From virtual to real: the relationship between video games and tourist destinations

Do virtual ao real: a relação entre videojogos e destinos turísticos

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Abstract

This paper intends to examine the potential interconnections between two distinct domains: tourism and video games. The primary objective is to ascertain whether there is a relationship between these two areas and to determine the extent to which video games may promote tourist destinations. In light of this, an attempt was made to comprehend the geographical element present in video games, as well as the historical and cultural recreations represented. Finally, this essay aims to gain further insight into the extent of public participation in gaming-themed events and attractions. The findings of this study were obtained through a questionnaire to video gamers. The findings of this study indicate that video games exert a direct influence on both tourism and individuals. The results of this investigation also corroborate the hypothesis that the geographical and historical/cultural references included in video games ultimately serve to promote tourist destinations. The results also corroborated the hypothesis that video games influence people's preferences, which could result in some destinations featured in video games being visited instead of other destinations that are not included. Furthermore, it can be asserted that gaming events are a category of events that not only attract large crowds but also have a positive impact on the services (restaurants, accommodation and attractions) in the vicinity. Finally, the results indicate that video game-themed attractions are well-received by the surveyed population.

Keywords: Leisure. Tourism. Destinations. Video games.

Resumo

Este artigo pretende analisar as potenciais interligações entre dois domínios distintos: o turismo e os jogos de vídeo. O objetivo principal é verificar se existe uma relação entre estas duas áreas e determinar em que medida os jogos de vídeo podem promover destinos turísticos. Neste sentido, procurou-se compreender o elemento geográfico presente nos jogos, bem como as recriações históricas e culturais representadas. Por último, este ensaio visou obter mais informações sobre o grau de participação do público em eventos e atrações com a temática dos jogos. Os resultados deste estudo foram obtidos através de um questionário aplicado a jogadores digitais. Os resultados deste estudo indicam que os jogos de vídeo exercem uma influência direta tanto no turismo como nos indivíduos. Os resultados deste inquérito corroboram a hipótese de que as referências geográficas e históricas/culturais incluídas nos jogos servem, em última análise, para promover destinos turísticos. Os resultados também corroboram a hipótese de que os jogos influenciam as preferências das pessoas, o que pode fazer com que alguns destinos apresentados sejam visitados em vez de outros destinos que não estão incluídos. Além disso, pode afirmar-se que os eventos de jogos correspondem a uma categoria de eventos que não só atraem grandes multidões, como também têm um impacto positivo nos serviços (restaurantes, alojamento e atrações) nas proximidades. Por fim, os resultados indicam que as atrações temáticas relacionadas com jogos de vídeo são bem recebidas pela população inquirida.

Palavras-chave: Lazer. Turismo. Destinos. Videojogos.

1. Introduction

Leisure can be understood as a set of contemporary events that are directly opposed to the term work (Gomes, 2014). Furthermore, leisure is antithetical to the routine obligations of human societies. Nevertheless, what is the true significance of this term in contemporary societies? As Bramante (1998) posits, this concept is of vital importance, influencing not only the phenomenon of socialisation but

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also shaping our perception of the concept of freedom and free will. In addition, another fundamental aspect of leisure is its potential to contribute to economic growth, in conjunction with the tourism sector (Nadais & Santos, 2012).

The ideas presented in this article emphasise the importance of understanding how a preconceived or informed image can influence our perception of tourist destinations. In general, an image constitutes a fundamental element in the decision-making process when selecting a tourist destination and subsequently purchasing a trip (Pike, 2004; Silva, 2021). The selection of various tourist destinations has been extensively analysed, and push and pull factors have been identified to comprehend the motivations and preferences of tourists and visitors when it comes to travelling (Gartner, 1994; Pais, 2015; Silva, 2021). In addition to influencing the behaviour of tourists and visitors when selecting and purchasing a destination or trip, images also play a significant role in the success of the destination itself. Negative preconceptions about a territory may affect its viability (Pike, 2004). In essence, an image can be defined as the collective of perceptions, feelings, ideas, and beliefs that an individual forms about a specific reality, such as objects or places (Gartner, 1994; Park & Song, 2021; Silva, 2021).

Before outlining the article's specific aims, it is necessary to consider the scale of video and digital games. For instance, video games play a pivotal role in the socialisation of numerous individuals, as they facilitate or change the growth of their social abilities. The exchange of knowledge and the creation of cooperative relationships are facilitated by social contact between individuals (Henriques, 2017) with the participation in interactive or contest video games. Furthermore, digital games serve as an effective means of occupying one's time. Additionally, they facilitate the acquisition of new languages and practical skills. Such games often promote capabilities such as strategy and quick reflexes (Lourenço et al., 2008).

Video games, tourism and the intertwining of these two areas represent a potential driver of territorial development. However, this crossover remains relatively unexplored by researchers. The general objective of this study is to examine the potential correlation between these two domains. In the contemporary era, the benefits that tourism bestows upon destinations cannot be underestimated. Video games are becoming increasingly prevalent in people's daily lives, whether for recreational or professional purposes. The principal objective of this article is to gain an understanding of the relationship between tourism and video games and to assess the potential impact of video games in related events on tourist destinations. It is pretended to analyse the use of video games and digital interaction technologies for the direct and indirect promotion and enhancement of destinations.

Throughout this study, evidence that video games can enhance a tourist destination will be presented. There are innumerable digital games in which the narrative is set in real destinations. The objective is to comprehend the intrinsic geographical dimension of these games. Moreover, one of the primary goals of tourism is the dissemination of a destination's historical and cultural heritage. It is important to note that there is a growing number of events related to video games, which may inadvertently promote video game-themed attractions. Both events and these attractions have the potential to act as promoters of a particular tourist destination. It is therefore of the utmost importance to comprehend the significance of these events and attractions in the context of tourist destinations. In this context, the goal of this article is to analyse the results of a questionnaire conducted among a population that plays games and travels, in order to gain an overall understanding of the relationship between games and destinations and their respective travel habits.

