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THE USE OF AI IN THE CREATION OF TRANSMEDIA ADVERTISING CONTENT: THE CASE OF THE ARTISTIC SECTOR

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ABSTRACT

Introduction: This study examines the use of artificial intelligence (AI) in transmedia advertising campaigns within the artistic field, focusing on how museums and galleries utilize AI to create interactive and automated narratives that enhance user experiences through immersive technologies such as augmented reality (AR) and virtual reality (VR). The objective is to evaluate the impact of these tools in creating customized and engaging content. **Methodology:** A systematic review of the literature on AI in transmedia advertising was conducted, alongside case studies of museums and galleries that integrated AI on platforms like social media, AR, and VR. The main focuses were identifying key factors, defining actionable steps, and detecting replicable elements. **Results:** Findings show that AI has increased user engagement by personalizing experiences and adapting advertising narratives. However, challenges such as ethical boundaries in automation and the potential loss of human creative control were also identified. **Discussion:** While AI proves to be an indispensable element in transmedia advertising, it is essential to balance it with human creativity to ensure that campaigns remain authentic and meaningful. Additionally, addressing ethical risks and establishing clear boundaries for its implementation is crucial. **Conclusions:** AI holds significant potential to transform transmedia advertising in the artistic sector, but its implementation must be carefully managed to preserve human creativity and ensure that experiences remain inclusive and genuine for audiences.

Keywords: Artificial Intelligence; transmedia; virtual reality; art; advertising.

1. INTRODUCTION

Artificial Intelligence (AI) presence in the advertising field is already a fact (Blanco et al., 2024). The changes and consequences of its application in the strategic planning process are evolving at a faster pace than expected, establishing a paradigm shift in the creation, development and implementation of advertising campaigns. This is causing a noticeable impact (Fernández, 2023) and some concern about the future role of the human being in the process (Mir, 2023).

The convergence of different digital technologies (AI, the Internet of Things, 5G networks, etc.) is presented as the natural step in the future evolution (Fernández Marcial & Estévez, 2022). In this scenario, the transmedia narratives established in the advertising field and, in parallel, in the cultural field are considered a cultural phenomenon characteristic of the era of convergence, according to which substantial elements of a narrative fiction are systematically disseminated along different channels, in order to promote a unified and coordinated reception experience, where each medium makes a unique, distinctive and valuable contribution to the development (Jenkins, 2006).

In this phenomenon, AI and other technologies converge, such as Augmented Reality (AR), which overlaps physical objects and places with virtual content; Virtual Reality (VR), which deals with the manipulation of and the interaction with virtual objects within a virtual environment; or Extended Reality (XR), an integral term for environments that combine the physical and the virtual worlds or provide immersive virtual experiences (Bojórquez, 2022).

This is the starting point that justifies the interest of the proposed study. Turning to the field of the Cultural Industry and, more specifically, the artistic sector (considered by definition to be innovative and early adopters), it can be seen that the application of these technologies to transmedia narratives has been anticipated, and they can be considered pioneers in their use (Flores, 2023).

Nowadays, it is increasingly common to find a wide range of cultural activities around exhibitions, in which digital content is intertwined. The dissemination of these activities is generally carried out through the museum's own website in a clear search for connection with the potential audience. This represents an evolution in the creation and dissemination of content towards a new museum model that makes use of other channels beyond the exhibition space itself, applying the concept of transmedia that pursues interaction, seeking a more complete experience (Rodríguez et al., 2018).

The importance of these initiatives has led to the development of specific research in the academic field. Starting with the impact of social networks in the cultural field (Río Castro, 2011; Gómez Vilchez, 2012; Forteza Oliver, 2012; Claes & Deltell, 2014; 2019), transmedia communication has been definitively achieved (Pérez Ibáñez, 2018; García Orozco, 2021), being the case study one of the most frequent methodologies applied in these analyses (Cordón & González, 2016; Caerols-Mateo et al., 2017).

