemporary media narratives.	Machine learning for visual effects and postproduction, natural language processing for automated scripting and personalization, and recommendation algorithms to optimize distribution based on viewer behavior. However, these also raise questions about creative authorship and ethics in media representation.	It automates repetitive tasks such as indexing, content search, and digital asset management. It facilitates editing and postproduction through pattern recognition and the generation of advanced visual effects.

Cave S, Dihal K, Drage E y Mclnerme K (2023)	It facilitates the automatic generation of scripts and settings, optimizes production with improvements in visual effects and animation, and personalizes recommendations and accessibility in reception. These transformations redefine cinematography and present ethical and aesthetic challenges with the integration of emerging technologies.	Natural language processing for scripts, machine learning for visual effects, and AI-based recommendation systems redefine narrative techniques by automating creative tasks, exploring new styles, and adapting content to audience data, transforming audiovisual storytelling.	It automates video editing, color adjustment, audio synchronization, and special effects, accelerating production and improving technical quality. It predicts audience trends through data analysis, facilitating strategic decisions, reducing time and costs, and boosting creativity by freeing up resources for narrative innovation.
Guerini F, et al. (2017)	AI generates personalized plots through semantic attributes and planning models, optimizes video processing and modeling, and enhances the viewer experience with interactive plots using technologies such as Interactive Movietelling, although it faces challenges that require further research.	Narrative generation through AI and video processing based on semantic attributes automate the creation of alternative plots and the recombination of cinematic segments, redefining traditional narrative techniques and expanding creative possibilities.	It automates video processing and narrative generation based on semantic attributes, optimizing efficiency and reducing costs. It fosters creativity by enabling alternative and personalized plots, and facilitates experimentation with new narrative and stylistic approaches, improving adaptability to market and audience demands.
Du H, et al. (2024)	It enables more efficient and personalized creation through advanced generative models. These models, such as those studied by Du et al. (2024), facilitate the generation of content tailored to individual preferences and demands of the Metaverse.	They include advanced generative models such as Deep Diffusion Soft Actor-Critic (D2SAC) and AI-Generated Optimal Decision (AGOD) algorithms. These technologies allow for the efficient generation of diverse, high-quality content, adapting to the Metaverse and enhancing accessibility with architectures like AIGC as a Service (AaaS).	It offers advanced solutions for content generation and management. This improves operational efficiency and expands the accessibility of AI-Generated Content (AIGC). By integrating deep learning and diffusion techniques, production teams can make more informed decisions and better adapt to audience preferences, radically transforming audiovisual production processes.
De Masi y Li S (2024)	AI automates script generation, optimizes visual effects, and personalizes viewing experiences, enabling more complex narratives. It also performs predictive analysis and personalized recommendations, diversifying the film offering and enriching debates on ethics and social impact.	AI in audiovisual content creation uses natural language processing for scripts and machine learning for visual and sound effects, allowing for greater personalization and experimentation with non-linear and interactive narratives, enriching the viewer's experience.	It automates repetitive tasks such as editing and post-production, improving efficiency and reducing costs. It facilitates the creation of visually stunning content and creative experimentation through data analysis and predictive recommendations, optimizing workflows and freeing up time for innovation.
Yaguana H, Arrobo J y Rene A. (2022)	It facilitates the creation of automated content and personalized narratives based on data, optimizes post-production with advanced special effects, personalizes the viewer's experience with adaptive recommendations, and uses robotic voices in sound narration, influencing the audience's perception and the relevance of genres.	Natural language processing to automatically generate scripts and dialogues, and voice recognition and synthesis to create sound narratives with robotic voices. These tools allow for massive content personalization and efficient production of materials, dynamically adapting to audience preferences.	It automates video editing, special effects, and workflow optimization, improving efficiency and fostering creativity with new techniques. AI also analyzes data and predicts trends, providing valuable insights that enhance the quality and relevance of the production.
Encinas A (2024)	It offers advanced tools to create and produce content, exploring new narrative forms and enhancing visual effects. While it increases accessibility and interactivity, it raises ethical and aesthetic challenges regarding originality and creative authenticity.	Text generation models, neural networks for images and videos, and AI-based recommendation systems automate scriptwriting and video editing, exploring nonlinear narratives and adapting content to audience preferences, though they face challenges in originality and ethics.	It optimizes editing, special effects, and workflow automation, improving efficiency and fostering creativity. However, it presents challenges for originality and authenticity, as it may imitate existing patterns and introduce biases.
López S. (2023)	It explores new ways of creation and production, enhancing media convergence and cultural participation, but also popularizes nostalgic narratives that mimic past styles, questioning originality in the digital age.	AI technologies in audiovisual content, such as natural language processing, machine learning, and neural networks, automate creation, allow mass customization, and adapt to audience preferences.	Its impact on creativity is mixed: while it facilitates experimentation and personalization, it can also perpetuate conventions and limit innovation by favoring the imitation of styles and cultural nostalgia.
Lope V. (2019)	It automates the processing of images and sounds, improving the management of large volumes of data and opening up new creative possibilities. Additionally, by integrating neuroscientific approaches, it delves into how emotional and cognitive aspects affect the viewer's experience, optimizing content reception and impact.	Automatic processing of images and sounds, analysis of large data volumes, and machine learning algorithms for content generation and optimization. These tools redefine traditional narrative techniques by enabling precise personalization.	Facilitating the management of large file volumes and automating repetitive tasks like labeling and indexing. This improves operational efficiency and fosters creativity by offering automatic content generation and personalization based on audience preferences. These advancements allow for experimenting with new narrative techniques that were previously costly or labor-intensive to implement.
Buil P y Buil P (2023)	AI revolutionizes audiovisual storytelling by automating scripts and scenarios, optimizing production with	AI technologies in audiovisual content, such as natural language processing, voice synthesis, and data analysis, automate and	AI tools revolutionize audiovisual production by automating editing, special effects, and workflows, increasing efficiency