2. Literature review

2.1. Importance of leisure

Leisure is defined as an experience that is both innovative and pleasurable. According to Bramante (1998), the concept of leisure is not constrained by temporal or spatial boundaries. Moreover, this same author notes that this concept is inextricably linked with socialisation and the notion of freedom. According to Surdi et al. (2013), leisure is regarded as an imperative need, not only as an ontological fact but also as a legal and psychological fact.

The concept of leisure can be considered to have an intrinsic origin in the human species, as evidenced by the act of playing (Huizinga, 2015; Santos & Silveira, 2019). Nevertheless, despite the essential role that leisure plays in human development, not all individuals have equal access to leisure opportunities. The expression of this human right is still impeded by factors such as elitism and democratic issues (Santos & Gama, 2008). Nevertheless, the global economic growth of recent decades has led to an expansion of the middle classes in many countries, which has in turn given rise to new forms of consumption associated with leisure time. Consequently, the leisure industry and the tourism sector in general play a significant role in economic growth (Nadais & Santos, 2012).

It is widely recognised that the voluntary interruption of the work routine is fundamental for the maintenance of physical and mental well-being (Carpallo, 2016). Furthermore, Carpallo (2016) cites studies that demonstrate the importance of holiday-taking for cardiovascular health and cortisol levels. This has a positive influence on each individual's well-being. The same author also cites a study conducted by the Randstad company in Spain, which found that 62% of respondents required less than a week to adjust to their newfound freedom from work, while another 38% needed at least two weeks or more. Although the data was universal, there is in fact some variation according to certain factors, such as the individual's gender. In the case of women, the process of disengaging from their work routine required a longer duration of time, while men required a shorter period. It is also noteworthy that 41% of women indicated that they required at least two weeks to disconnect, in contrast to 35% of men who expressed a similar preference (Carpallo, 2016).

In the contemporary era, leisure is increasingly regarded as a fundamental human need (Medeiros, 2004, as cited in Gomes (2014)). As tourism and playtime are integral aspects of leisure time, they have become increasingly significant fields of leisure (Bramante, 1998; Coriolano, 2013; Souza, 2010).

One of the most widely practised leisure activities across the globe is playing games. This activity is not constrained by age, level of education or gender. Concerning digital games, it is evident that they are no longer perceived as mere recreational tools for younger age groups (children and adolescents). It is currently asserted that the video game industry and games themselves represent a significant form of leisure for all age groups (Reis & Cavichiolli, 2008). They are significant as they elicit a range of emotions (from positive to negative), fulfil players' aspirations, and facilitate the development of personal interests among their users. Furthermore, numerous authors have asserted that computer games are particularly alluring for individuals with low self-esteem, relationship difficulties, or feelings of frustration (Polcyn, 2019). The act of playing enables individuals to overcome their shyness in the virtual world, thereby experiencing feelings of strength, empowerment and independence (Polcyn, 2019).

2.2. Major milestones in the history of video games and their evolution

The history of video games is inextricably linked to the evolution of the computer (Rechsteiner, 2022). In 1952, British professor Douglas made a significant contribution to the history of digital games with the creation of OXO, which was one of the first software-based games to incorporate a video monitor. In 1958, William Higinbotham designed Tennis for Two, a game that could already be played on an analogue computer. In 1967, Ralph Baer developed a multiplayer video game system, the Brown Box, which featured numerous programmes that could be played on a television. Baer licensed his device to Magnavox, which subsequently sold the system to consumers as Odyssey in 1972. In 1977, Atari released the Atari 2600, a console that included joysticks and interchangeable game cartridges that played multicoloured games (Channel, 2022).

In the 1980s, the quality of game graphics improved as a result of the advent of 8-bit processors (Puiati, 2023). At approximately this time, the inaugural console competition was held. The two competing game developers were Sega and Nintendo. This confrontation demonstrated that video games were not merely a form of entertainment reserved for children. The release of games like Mortal Kombat demonstrated that it was possible to reach a more adult audience (Kelion, 2014).

In the fifth generation, the advent of 3D graphics and CD-ROM software led to the development of longer games. The advent of story-based content, exemplified by titles such as Final Fantasy and Resident Evil, marked a shift in the gaming industry (Plarium, 2023).

The advent of the sixth generation of video games marked a significant turning point in the industry, with the introduction of 128-bit technology. This groundbreaking advancement not only elevated the accessibility and affordability of games but also paved the way for the subsequent evolution of the gaming experience. This generation saw the emergence of console gaming platforms such as the Xbox and PlayStation 2. The advent of these two consoles resulted in the decline of Sega and Nintendo's dominance, and from this point onwards, Microsoft and Sony began to gain a significant advantage in the global economic panorama, with titles such as Prince of Persia and Grand Theft Auto: San Andreas (Plarium, 2023) becoming notable examples.

The pivotal moment of the seventh generation was the comeback of Nintendo with the release of the Wii and the DS portable console (Plarium, 2023).

The eighth generation of video game consoles saw the release of the Xbox One and the PlayStation 4. This generation was highly profitable, with games such as Red Dead Redemption 2 and GTA V generating significant revenue for studios that exceeded their expectations.

Nowadays, the spotlight is on the PlayStation 5 and the Xbox S/X series. It can be reasonably assumed that the development of this latest generation of games will be influenced by the advent of artificial intelligence, virtual reality, augmented reality and blockchain technology. This will in turn have an impact on the evolution of browser games (Plarium, 2023).