However, in this case professional experience seems to be advancing faster than academia, with complete manuals on transmedia management in general (Scolari,

2014) or on specific issues such as the application of AI (Murphy & Villaespesa, 2022), identifying the existence of a concept of "digital" Museum (Moreno Sánchez, 2013) and specific digital narratives for museums (Rodríguez Ortega, 2011).

Finally, in addition to the issues related to the implementation of technologies in cultural campaigns and the possible improvements that these technologies seem to bring in terms of interest, one can further include aspects linked to changes in the basic communicative model, by presenting the possibility that the audiences themselves become " reporters, commentators, disseminators, active participants in an ongoing event that they contribute to create and tell" (Rodríguez Ferrándiz and Peñamar, 2014). This implies that the approach to transmedia campaigns in cultural contexts requires valuing the existence of a consumer-audience (Schmilchuk, 2012) that interacts, engages and creates (Carreras et al., 2005) and that must be managed strategically (Oliveira & Capriotti, 2013).

The approach to our field of research makes it clear that a complex scenario is in front of us in terms of the elements to be analyzed. For this reason, an initial and structured description of the elements that will be relevant to this study will be made. One of the main concepts needed to be established is that of Artificial Intelligence. AI is a general term, not a single technology, which is defined as the set of algorithms that simulate human intelligence, mimicking behaviors such as self-learning and decision making. This simulation of human intelligence allows something that is inherent to human beings, that is, to react and act in a flexible and natural way to the different stimuli of the environment (Fernández Marcial & Esteves, 2022).

Likewise, and due to the AI application approach under analysis, it is mandatory to address the concept of Transmedia Storytelling (Transmedia Storytelling). This is a concept that has a strong presence among researchers working in Media Studies, at the crossroads between narratives in traditional media -in the form of novels, films, television programs, comics- and in new media -such as video games, webseries, mobisodes and other written or audiovisual formats for the web- (Rodríguez & Peñamar, 2014).

It is in this context that the last key concept emerges augmented advertising. This is understood as a multisensory reality through which concepts are perceived and expressed. This advertising communication system, based on augmented reality technology, integrates interactivity and new expressive media such as sounds, animations, juxtapositions, virtual and mixed reality, and it intends to produce a higher degree of immersion than traditional advertising (Puentes & Bohórquez, 2019). All this highlights the existence of an evolution in the creation and dissemination of content towards this new museum model whose analysis and in-depth study is the subject of this study.

2. OBJECTIVES

The main objective is to analyze the impact of technological tools in the creation of transmedia content by artistic entities, understanding their possibilities and evaluating their capacity to generate more attractive, personalized and effective advertising campaigns.

This implies that, as secondary objectives, it is necessary to develop the following lines of research:

a) To analyze how AI helps in the creation of interactive narratives adapted to diverse audiences.

b) To examine the use of AR and VR in museum advertising campaigns, with the support of AI, to improve user experience.

c) To identify success drivers and ethical challenges in the implementation of AI in the arts sector.

3. METHODOLOGY

The proposed research project is based on several phases. The first phase is limited to a bibliographic and hemerographic study that makes it possible to determine the state of the art and address some of the main concepts that are fundamental to the object of study. In the second phase, a fieldwork is developed which provides a database of twenty cases of use of technological resources in the communicative activity of museums and art galleries in the period 2010 - 2024. This fieldwork provides an insight into the reality of the application of technologies in the field of museums and galleries and enables the development of a taxonomy in relation to the objectives, results and most used technologies. Finally, in the third phase, as the main results of this study, a Classification Model for AI in Museums is provided, which is intended to be used as a support tool for future research in the field of ICCS.

3.1. Phase 1. Definition of the state of the art

As stated above, it is necessary to carry out a systematic review of the existing bibliography on the object of study. The purpose of this process is twofold: to establish the existence or not of previous studies and to define the elements that should be taken into account when carrying out fieldwork.

a) AI and customized advertising

The current saturation of markets, not only in media advertising, but also in the offer of similar products to meet specific demands, has led to the search for new ways to get the attention and preference of potential consumers (Sábada, 2012). The Theory of Customization in Marketing is an approach that takes into account the diversity and uniqueness of consumers and seeks to adapt marketing strategies to meet their individual needs. This theory is based on the premise that consumers become more responsive to messages and offers that are customized to their preferences and behaviors (Rivera-Montaño, 2023).