	better editing and effects, and personalizing recommendations and viewing experiences, increasing interactivity and immersion.	personalize production, adapting stories to individual preferences and optimizing the user experience.	and reducing costs. They foster creativity, facilitate collaboration, and allow teams to focus on conceptualizing complex ideas.
Santiago D (2023)	In production, automation reduces costs and time, but it may limit originality by repeating established patterns. In reception, these AI-generated narratives are consumed on digital platforms, fostering a nostalgic media culture that prioritizes aesthetic reproduction over genuine innovation.	Image and video generation algorithms, along with natural language processing, automate the production of content that mimics classic styles, resulting in more nostalgic and repetitive narratives without significant innovations in narrative language.	They reduce production costs and time. However, this advancement could limit creativity by replicating past styles, making production more efficient but less innovative and diverse in terms of artistic expression and narrative
Moya E. (2023)	AI automates content creation, optimizes production with advanced algorithms, and personalizes the viewer experience through recommendations and predictive analysis. While it expands creative possibilities, it raises ethical and aesthetic challenges, redefining roles and prompting reflection on its influence in the digital age.	Natural language processing, neural networks for synthetic images and videos, and machine learning algorithms enable nonlinear narratives and dynamic content adaptation, redefining narrative techniques and challenging conventional methods of media production and consumption.	Automation in video editing, color correction, and special effects improves efficiency and fosters creativity, offering new tools and facilitating remote collaboration and content personalization to meet market demands.
Franganillo J el 2022	It automates and diversifies the creation of text, graphics, sound, and video. This advancement improves efficiency and personalization, but it also carries risks such as misinformation and manipulation.	Technologies like human-like writing simulation, deepfake videos, voice cloning, and text-to-image generation are expanding creative possibilities and content personalization. However, they present significant ethical challenges in terms of misinformation, media manipulation, and privacy.	The automation of textual, graphical, auditory, and visual content improves efficiency and fosters creativity but also raises ethical and security challenges, such as misinformation and media manipulation, which demand robust regulatory frameworks.

* P.G.: Pregunta general
P.E. 1: Pregunta específica 1
P.E. 2: Pregunta específica 2