2.3. Narrative, space and gameplay – Game structure versus film structure

In a similar manner to the evolution of film narratives and storylines, video games have also been marked by the introduction of narratives and storylines in recent decades, making them dense and striking for the consumer. In terms of their structure, video games and films are distinct. In films, there is a goal that cannot be changed and on which the viewer will live the experience that the director of the film has created. Consequently, the audience's viewing of the film will remain unaltered and arouse the same feelings (Newman, 2013, cited by Monteiro, 2021). In video games, the player can remake the narratives in their own way. By altering the visual structure of the game or not, the decisions made in the games define the type and genre to which the games belong. The player is afforded the autonomy to select their path, deviating from the instructions presented on the screen (Monteiro, 2021).

The absence of a space would preclude the possibility of establishing a place or theme on which to base a narrative. The space in which a game takes place is thus defined by the act of playing itself and the set of rules that condition the player. It is within this specific space that the player acts and takes refuge (Piteira, 2015). As Huizinga states in Homo Ludens (1955), each instance of play generates a playing field. These are all isolated locations in which players engage and are subject to specific conditions. However, all of these spaces have the capacity to create temporary universes and are designed for the performance of a specific action (Piteira, 2015).

In the context of game theory, gameplay refers to all the actions carried out within a framework of pre-agreed rules (Lindley, 2002, cited by Vannucchi & Prado (2009)). In Vannucchi & Prado (2009), it is regarded as the nexus between two distinct entities: the game and the player. The authors defined it as the set of potential actions and reactions that are generated by both the player and the game itself. Ultimately, the term can be used to reflect the nature and degree of interactivity (Ribeiro et al., 2013). The three terms that form the basis of tourism promotion through video games are 1) the space, through the recreation of destinations; 2) the narrative, exploring the history and customs of those same places; and 3) the gameplay, the interactivity that the player has with the destination and its history.

2.4. Video games in everyday life and drivers of tourism

Video or digital games have now attained a status that is both elevated and multifaceted. They are no longer solely regarded as a source of leisure; they have also become a significant aspect of professional and economic life. In contrast to decades ago, it is no longer possible to assert that a young child's future will not be inextricably linked to games. There is a plethora of professions

that have been shaped by the gaming industry, including professional gamers, scriptwriters, graphic designers, programmers, and many others.

The popularity of video games is not a phenomenon confined to the past. Before the advent of multiple gaming devices at home, there existed numerous opportunities for individuals to engage in gaming with their friends or alone, utilising the iconic arcade machines. In these establishments, which were colloquially known as LAN houses, players would queue to spend their coins to play and beat other players' records.

Since the advent of video games, there has been a consistent and growing interest in them. While the initial appeal was limited to social interaction, modern gamers are now seeking to engage with the gaming environment in a more immersive manner. This includes visiting the locations depicted in games, attending professional tournaments, participating in events, and exploring gaming-themed attractions.

Despite the relative youth of gaming tourism, it is experiencing a period of rapid growth (Neto, 2023). Video games represent an effective means of promoting a destination. A game can be played for 10 or 100 hours, during which time the player is exposed to a constant stream of information in a relaxed and engaging manner. Indeed, using the video game Assassin's Creed Odyssey as a reference, Rainoldi et al. (2022) easily recognised that factors such as the level of immersion, the dynamics of the game world, the connection to the characters, the sense of realism and the level of freedom are crucial. These factors are important not only for the gaming experience itself, but also because they are the key elements that motivate players to visit game locations.

In another case, Dong et al. (2021) theorised the idea that the more players trust that their virtual experience is genuine, the more likely they are to exhibit emotional reactions and, in turn, increase their intention to visit the media-related destination. This article is also fundamental because it proclaims that factors such as the propensity for imagination and nostalgia can be antecedents of the intention to visit.

Furthermore, it is pertinent to mention the substantial importance of storytelling in the tourism sector. Storytelling about a particular destination encourages visitors to savour an experience, triggers emotions and influences their sense of belonging and identification with the place (Bassano et al., 2019). Storytelling has been the subject of marketing research and has been found to be a particularly good marketing tool because people like to listen to stories (Junko et al., 2022). Video games can be a more effective tool for storytelling, while also providing solid mental images and a sense of presence on site (Junko et al., 2022).

In an experimental study carried out by Dubois et al. (2021), an attempt was made to find out the impact of the Far Cry 5 video game on the image of the tourist destination. The results were remarkable. Despite its interactive nature and people's growing attraction to it, this famous video game had fewer positive ratings than expected. This may have been due to the game's violent content. This suggests that tourism marketers should always be aware of the intention of the media and the use of images of a destination (Dubois et al., 2021). Future destination marketers should bear in mind that gamers are usually people who are very connected to information technologies and that using these technologies to create products for them, as well as to communicate with them, is necessary and successful. At the same time, the most popular video games generate a much stronger emotional connection between users than most films (Żemła & Bielak, 2024). Potential destination marketers should also take into account the recommendations that come directly from the work of Sharma et al. (2023). The article's data revealed that both player-NPC interactions and player-player interactions were positively associated with emotional solidarity with NPCs and players, respectively. Similarly, emotional solidarity with NPCs and emotional solidarity with players were favourably associated with cognitive image in the game. Cognitive image in the game was also positively related to affective image and conative image. Conative image in the game was also confirmed as being positively associated with the desire to visit associated destinations in the real world (Sharma et al., 2023).

The player's input can encompass a multitude of information pertaining to the historical context, geographical features, linguistic characteristics, and cultural nuances of the destination where the game is set. The most advantageous aspect of this process is that the player is not required to possess

the game to receive this information. The current global network allows for the rapid dissemination of information across the globe. By utilising platforms such as YouTube or Twitch, a person can observe another person engaged in the gameplay of a specific video game and simultaneously receive the same information.