AI in marketing is driving a new era based on customization, enabling companies to deliver a unique experience for each individual customer (Li et al., 2022) as well as collect and analyze data in real time, making it easier to quickly adjust strategies in favor of maximizing their effectiveness (Verhoef et al., 2015). AI in customized marketing contributes to an enhanced customer experience by delivering relevant and personalized content, entities increase satisfaction and strengthen emotional connection (Peltier et al., 2020).

When analyzing large data sets, AI can identify patterns and trends specific to each consumer. In addition, it can constantly learn and adjust strategies as more data is collected. Successful implementation of customization in marketing therefore requires not only the collection and analysis of data, but also creating a consistent and relevant experience across all customer touch points. This would be where AI would contribute by monitoring customer behavior in real time and making algorithm-based decisions to adjust content. This includes everything from ad customization to the creation of personalized landing pages in addition to one-to-one customer service (Navarro del Toro & Aguilar Carvajal, 2023).

b) AI in museums and galleries

Museums and galleries have been exploring and pioneering the application of AI in their exhibition spaces for years, with a clear focus on improving the user experience. Reference publications are available (Eve Museos e Innovación, 2024) and authors such as Hufschmidt (2023) analyze from a global perspective the use of AI in this environment, delving into the motivations, objectives and challenges associated with its implementation. They also work on case studies, aiming to guide AI in current and future practices and have compilations of the main technologies used, creating maps of AI in museums (Hufschmidt, 2023).

The application of AI in museums is wide and diverse. Surveys and other research methodologies have revealed the results of a multitude of AI projects that seek to: better understand visitors, develop new experiences through chatbots and other applications, systematically address the museum database, or preliminarily explore changes in museum work (Thiel & Bernhardt, 2023).

c) AI and transmedia narrative in museums and galleries

The needs required by the exhibitions themselves to bring the different works closer to visitors require not only creativity and optimization of space but are also nourished by their own innovative nature of multiple elements. Therefore, museums can be understood as transmedia realities and worlds themselves (Rodriguez et al, 2018). The development of AI and the irruption of algorithms therefore contribute to the development of transmedia narrative in this context (Terranova, 2017).

d) Impact of AI on cultural campaigns and content

Impact and influence data on cultural audiences lead to AI-driven transmedia narratives and advanced technologies in museums. In the study developed by Yaoyuneyong et al. (2016), which compared consumer response to ads involving technologies such as traditional print ads, quick response hypermedia (QRH) print ads and augmented reality (ARH) print ads, the results showed that there was a preference for the ARH print ad, as it provides more information, novelty and effectiveness; the QRH print ad, on the other hand, caused irritation; and the traditional one led consumers to invest more time in reading and understanding it. These issues (attitude, attention, irritation, comprehension, innovation and effectiveness) make it possible to evaluate the high impact of including technology and the development of transmedia narratives in museums.

The result is particularly noteworthy in this environment for several reasons. The research by Feng and Mueller (2018) made evident a number of distinctive features that are related to the places in which augmented reality technology is implemented in advertising campaigns. The authors notice a significant difference, not in the processes of immersion in the applications, but in the possibilities of modifying the interaction with the application to obtain individual results, determined by the cultural contexts in which the messages are disseminated.

3.2. Phase 2. Fieldwork

In the second phase, fieldwork is carried out to identify specific cases of technology application in museum or art gallery campaigns. Our approach is established in the period from 2010 to 2024, carrying out a search process that matches in time with the evolution of the analyzed technologies and that, in addition, can corroborate the pioneering character of the ICCS regarding the adoption of these resources. In addition, the selected campaigns are those that use some of the resources indicated in paragraph 1.3. of the article, opening the focus to international entities.

The search carried out yielded the cases shown in Table 1. When compiling the cases, the main aspects of each campaign, its objectives and results in terms of improving the experience have been analyzed. Given the basic research objective, special mention has been made of the technologies used in each of the cases.