Table 3: General characteristics of the publications included

ID	Codg de Autor	Autor/Año	Título	Buscador	Idioma	Continente/país
1	1	Igartua J., González-Vázquez A., Alejandro C. 2022	Using testimonial narratives to persuade people about artificial intelligence: the role of attitudinal similarity with the protagonist of the message	WOS	Inglés	Europa/España
2	2	Varano E., Guilleminot P., Reichenbach T. 2023	AVbook, a high-frame-rate corpus of narrative audiovisual speech for investigating multimodal speech perception	WOS	Inglés	Europa/España.
3	3	Du, et al. 2023	AI-Generated Incentive Mechanism and Full-Duplex Semantic Communications for Information Sharing	WOS	Inglés	Norteamerica/Canada
4	4	Lin YJ, et al. 2023	Blockchain-Aided Secure Semantic Communication for AI-Generated Content in Metaverse	WOS	Inglés	Asia/China
5	5	Elkhatat AM., Elsaid K., Almeer S. 2023	Evaluating the efficacy of AI content detection tools in differentiating between human and AI-generated text	WOS	Inglés	Asia/Qatar
6	6	Chubb J., Reed D., Cowling P. 2022	Expert views about missing AI narratives: is there an AI story crisis?	WOS	Inglés	Norteamerica/EE.UU.
7	7	Watts T., Bode I., 2024	Machine guardians: The Terminator, AI narratives and US regulatory discourse on lethal autonomous weapons systems	WOS	Inglés	Europa/Inglaterra
8	8	Cave S., et al. 2023	Who makes AI? Gender and portrayals of AI scientists in popular film, 1920-2020	WOS	Inglés	Europa/Inglaterra
9	9	Vidal-Mestre M., Freire-Sánchez A., López-González J. 2023	The representation in Spanish cinema of AI associated with robotics: Eva and Automata	WOS	Inglés	Europa/España
10	10	Guerrini F., et al. 2017	Interactive Film Recombination	WOS	Inglés	Europa/Italia
11	11	Du H., et al. 2024	Diffusion-based Reinforcement Learning for Edge-enabled AI-Generated Content Services	Scopus	Inglés	Asia/China
12	12	De Masi V. y Li, S. 2024	La película japonesa AI Amok (2020) y el colapso de la visión realista de la IA	Scopus	Inglés	Asia/China
13	13	Lin Y., et al. 2023	Un marco unificado para integrar la comunicación semántica y el contenido generado por IA en Metaverse	Scopus	Español	Asia/China
14	14	Yaguana H., Arrobo J., Rene A.	La inteligencia artificial en la narrativa sonora:	Dialnet	Español	Suramerica/Ecuador
15	15	Arturo E. 2024	Inteligencia artificial generativa y fabulación de relatos audiovisuales	Dialnet	Español	Europa/España
16	16	López Delacruz, Santiago. 2023	audiovisual narratives generated by artificial intelligence, between pastiche and cancellation of the futures	Dialnet	Español	Suramerica/Uruguay
17	17	Lope V. 2019	Retos para la investigación audiovisual con la inteligencia	Dialnet	Español	Europa/España

			artificial			
18	18	Buil, Pedro. 2023	Narrativa audiovisual y espectrogramas	Dialnet	Español	Europa/España
19	19	Eva Moya Losada 2023	Libertad de pensamiento e inteligencia artificial automatismos y generación de pensamiento	Dialnet	Español	Europa/España
20	20	Jorge Franganillo. 2022	Contenido generado por inteligencia artificial oportunidades y amenazas	Dialnet	Español	Europa/España

Description of Table 3: Manual filters were implemented both for the 1,003 articles identified and for the eligibility criteria of the present research (n = 788), as well as to eliminate duplicate research (n = 399). However, the naming and degree of consistency of publications was considered (n = 385), ultimately eliminating disclosures that did not include the study methodology (n = 361). This resulted in 20 articles for review, as shown in Table 1.

According to the data collection in Table 3, recent research (2019-2014) on AI and audiovisual narratives, are mostly concentrated in Europe, exactly in countries such as England and Spain. In contrast to Latin American countries, since fewer publications are found coming from these states. These data mark the notable gap in the application of technology from both economic and cultural contexts, as we can relate this issue to the advantage that Europe has with technological resources and its stronger scientific culture.

Table 4: Main artificial intelligence technologies used in the creation of audiovisual content

AI Content Generation	**Automated Editing**	**Creation of Avatars and Virtual Characters**	**Music and Sound Generation**	**Content Analysis and Personalization**
Text to Image/Video Generation: -DALL-E -Midjourney	**Video Editing:** -Adobe Premiere Pro (Adobe Sensei) -Magisto	**Deepfakes and Video Synthesis:** -DeepFaceLab -Synthesia	**Music Composition:** -AIVA (Artificial Intelligence Virtual Artist) -Amper Music	**Personalized Recommendations:** -Netflix -YouTube
Script Creation: -GPT-4	**Color Correction and Postproduction:** -DaVinci -Resolve (Blackmagic Design) -Colorlab AI	**AI-Based Animation Systems:** -Reallusion iClone -Eisko (FACS - Facial Action Coding System)	**Sound Design:** -Endlesss -Sonantic	**Audience Analysis:** -Crimson Hexagon (ahora parte de Brandwatch Audiense)

Description of Table 4: Redefining Traditional Narrative Techniques

- *Interactivity and Participation: AI enables the creation of interactive and adaptive content, where user decisions can influence the development of the narrative, offering more immersive and personalised experiences.*
- *Non-Linear Narratives: With the ability to generate multiple versions of a piece of content and adapt them to different audiences, creators can explore non-linear narrative structures that offer new ways of storytelling.*
- *Efficiency and Creativity: The automation of repetitive tasks allows creators to focus on more creative aspects of the work, exploring new forms of storytelling and experimenting with innovative styles and techniques.*

The integration of AI into audiovisual storytelling is opening up new opportunities for narrative innovation, allowing creators to explore ways of telling stories that were not possible before and redefining how narratives are produced and consumed.