A process of gathering and analysing information on the structure of the most internationally recognised digital games, as well as their dissemination and related activities, revealed that games typically cover four strategic elements on how they can promote a destination. These are: 1) architectural/geographic references; 2) historical/cultural references; 3) gaming events; 4) thematic attractions. It's important to specify each of them.

2.5. Architectural/geographical references

One method of promoting a destination through video games is by incorporating architectural and geographical references within the game that pertain to a specific location. Even when the game is set in a fictional environment, it may contain references and inspirations from a particular destination.

How architectural and geographical elements are presented to the gamer will influence their appreciation and taste. The longer a player spends in a specific location within a game inspired by a destination, the more information they will assimilate about it. This may result in a heightened desire to visit the destination in person.

Architectural and geographical references presented vary according to the temporal period that the game wishes to examine. In the case of a historical setting, the game will recreate the appearance of the destination at the relevant point in time. A case in point is Assassin's Creed Origins (2018), which is set in ancient Egypt. When a game is set in the past, the developers must analyse historical data to represent the destination and its cultures and customs accurately.

Games set in the present have a representation of a particular destination that is current. The genres most commonly and most readily accessible for reconstruction in this temporal context are sports and racing games. Such games attempt to provide an almost exact representation of the location in question. For instance, in the case of FIFA, the football stadiums are recreated with great precision, while in the context of F1, the Formula 1 world championship circuits are meticulously replicated. It is not only stadiums and circuits that are recreated in games set in the present day. Furthermore, entire cities may also be rebuilt for action games. In instances where the game in question involves violence, some destinations may be recreated with a fictional name to protect the brand and the destination.

In contrast, in games set in the future, architectural and geographical elements are frequently modified in relation to the present to align the theme with the destination. Some potential themes have been identified, including war, the apocalypse and technological futurism.

In addition to the temporal context in which the action occurs, another factor to be considered is the mode in which architectural and geographical references are presented. It is more important to consider how the reference is presented than the mere appearance of the reference itself. About the manner of presentation, the form was divided into four categories: detailed, minimalist, altered and inspired.

In the case of a detailed presentation, the architectural or geographical element is recreated with great accuracy. In contrast, a minimalist presentation represents a simple yet illustrative recreation of the architectural or geographical element in question.

In the context of presentations with altered elements, these are elements that have been altered to align with the overarching theme of the game. For instance, in The Last of Us 2, the city of Seattle is depicted as being consumed by nature, which serves to reinforce the apocalypse theme present throughout the game. Finally, inspired presentations are elements that do not represent an exact architectural or geographical element but allow us to see where their inspiration came from.

2.6. Historical and cultural references

It is important to note that the gameplay and the space are not the only elements that contribute to the overall experience. As previously mentioned, the narrative also plays a central role in the rela-

tionship between the various elements. Concerning the presence of historical and cultural references, these are closely associated with the narrative that the game is playing out. Such references may encompass a wide range of elements, from minor objects to the fundamental narrative of the game.

When a game portrays real historical events in its narrative, it is important to note that what occurs in the game is not necessarily an exact replication of what occurred in real life. There is always an element of adaptation, a process that is similar to that employed in the film industry. If a game is to portray these historical events, the space in which they occur will also be depicted. Once again, architectural and geographical references will be present. An illustrative example of a game that challenges players to gain a deeper understanding of a specific historical event is Ghost of Tsushima, which draws inspiration from the Mongol invasions of the island of Tsushima (part of the Japanese archipelago) in 1274. Despite the game's incorporation of fictional elements, such as the protagonist (Jin Sakai) that the player controls, it also presents historical and cultural facts throughout the game. These include the samurai code of honour and some of their customs (Portugal, 2020).

It is not only through the principal or minor narrative of the game that we can access this type of information and references. In addition to the narrative elements of the game, the player may interact with various objects that they encounter along the game's spaces. Such items may include, but are not limited to, small vases, large statues, and even letters. The letter may contain a traditional recipe for the destination or a description of a historical event. Any object that has been crafted and implemented effectively can be used as a cultural and historical reference.

Finally, another historical and cultural reference that a game can transmit to us about a particular destination and time is the characters that the player can interact with. This is exemplified by the game Assassin's Creed II. In this game, the player is allowed to interact with Leonardo da Vinci. The player can obtain an insight into the painter's life and also observe the genesis of his creations.

2.7. Gaming events

Events represent an effective means of promoting a particular destination, given the movement of people they generate. Gaming events are becoming increasingly prevalent in contemporary society. Two distinct categories of gaming events can be identified: trade fairs and tournaments. A trade show-style gaming event is defined as an event where various developers are present to showcase their products to visitors, who can then experience these products, including games, consoles and accessories. At such events, developers have the opportunity to announce their forthcoming products and, in some cases, to permit visitors to engage in pre-launch contact.

One of the most significant gaming events of this kind is GamesCom, which takes place in Cologne, Germany. In the 2023 edition, the event welcomed approximately 320,000 visitors from over 100 countries. Furthermore, the event was viewed by 180 million individuals via online streaming (Gamescom, 2024). Events of this nature are dispersed throughout the globe, as evidenced by Table 1. In Portugal, Lisbon Games Week and ComicCom Portugal represent the most prominent examples of such events.