The analysis and study of real experiences allows us to learn lessons that can be replicated. Approaching the progress made, understanding the benefits and risks of the application of these technologies in the museum's different communication channels, is a way to understand the current scenario. A scenario that, it can be said, has even more potential.

The analysis includes data such as the year, the museum or entity, the main objectives, the technologies being applied, the key or outstanding elements and the results. The first three items of analysis are merely identifying, presenting, as the fourth item, the objectives of the communicative actions. This item allows us to understand the main purposes and motivations that explain the use and usefulness of advanced technologies in the museums and galleries under study. In addition, a taxonomy of the

main drivers of the application of technologies to the exhibition spaces has been made and included in the corresponding legend. It should be noted that the most repeated objectives in the twenty cases analyzed are 4, focused on improving the overall experience in the museum, and 7, focused on visibility, reputation and attracting audiences. AI and other advanced technologies are an attraction for audiences, increase the reputation and visibility of the museum, especially when applied to improve the overall museum experience.

The fifth section of the analysis refers to the technologies being applied. On this occasion, given the number of elements and typologies of technologies detected, a system of labels is incorporated (in the legend) that are linked to each type of technology. It is worth remembering that the development and implementation of AI in museums is in its initial stages, but technologies such as VR and AV have a longer implementation path. It can be stated that these two technologies, usually combined, have been the predominant technologies in improving the overall museum experience over the last fourteen years.

The sixth aspect of analysis focuses on the key elements and highlights. This refers to those milestones that represent by themselves insights that can be replicated in the future. These elements range from interactive devices designed specifically for the museum, to timelines or historical tours thanks to technological applications.

The seventh and last field of study refers to the results, the impact of AI and other technologies. Here again a taxonomy of objectives is used, since they are, per se, the results of the technological application. The main finding is that in most cases the results of the application of technology in museums have been more than expected. Being 7 (visibility, reputation and attracting audiences) the most repeated, present in 18 out of the 20 cases analyzed.

Table 1.

IA Cases and Museums (2010-2024).

Caso	Año	Museo	Objetivos	Tecnologías	Claves	Resultados
1. Institut Catalá de Paleontología	2010 2013	Institut Catalá de Paleiontología	1	RV, 3D, APP	3D Virtual LAB. Espacio para la Digitalización	1, 2, 5, 7
2. Expo: Pensar con las manos. P. Carrió & I. Ferrer	2013	Sala Josep Renau. F.BB.AA UPV	2	AV, DP, APP	App Libro Interactivo 'Abierto todo el día'	2, 4, 5, 7
3. The Pen	2015	Museo Cooper Hewitt	3, 4, 5	DP, SG, WP, APP	Bolígrafo inteligente. El usuario recoge destacada	3, 4, 5, 7
4. Grimwelt Kassel	2015	Grimwelt Kassel	4	PRY, NT	Combinación entre los histórico y lo actual	4, 5, 7
5. Expo: Ana Juan	2015 2017	Museo ABC	2	AV, NT, RV	Album interactivo, Videojuego	1, 2, 4, 5, 7
6. Friedland Gate Museum	2016	Friedland Gate Museum	4	NT, PRY	Combinación entre los histórico y lo actual	4, 5, 7
7. EXPO: Piedad y terror en Picasso	2017	Museo Nacional de Arte Reina Sofía	4	NT	Actividades 360º Transmedia.	7, 4, 5
8. Tecnorevolución	2017	Obra Social La Caixa	2	IA, IA GEN, RV, AV, SG	Instalación Exterior Itinerante	4, 5, 7
9. David Bowie Is	2017	Muso del Disseny BCN	1, 7	3D, AV, PRY	Objetos físicos y recreaciones virutales	1, 7
10. Björk Digital	2017	CCCB	4, 5, 7	RV, NT, PRV, 3D	Album Interactivo Biophilia	4, 5, 7
11. Espacio Realidad Virtual Fundación Telefónica	2017 2024	Fundación Telefónica	5	RV, AV, SG	Dispositivos y Experiencias Inmersivas	3, 4, 5, 7
12. Accesibilidad e IA	2019	Metropolitan Museum of Art	2, 6	IA GEN	Sistema de Etiquetado de Obras Sofisticado	2, 4, 5, 7
13. Digitalización Global	2020	Museo Nacional del Prado	6	IA, IA GEN, NLU,NLP, AV	Línea del Tiempo y Conexión entre las obras	6, 4
14. National Gallery Experience	2020	National Gallery	4, 6	IA, MP	Analítica predictiva	2, 3, 4, 7
15. The Intelligent.Museum	2020	ZKM-Centro para el Arte y MM.CC.	2, 3	IA, RV, AV, NT	Centro especializado en el arte tecnológico	2, 3, 4, 5
16. Unsupervised	2022	MOMA	7, 1	IA GEN, IA NS, SG	Primera Obra infinita de IA NS. Se adapta al entorno	7, 1
17. Pokemon y Van Goh	2023	Van Goh Museum	7	3D, RV	Mix Entretenimiento y Cultura	1, 7
18. UnArtificial Art	2023	Museos de Viena	7	IA GEN,	Aplicación en la producción	7, 1
19. 25 Aniversario Guggenheim	2024	Museo Guggenheim	2, 4	IA GEN, RV,TS, MV, AV	Artetik. Grado del Conocimiento	4, 7, 5, 6
20. Ask Dalí	2024	Museo Salvador Dalí	7	IA, IA GEN, NT, RV	The Lobster' elemento de comunicación con Dalí	7, 4,5