Table 5: Transformation of Audiovisual Production through Artificial Intelligence: Tools, Transformations and Impacts

Category	Tools/Algorithms	Transformations in Audiovisual Production	Impacts on Efficiency and Creativity
Automation of	Adobe Premiere Pro (Adobe	Automated video editing.	Reduction in time and effort.

Repetitive Tasks.	Sensei), Magisto, DaVinci Resolve, Colorlab AI	Automated color correction.	Increased speed in postproduction.
Content Generation and Animation	DeepFaceLab, Synthesia, Reallusion iClone, Eisko	Creation of avatars and deepfakes. Realistic character animation.	Simplification of visual effects. Reduced need for human animators.
Composition and Sound Design	AIVA, Amper Music, Endlesss, Sonantic	Automated music composition. Generation of synthetic effects and voices.	Customization of soundtracks. Reduction of extensive recordings.
Content Analysis and Personalization	Netflix, YouTube, Crimson Hexagon, Audiense	Personalized recommendations. Audience reception and behavior analysis.	Improved viewing experience. Quick adjustments in content strategies.

Description of table 5: Artificial intelligence is transforming audiovisual production by automating tasks such as editing and colour correction, simplifying the creation of avatars and visual effects, and personalising music and sound. These innovations increase efficiency by reducing time and costs, while expanding creative possibilities, allowing users to explore new narratives and styles with greater agility.

4. Conclusion

It is concluded that the development of audiovisual narratives in the context of artificial intelligence (AI) represents an exciting and complex challenge. Although AI offers new possibilities for audiovisual creation, its integration must be handled with caution in order to maximise its effectiveness and acceptance by the audience. Therefore, the following key recommendations for researchers, creators and regulators are drawn from a review of the literature on the transformation of audiovisual storytelling in the age of artificial intelligence:

Strategic Integration: AI, like ChatGPT, should complement human creative writing, preserving authenticity and innovation in audiovisual storytelling.

Fostering Innovation: It is essential that AI is used to create original aesthetics and not just replicate past styles, driving the evolution of audiovisual language.

Methodological Update: Research must incorporate neuroscience and adapt to technological advances to analyse emotional and cognitive interaction in the audiovisual experience.

Exploring Sound and Music: Sound and music must be carefully designed to enrich the narrative and cultural imagery associated with AI.

In short, for AI to effectively transform audiovisual storytelling, strategic integration, an innovative and ethical approach, and collaboration between researchers, creators and regulators are vital. For AI evidently has the potential to transform audiovisual storytelling in significant ways. Whose integration must be careful and strategic, complementing human creativity and not surpassing it, ensuring an ethical and reflective approach that promotes innovation and social welfare. The challenge ahead is to achieve the collaboration between researchers, creators and regulators that is essential to maximise the benefits of AI in audiovisual storytelling and to address the ethical and social challenges of these technologies in a changing and evolving society.

The development of AI in audiovisual storytelling varies by region and industry type. In North America, directly in Hollywood, it is used to optimize production, personalize and reduce costs, although concerns about employment arise. In Europe, the use of AI faces strict regulations, based on a balance between innovation and cultural protection, while in Asia, most notably in China and Japan, it is implemented for efficiency and massive content creation, based on a state-controlled approach. In Latin America, although its use is more limited by infrastructure, AI provides opportunities to democratize audiovisual production, and poses challenges to cultural homogenization. Overall, AI is transforming narratives, but its uptake reflects a diversity of approaches and ethical concerns, depending on the regional context.

Considering the ethical implications of audiovisual narratives in the age of AI highlights the need for accountability and transparency in all algorithmic processes, as well as the promotion of

diversity and inclusion to avoid the perpetuation of bias. It is important to address how AI could influence cultural and social representation, altering how societies interact and how their stories are told. In addition, care over copyright and intellectual property becomes necessary, due to advances in AI that may challenge traditional norms of authorship. It is crucial to address these issues responsibly in order to balance technological innovation with human values.

5. Ethical Considerations

During the research, the author's rights were respected, both printed and digital bibliographic material was consulted, and the information was collected anonymously (numeral 2.1, 2.2 and 2.3.3.3 of the National Code of Scientific Integrity CONCYTEC-2019). The current review has considered the criterion of respectability of the subjects in the sample, as the article aims to provide a response to the stated objectives (numeral 2.3.2 and 2.3.4. of the National Code of Scientific Integrity CONCYTEC-2019).

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