Table 1. Main face-to-face gaming events of the trade fair type (by world region)

Europe		America	
Name	**City/Country**	**Name**	**City/Country**
Gamescom	Cologne (GER)	E3	Los Angeles (USA)
Insomnia Gaming Festival	Birmingham (UK)	PAX	Seattle/Boston/S. Ant. (USA)
IgroMir	Moscow (Russia)	The Game Awards	Los Angeles (USA)
Paris Game Week	Paris (France)	BlizzCon	Anaheim (USA)
Games Forum	London (UK)	Brazil Game Show	São Paulo (Brazil)
EuroGamer Expo	London (UK)	EGLX	Toronto (Canada)
Fun & Serious Game Festival	Bilbao (Spain)	Montreal Int. Game Summit	Montreal (Canada)
MAGIC	Monaco (Monaco)		
Asia		**Africa**	
Name	**City/Country**	**Name**	**City/Country**
Tokyo Game Show	Tokyo (Japan)	Africa Games Week	Cape Town (South Africa)
Japan Game Awards	Tokyo (Japan)	Africa Games Festival	Dakar (Senegal)
ChinaJoy	Shanghai (China)	Nairobi Gaming Convention	Nairobi (Kenya)
GamesCon Asia	Suntec (Singapore)	Digital Africa Gaming Summit	Gaborone (Botswana)
Games Forum Asia	Seoul (South Korea)		
Taipei Game Show	Taipei (Taiwan)		
G-Star	Busan (South Korea)		
Middle East		**Oceania**	
Name	**City/Country**	**Name**	**City/Country**
Games Forum Middle East	Riyadh (Saudi Arabia)	PAX Australia	Melbourne (Australia)
Middle East GamesCon	Abu Dhabi (UAE)	Melbourne Int. Games Week	Melbourne (Australia)
Saudi Gaming Expo	Riyadh (Saudi Arabia)	NZ Game Developers Confer.	Wellington (New Zealand)
Qatari Gaming Festival	Doha (Qatar)		
Oman Gaming Festival	Muscat (Oman)		
Bahrain Int. Gaming Expo	Manama (Bahrain)		

Source: Own elaboration.

In the context of gaming events of the tournament type, the term 'tournament' is used to describe the coverage of a specific game. There are numerous professional teams in various games, which has led to the establishment of a fans club of these teams. These fans visit these events to support their team and watch the best players in their favourite video game. Examples of events of this type include the Intel Extreme Master ESL, a Counter-Strike tournament, and in Table 2, other examples of major gaming events of the tournament type can be identified.

2.8. Themed attractions

Despite the relative infancy of investment in themed attractions linked to video games, the quality of these attractions is not lacking. As previously stated, there are already a number of themed attractions, including small entertainment venues, routes and even themed parks.

When considering gaming attractions, Japan and the city of Tokyo immediately come to mind. This is due to the country's prominence in various games and the culture associated with video games and technology. In Japan, visitors can visit gaming attractions such as the Pokémon Centre or the Tokyo Arcade Experience. However, this type of attraction is not limited to Japan and Tokyo. Gamers can find such establishments in various locations around the globe. One may also visit the LOAD ZX Spectrum Museum in Cantanhede, Portugal. Another attraction that has gained considerable media attention is the F1 Arcade in London, England (Games, 2023).

In the realm of attractions with larger spatial dimensions, it is worth noting the emergence of theme parks linked to video games. One such example is Super Nintendo World (Figure 1), which opened its doors in 2023 and is located in California, United States of America. The primary theme

Table 2. Major face-to-face gaming events of the tournament type

Tournament	Video Games
World of Warcraft Arena World Championship	World of Warcraft
Rainbow Six Siege Pro League Finals	Rainbow Six Siege
Capcom Cup	Street Fighter V: Champion Edition
World Cyber Games	Mobile Legends/ Clash Royale/ Herthstone/ Valorant
Call of Duty World League Championship	Call of Duty
Fortnite World Cup	Fortnite
Overwatch League Grand Finals	Overwatch
Inter Extreme Masters ESL	CS. GO
EVO (Evolution Championship Series)	Street Figther V/ Tekken 7/ Grandblue Fantasy Versus
EVO (Evolution Championship Series)	G. G. Strive/ King of Fighters/ Melty Blood/ V. Fighter 5
League OF Legends World Championship	League of Legends
The International Dota 2 Championship	Dota 2
EA Sports FC Pro World Championship	EA Sports FC 24

Source: Own elaboration.

of this park is the world of Super Mario and the associated characters from the video game (Lopes, 2023).

Finally, a tourist route associated with gaming in the state of West Virginia in the United States of America has been identified. However, the points on this route have not yet been built or adapted to a gaming theme. The points on this route are included in the video game Fallout 76 by the developer Bethesda Softworks because the game's narrative takes place in the state of West Virginia. In order to attract a new audience to the destination, the local government and the game's developer entered into a partnership to promote the aforementioned points in the game. The Palace of the Winding Path, the Landview Lighthouse and the Big Bend Tunnel East (Figure 2) are among the points that players can experience in the game and visit on this route.

3. Methodology

In this research, a survey was carried out entitled Videogames as Boosters of Tourist Destinations, and was divided into five sections: 1) player profile; 2) references present in games and their detection; 3) gaming events; 4) digital interaction technologies; and 5) tourist animations. The aim of this questionnaire was to explore new knowledge on a subject that has still been little researched in the tourism area, trying to understand whether video games influence or create the desire to travel to destinations where the games take place virtually, as well as to gauge the degree of popularity that the video games area has among those surveyed, leading them to take part in related/themed events, as well as travelling to theme parks.

As this research is in the field of tourism and video games, the target audience for this questionnaire was people who play and travel. The survey was written in English to reach as many people as possible, rather than limiting the survey to Portuguese-speaking territories and was conducted between 15 February and late April 2023. The survey was created using the Google Forms software. It was made available to several online gaming communities. Some of these same communities can be found in social networks like Facebook. The public groups where the survey was shared included the following: Xbox Gaming Community, Playstation Gaming Community, Comunidade Gaming Portuguesa and Pro Gaming Comunidade. The private groups included Pplware@ Gaming and Retro Gaming Portugal. Additionally, the survey was disseminated through the snowball sampling technique, whereby respondents were encouraged to share the survey with other individuals who met the eligibility criteria.

Figure 1. Super Nintendo World.
Source: Nintendo (2023).