LEYENDA		
OBJETIVOS Y RESULTADOS	**TECNOLOGÍAS**	IA GEN = IA Generativa
1. Innovación y progreso.	RV = Realidad Virtual	NLU = Comprensión de Lenguaje Natural
2. Accesibilidad	AV = Realidad Aumentada	NLP = Procesamiento de Lenguaje Natural
3. Personalizar la experiencia	3D = Imágenes tridimensionales	MP = Modelos Predictivos
4. Mejorar la experiencia globa	DE = Dispositivo electrónico	IA NS = IA No Supervisada
5. Interacción y participación	APP = Aplicación Móvil	RV = Reconocimiento de Voz
6. Agilizar procesos	PRY= Proyecciones Gran Formato	TS = Traducción Simultánea
7. Visibilidad, notorierdad y cap	SG = Smart Gadgets - Dispositivos	MV = Metaverso
	NT = Narrativas Transmedia	WP = Web Personalizada
	IA = Inteligencia Artificial	

Source: Elaborated by the authors

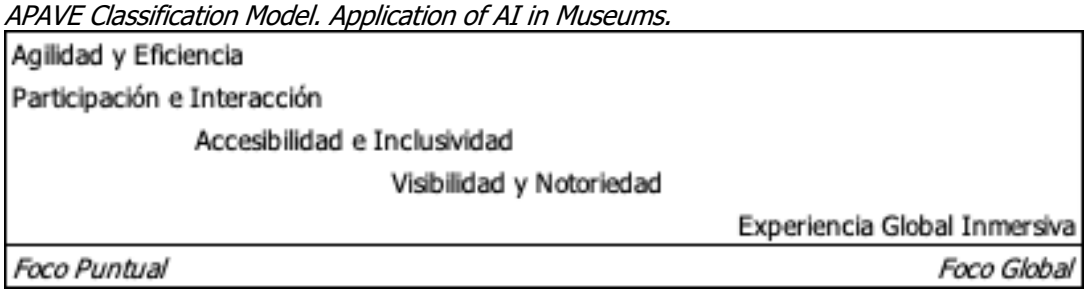
Finally, and in general, it should be noted that, although it has not been exposed as a field of analysis, the presence of technology in museums and galleries is a global fact, as it can be contrasted with the cases collected in our inventory. However, most of the cases are of European and U.S. origin.