Figure 2. Big Bend Tunnel East.
Source: West Virginia Tourism (2023).

Table 3. Biographical information on the population surveyed

Biographic data (%)					
Gender	**Masculine**	**Feminine**	**N.A.**		
	67.4	30.6	2		
Age groups	**18-25**	**26-40**	**41-60**	**Over 60**	**N.A.**
	40.1	46.2	7.8	2.6	3.3
Professional position	**Student**	**Employee**	**Self-employed**	**Retired**	**Unemployed**
	34.8	23.7	37.1	2.2	2.2
Nationality	**Portuguese**	**English**	**Canadian**	**Polish**	**Other**
	32.2	8.1	5.2	2.9	51.6

Source: Created from the survey.

Table 4. Player characterisation

Gaming (%)					
Platform	**PlayStation**	**Xbox**	**Nintendo**	**PC**	**Mobile**
	72.6	20.5	31.2	64.5	44.3
Game frequency	**Daily**	**Weekly**	**Occasionally**	**Rarely**	
	44.3	32.6	15.3	7.8	
Genre	**Action and adventure**	**Sports and racing**	**Role-playing (RPG)**	**Strategy**	**Simulators**
	75.9	73.9	64.8	62.2	52.1

Source: Created from the survey.

4.   Results and discussion

A total of 307 valid responses were obtained from the questionnaire. A comparison of the biographical data reveals that the gender representation in this sample is fairly balanced, with 30.6% of respondents identifying as female. This is in contrast to the assumption that the overwhelming majority of players are usually male (Table 3). Furthermore, the age range of respondents indicates that gaming is not confined to a specific age group (usually of school age). Indeed, 46.2% of respondents were between the ages of 26 and 40.

In terms of professional status, the most prevalent group was students (34.8%), while the employee and self-employed groups collectively accounted for the majority (60.8%). This indicates that the time spent engaging in gaming activities persists beyond the transition to employment. In terms of nationality, the most represented group was Portuguese (32.2%). This can be attributed to the limitations of employing the snowball sampling technique. Nevertheless, a noteworthy total of 67 nationalities were surveyed.

Table 4 presents the results of the survey on the consumption of video games by the respondents. It includes information on the platform used for gaming, the frequency of gaming, and the genre of games played. In terms of platforms, the Playstation was the most popular choice among respondents, with 72.6% indicating its use. Concerning the frequency of play, 44.3% of respondents indicated that they play daily, while 32.6% stated that they play weekly. When these two options are combined, it can be seen that 76.9% of respondents engage in gaming at least once a week. This represents a significant corpus of information derived from video games that is consumed by the respondents, information that destinations can transmit. All the percentages are over 100% because many players use more than one platform. Concerning the genre of video games, the two genres most frequently played by respondents were action and adventure (75.9%) and sports and racing (73.9%). This data is pertinent to a destination that is considering developing a video game about itself, as it allows for an analysis of which genre would be most suitable for the destination. It is important to acknowledge that although video games are traditionally associated with consoles and computers, a growing number of games are now available on smartphones in their entirety (or in more streamlined versions). This demonstrates that, in the current era, anyone can easily access a game with a simple click.
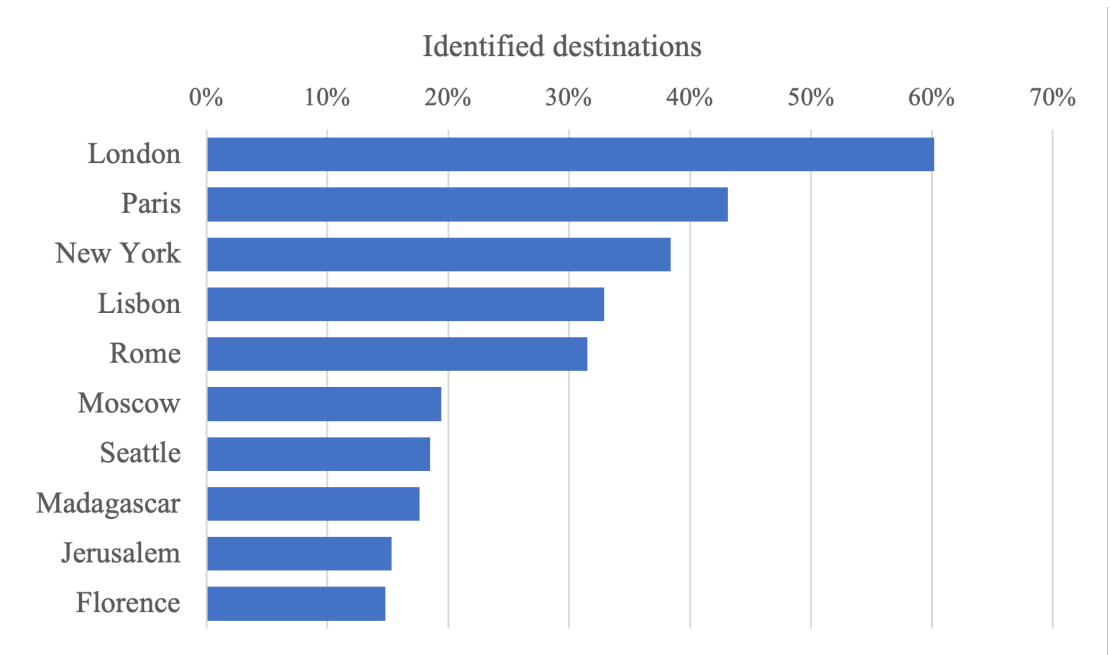
Identified destinations

Figure 3. Top destinations recognised in the video games.
Source: Created from the survey.

In a further investigation into the characteristics of gamers, we inquired as to whether video games influence their interests. Of the respondents, 15.6% indicated that they believed video games to be influential, 11.7% stated that they did not, and 72.7% expressed a degree of uncertainty, suggesting that the influence of video games on their interests may depend on the specific game in question. This 72.7% may be indicative of a more nuanced response, suggesting that not all games have the same potential to influence respondents' tastes and desires. This illustrates the necessity for destinations to adapt their marketing strategies to appeal to gamers and, in turn, encourage them to visit the destination. In response to the questionnaire item on architectural, geographical, historical and cultural references in games, 70.4% of respondents indicated that they had already identified a destination in a video game. Among the most frequently identified cities were London (60.2%), Paris (43.1%) and New York (38.4%) (Figure 3). While the most identified cities are already well-known tourist destinations on a global scale, it is notable that less well-known cities and territories such as Lisbon (32.9%), Seattle (18.5%), or Madagascar (17.6%) also feature in this top list.

In terms of their interest in visiting a destination that they had previously encountered in a video game, 93.9% of respondents indicated that they were interested in visiting it (Table 5). This illustrates the appeal that a video game can confer upon a destination. Of those who expressed interest in having already visited a destination they recognised from a game, 55.1% indicated that they had already done so. London was the destination with the highest percentage of such visitors, at 47.1%.

Video games are a way to arouse interest and curiosity about different topics and destinations. When asked if the story (of a game) has ever led them to research a topic/destination to increase their knowledge about it, 69.7% said yes. Topics cited by respondents include the history of the destination where the game takes place, culture, politics and mythology.

To ascertain the capacity to identify and associate destinations and games, respondents were presented with three images and asked to identify the location and game. The first image was taken from the Spider-Man game and depicts New York City. The second image shows a futuristic city of London and was taken from the game Watch Dogs Legions. The last image is from the game Microsoft Fly Simulator (Table 6). The image depicts a portion of Paris from an aerial perspective. Of the three images presented, the initial image is the most challenging to identify, as it lacks the distinctive architectural elements present in the other two images. In this instance, the image depicts Manhattan, New York. Upon examination of the data, it becomes evident that a considerable proportion of respondents (49.8%) were able to correctly identify both the city and the game. Furthermore, 36.2% of

Table 5. Intentions, visits and destinations recognised by respondents

Interest and visits to destinations (%)					
Interest in visiting a destination	**Yes**	**No**			
	93.9	6.1			
Main indications (interest in visiting)	**New York**	**Paris**	**Rome**	**London**	**Los Angeles**
	12.3	11.8	8.4	7.4	5.9
Visited a destination present in a game	**Yes**	**No**			
	55.1	44.9			
Main indications (visited)	**London**	**Paris**	**New York**	**Lisbon**	**Rome**
	47.1	21.8	6.7	6.7	4.2
Curiosity on different topics	**Yes**	**No**			
	69.7	30.3			

Source: Created from the survey.

respondents were able to correctly identify the city. When these two values are combined, it becomes clear that 86% of respondents were able to correctly identify the city.

The second image depicts a well-known architectural element, namely Big Ben, but with some futuristic alterations. Notwithstanding the aforementioned modification, 46.3% of respondents correctly identified the city, while 47.2% correctly identified both the city and the game. Consequently, 93.5% of respondents correctly identified the city, even with the change.

In the final image, which depicts the city of Paris, the Eiffel Tower is once again depicted, but without any alterations. The game in question, Microsoft Fly Simulator, was selected as the most challenging to identify, necessitating the inclusion of an image that would provide a clue to the game. This clue led to 46.9% of respondents correctly identifying the city and the game, while 49.5% only identified the city as Paris. The total number of respondents who correctly identified the city of Paris was 96.4%.

A general analysis of the images and their results reveals that the first image is the most challenging to correctly identify the city. This image had the lowest identification rate of the city, with 86%, while the other two images had identification rates higher than 93%. However, the first image was the one that yielded the most accurate indications of the city and the game together. These data allow us to draw several conclusions. Firstly, it can be observed that the identification of places, whether individual architectural elements or cities, is relatively straightforward. Secondly, the number of correct answers relating to the city's association with the game was extremely positive, indicating that games leave a lasting impression.

Another noteworthy point is that the first image (New York) was the most challenging to identify, yet it was the one that yielded the most comprehensive responses, including the city and the game. This data serves to reinforce the promotional impact that the video game has on the destination. The identification of the city without the game was the least successful, while the combined approach yielded the most responses. This demonstrates that a destination can be associated with a video game, in this case, that of Manhattan, New York and Spider-Man.

Concerning gaming events, respondents were asked whether they had ever participated in an international gaming event. Of those surveyed, 54% answered in the affirmative, while 14% indicated that they had not participated in such an event, but expressed interest in doing so. Those who responded affirmatively were then asked to specify which events they had attended. The most frequently cited responses can be found in Table 7. Electronic Entertainment Expo (E3), which takes place in Los Angeles, was the most indicated with 20.5% of responses, followed by GamesCon, which takes place in Cologne, Germany with 17.5% responses. In third place, comes the EGX event which was mentioned by 7.2% of the participants.

Events serve as catalysts for the movement of large numbers of people. It is important to consider whether people only move to the event or whether they attempt to be in the destination for days before and/or after the event. Table 7 reveals that 79.9% of respondents indicated a preference for staying at the destination for an extended period in addition to the event. A further 2.3% of respondents

Table 6. Identification of destinations and games

Destinations and games		
a) New York City in the Spider-Man digital game (source: Spider-Man digital game)	b) Big Ben in the Watch Dogs Legion digital game (source: Ubisoft)	c) Eiffel Tower in the Microsoft Flight Simulator v game (source: Microsoft)
New York and Spider-Man: 49.8%	London and Watch Dogs Legion: 47.2%	Paris and Fly Simulator: 46.9%
New York only: 36.2%	London only: 46.3%	Paris only: 49.5%
SpiderMan only: 1.3%	Watch Dogs Legion only: 0.3%	Fly Simulator only: 0.3%

Source: Created from the survey.