4. RESULTS

The analysis of the cases that were identified in the previous section has made it possible to classify the fundamental lines of action, thus creating a Classification Model for AI in Museums that identifies the main areas of application. The model presented here not only includes the main trends and lines of application of AI and advanced technologies in exhibition spaces, but also classifies them according to the application approach, distinguishing between Point Focus trends and Global Focus trends. The former involve specific and tactical applications to the museum or gallery with a specific objective. The latter keep a global and integral approach, understanding the exhibition space, identifying opportunities for the application of the aforementioned technologies to the overall experience in the museum or gallery.

Figure 1.

APAVE Classification Model. Application of AI in Museums.



Source: Elaborated by the authors.

Below, the five lines of action included in the APAVE Model will be discussed in more detail, with the aim of identifying the key elements of each of the action trends in the application of AI and other advanced technologies. In addition, reference will be made

to the main paradigmatic cases of each of the trends, which will make it possible to illustrate and exemplify each focus of action.

Agility and Efficiency: agile and efficient museums

The main focus of most of the literature consulted is on streamlining processes and saving time at all levels of implementation. In most cases, the focus of technological action addresses in a precise or tactical way some of the main processes carried out by the museum, which allows improving its agility and efficiency. The ability to deal with huge amounts of data, label and classify them, and draw analytical and predictive conclusions are some of the main advantages of the application of technologies to the usual processes of museum and gallery management. Reducing time in the preparation of the visit, the reservation and sale of tickets and guided tours, even the knowledge about the preferences and cultural tastes of the audiences allow museums and galleries to be more agile and efficient and adapted to the needs of visitors.

The progressive technological improvements made at the Prado Museum in recent years are an outstanding example of museum practices in this regard. The major milestone has been the digitization of the works and the creation of a timeline that has allowed not only to connect works with each other, but also to improve the labeling of the pieces and increase the level of understanding the works that can be experienced by the user, even before visiting the museum.

Engagement and Interactivity: interactive museums

The traditional model of museums, which were a barrier to access to culture per se, is being overcome by exhibition proposals and museum projects that place the user at the center. The first experiences of this technology application approach are focused on improving certain aspects or spaces of the museum, favoring user interaction in a tactical way, progressively advancing towards a more global and integral approach. The experiences that are offered seek the visitor's engagement, interaction with the contents, the transformation resulting from having accessed the contents of the exhibition and the experience beyond the actual visit to the museum. This focus on what is tangible and experienced based means a new reason to visit the museum, a new advertising appeal.

The Fundación Telefónica's Virtual Reality Space is a paradigmatic example of this trend. In all areas and elements of the exhibition space, the focus is on the visitor and on encouraging them to engage and interact with the elements. VR and AV are allied in this space that could be understood as a laboratory for museums and galleries, where the visitor co-creates with the elements of the exhibition for his own exhibition experience.

Accessibility and Inclusivity: accessible and inclusive museums

The special needs demanded by many users, which in the past meant their direct exclusion from museum and cultural spaces, have become another major focus of action which, with the advent of technologies such as AI, have made significant progress.

In the beginning, accessibility was focused on physical aspects, but an attempt is being made to gradually apply accessibility and inclusivity to all spaces (physical and digital) in the museum.

Occasionally, the difficulty of access is due to the conditions of the works themselves. In this case, new technologies have brought definitive advances, allowing the exhibition and access to these works in a new, simple and interactive way. These are aspects that would be completely impracticable without the direct application of technologies such as Augmented Reality or Virtual Reality.

Examples such as those presented in the cases of the exhibition *Pensar con las Manos* (Thinking with our Hands) by Pep Carrió and Isidro Ferrer at the Polytechnic University of Valencia, or the Ana Juan Exhibition at the ABC Museum, shows how technology becomes an ally for accessibility, interactivity and the overall improvement of the experience. Mobile devices, interactive books and albums as well as the gamification logics of video games, turn access to works of art into a unique and immersive experience.