Table 7. Participation in gaming events (%)

Events (%)				
Participation in gaming events	Yes	No	No, but intend to	
	54	32	14	
Main events attended	E3	GamesCon	EGX	Nordic Game
	20.5	17.5	7.2	7.2
Length of stay	Yes	No	It depends on	
	79.9	17.8	2.3	
During and beyond the event	Visit nearby attractions	Consume local products	Stay more days at the destination	
	81.3	62.8	49.7	

Source: Created from the survey.

stated that their decision depends on various factors, including the destination, gastronomy, holiday time of visitors, and whether they travel alone or with others.

The data indicates that events serve as a catalyst for travel, with many attendees staying for extended periods beyond the event itself (49.7%). However, it remains to be seen whether the events in question are an effective means of promoting the destination in general. It is therefore necessary to ascertain whether these events promote the attractions in the vicinity. The majority of respondents (81.25%) indicated an interest in visiting attractions in the vicinity of the event. Additionally, 62.8% reported consuming local products.

The final section of the questionnaire was designed to achieve two specific objectives. The first objective was to ascertain whether respondents were interested in video game-themed attractions and had visited them. The second objective was to determine the real importance of technologies in attracting tourist spaces and animations from the perspective of the visitor/consumer. Upon inquiry as to whether the respondents had ever visited any park or tourist attraction related to video games, 51.4% indicated that they had not, while 48.6% responded in the affirmative. The relatively high proportion of negative responses can be attributed to the continued lack of awareness among the public regarding specific attractions that are oriented towards digital games. The primary indications of the attractions/theme parks that had already been visited by the surveyed individuals, as expressed in percentage terms, were as follows: London Madame Tussauds Museum (35.1%), Paris Madame Tussauds Museum (11.3%), F1 Arcade London (4.7%), National Videogame Museum (Texas) (3.3%), Museum of Art and Digital Entertainment (California) (3.3%) and National Videogame Museum (Sheffield, UK) (3.3%).

In terms of the significance of digital interaction technologies in tourist spaces (1 = Not at all important; 5 = Extremely important), the mean value was 4.2, indicating a high level of importance

Table 8. Types of digital interaction and respondents' interest

Interest in digital interaction	1 - 5
QR code	3.3
Geolocation	3.9
Interactive panels	3.9
Virtual guides	4.0
Digital games	4.2
Augmented reality	4.3
Virtual reality	4.4

Source: Created from the survey.

to the respondents. Accordingly, for those seeking information, the presence of these technologies in tourist attractions is of significant importance at the moment of choice. For these individuals, an attraction that incorporates digital interaction technologies into its offerings is perceived as more appealing than those of its competitors. It is important to note, however, that the above data does not detract from the value of attractions that do not have digital interaction technologies. Nevertheless, it can influence the decision-making process regarding which attractions to visit.

With regard to the specific types of interaction technologies, the initial observation to be made when analysing Table 8 is that all the technologies indicated have a score higher than three, indicating a positive score for each. Secondly, the QR Code, which is arguably the most prevalent technology among the nominees, is the one with the lowest score. The extensive and globalised use, in conjunction with the minimal interaction it facilitates, may be among the factors that render it the least appealing to the respondents.

Thirdly, the geolocation; the interactive panels and the virtual guides, all three have a similar note, being all slightly different from each other. In geolocation and virtual guides, the idea of being on the move, but accompanied by technology, differentiates the experience from the 'so-called ordinary' visit. Concerning the interactive panels, the objective is to disseminate information in a manner analogous to that of the QR Code. However, the experience differs in that the interaction is not constrained by the dimensions of a smartphone. Moreover, the interaction is likely to be more dynamic.

Finally, digital games, augmented reality, and virtual reality are the technologies that elicit the greatest interest among respondents. The three technologies have an average rating of over 4. These technologies present a higher level of interaction on the part of the respondent. However, they are the most difficult to apply to attractions and also the ones that represent an added cost. The acquisition cost is an important step for the promotion of tourist attractions or destinations because they are the ones that arouse the greatest interest in people.

5. Conclusion

In light of the objectives of this article and the results obtained and analysed, it can be concluded that geographical references and historical-cultural references are promoting tourist destinations. Furthermore, it is essential to point out that it is vital to create partnerships between game developers and destinations in order to adapt the references to the interests of both. Concerning the subject of video games, the results obtained in this study prove the hypothesis that video games influence (or can influence) people's tastes.

Regarding gaming events, this research indicates that a significant proportion of respondents have already attended gaming-related events. This corroborates the hypothesis that these events can not only draw crowds but also boost services such as accommodation and entertainment. For this reason, municipalities are increasingly interested in holding or hosting events of this type, with the aim of attracting specific audiences, including solitary gamers and families who enjoy video games. People

are motivated to visit places they have previously experienced in games, and there are still individuals who have visited places they have previously played in video games.

Concerning themed attractions, there are still few initiatives in place. However, those that do exist are attractive to people. Indeed, this work also confirms that some individuals have already visited themed locations. However, these attractions are still relatively new.

The market is witnessing the emergence of an increasing number of digital interactive technologies that companies can adopt for their tourism offerings. Virtual reality and augmented reality technologies are generating the most interest from visitors. Despite differences in people's preferences regarding specific technologies, one undeniable fact is that people generally have a positive attitude towards digital technologies. These technologies are beneficial because they result in increased time spent in a place that has them. In short, it can be said that video games are promoters of tourist destinations, despite being a relatively new phenomenon with considerable potential for growth, similar to film tourism, which has already made an impact on the sector.

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