Visibility and reputation: museums that become news

In many of the cases under study, museums and galleries understood that the use of technologies (especially AI) was a newsworthy event per se. Today, AI is making headlines and attracting the attention of all kinds of audiences and publics. This fact becomes the main reason that invites museums and galleries to innovate and experiment in some of the phases of their value chain. In these cases, the use of AI has a global impact for the museum, influencing aspects as relevant as the attraction of new visitors. In this case, the risk of opportunistic or inappropriate use of technological resources should be mentioned, turning the positive opportunities of technology into elements with non-cultural purposes.

In any case, it is worth mentioning positive cases such as the 25th Anniversary of the Guggenheim (19) where several technologies were applied by launching an extensive process of turning the museum into a digital and technologized facility. The impact and reputation that was achieved led to a direct increase in the number of visitors and the significance of the museum in the media all over the world.

Immersive experience: comprehensive museums placing the visitor at the center of the experience

The interest of museum spaces and galleries has been focused, for some time now, on improving the experience as an attraction on its own. The curation of exhibitions, the selection of artists, the distribution of each exhibition project in the space, among others, have been processes of special care. The global perspective of this trend is evident since; by placing the visitor at the center of the experience, an integral impact is achieved in the museum context.

Cases such as the Friedland Museum Gate (6), the exhibition at the Museo Nacional de Arte Reina Sofía *Piedad y Temor en Picasso* ("Pity and Terror in Picasso") (7) or the technological innovations implemented at the Prado Museum (13) or the Guggeheim

Museum (19) in recent years are examples of the relevance of the experience itself in attracting visitors.

As the technologies at hand have entered museums, the possibilities for improving the experience have focused on issues that affect customization. Technologies make it possible to know the expressed needs of each visitor, their tastes, preferences and cultural behaviors, and are enabling the customization of the experience to very detailed levels. The case of the Intelligent-Museum is particularly illustrative in this regard, where the user experience is inclusive and adapted to the maximum thanks to the inclusion of smart devices in the physical spaces of the museum.

5. CONCLUSIONS Y DISCUSSION

The research process has provided a series of results of great interest in our field of study. Both the field work, the study of the twenty selected cases, as well as the creation of the APAVE Classification Model, summarizing the focuses of application of AI in Museums, have confirmed the fact that the technologies applied in the management of cultural entities and in their communicative proposals have allowed an increase in user engagement and an overall improvement of the experience.

This increase in engagement has its fundamental axis in the customization of experiences in AR and VR thanks to AI and includes a significant saving of resources by allowing greater efficiency in the creation of content and the development of certain recurring processes. The cases under study show a remarkable impact of AI on cultural activity and it could even be said that it confirms a complete change in the way advertising campaigns are developed in this sector. AI allows museums and galleries to connect with specific audiences and adapt experiences according to the data obtained on user preferences and behavior.

However, these data should not divert attention from the fact that the evolving use of these technologies poses significant challenges, especially related to the ethical limits of automation and the potential loss of creative control by humans. Added to this there are issues such as privacy concerns, algorithmic bias (involving cultural biases) or standardization.

This is not to mention issues related to the unchecked or unmotivated use of technology just for the sake of the newsworthiness that technologies such as AI pose today. This requires that museums and galleries must work on the development of proposals that employ AI in a responsible way, considering inclusivity and cultural representativeness in their campaigns and establishing a necessary balance between AI and human creativity.

Indeed, the importance of human creativity is, if possible, even more important in the context of cultural industries and the artistic field, where the authenticity of the creator's vision is crucial. It should not be forgotten that museums and galleries are presented as cultural entities that not only seek to attract audiences but also work to improve the cultural experience as a social responsibility of these organizations.

Finally, it should be noted that AI has great potential to transform transmedia advertising in the arts sector, but its implementation must be carefully managed to preserve human creativity and ensure that the experiences remain genuine, inclusive, representative and meaningful to the audience. Our research aims to provide the cultural sector in general, and the museum and gallery sector in particular, with strategic lines that contribute to the implementation of AI in an effective way from both a creative and ethical point of view. The development of the proposal brings to the table possible avenues for future research that would examine, in more depth, the ethical and creative issues that have emerged at this stage.

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