Evaluation of Digital Games with Historical Narrative within the Scope of Virtual Museum

Tarihsel Anlatılı Dijital Oyunların Sanal Müze Kapsamında Değerlendirilmesi

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Abstract

With the invention of computer and internet technologies, a new cultural paradigm of living has been established. This culture started to manifest itself across various platforms within the digital world.

Major museums around the globe have created virtual museums in digital environments to exhibit their collections to a worldwide audience. These three-dimensional virtual museums, primarily designed for informational purposes, lack interactive features. As stated by ICOM (International Council of Museums) virtual museums are classified into three types: brochure, content, and educational. In these virtual spaces, there is no direct interaction. However, the most advanced environment to exhibit history and art at a higher level to audiences is digital games. Far from being purely entertainment-driven, these digital platforms exhibit significant cultural reflections, attracting millions of users globally.

Among the many subgenres of digital games, those rooted in history, mythology, and culture can be considered digital museums or even prospective archives. This study aims to compare such historically inspired games, which authentically reflect the cultural and artistic elements of their respective periods and allow detailed exploration, with virtual museums. It will examine whether these games can be evaluated within the scope of virtual museums. Ultimately, this study argues for a re-evaluation of the scientific perspective on digital games in the context of the current digital age.

Keywords: Art History, digital art, game, Egpyt, virtual museum, digital culture, Assassin's Creed.

Academical Discipline(s)/Field(s): Art History, museum, virtual museum, digital art, digital game, digital culture.

Özet

Bilgisayar ve internet teknolojisinin ortaya çıkmasıyla birlikte yeni bir yaşam kültürü oluşturulmuştur. Bu yaşam kültürü kendisini dijital dünyadaki farklı platformlarda göstermeye başlamıştır.

Dünya genelinde kurulan büyük müzeler, seksiyonlarındaki eserlerini bütün dünyaya göstermek amacıyla dijital ortamda sanal müzeler kurmuşlardır. Üç boyutlu tasarlanan bu müzeler esasında sadece bilgi amaçlı olduğu ve interaktivitenin gerçekleşmediği bir ortamdır. ICOM'a (*International Council of Museums*) göre broşür, içerik ve öğretici olmak üzere üç tip sanal müze vardır. Bu müzelerde doğrudan bir etkileşim söz konusu değildir. Ancak bu hususta tarihi ve sanatı daha ileri seviyede karşısındakine sunan en gelişmiş unsur ise dijital oyunlardır. Sadece eğlence amacıyla bakılmaması gereken ve milyonlarca kişi tarafından tercih edilen bu dijital ortamda kültürel yansımanın etkilerini görmek mümkündür.

Birçok alt türü bulunan oyunlardan tarihi, mitolojiyi ve kültürü temel alanlar, birer dijital müze veya ileriye dönük birer arşiv niteliği taşımaktadır. Bu çalışmada tarihten beslenen ve dönemin kültürel, sanatsal unsurları birebir yansıtan, her detayının incelenebildiği oyunların sanal müze ile karşılaştırması yapılarak sanal müze kapsamında değerlendirilip değerlendirilemeyeceği üzerine tartışılacaktır. Sonuç olarak ise yaşanılan dijital çağda oyunlara bakış açısının bilimsel anlamda yeniden değerlendirilmesi gerektiği ortaya konulacaktır.

Anahtar Sözcükler: Sanat Tarihi, dijital sanat, oyun, Mısır, sanal müze, dijital kültür, Assassin's Creed.

Akademik Disiplin(ler)/Alan(lar): Sanat Tarihi, müze, sanal müzeler, dijital sanat, dijital oyun, dijital kültür.

1. Introduction

Many events and inventions have shaped, changed, and deeply affected humanity and states, and their cultures and lives throughout history. Among them, the invention of the Internet and computers had an unprecedented impact on history. These two phenomena, which create life within life, have deeply affected cultures.

The computer, which is one of the most significant discoveries of the 21st century, gained meaning with the invention of the Internet and played an active role in social life, business life, commerce, banking, entertainment, and education. These two technologies have dissolved the borders between countries and created a universal language by integrating with several fields over time, just like in the Industrial Revolution. The digital environment was combined with art, one of the universal languages, to create a digital art platform, thus bringing the sphere of influence of art to the highest level.

Art's sphere of influence also plays a very important role in promoting and announcing this culture to the world. Transferring the elements of the real world to the digital environment is considered one of the requirements of the digital world. Going beyond only transferring from real to digital, new issues are also presented to consumers directly in the digital environment.

The digitalization of everything in the real world also leads to the digitalization of cultures. Since prehistoric times, artistic elements that illustrate the culture and life of humanity and prove its existence in this world have been digitized on various platforms.

Nowadays, many elements such as the history, cultures, traditions, cities, beliefs, mythology, and key figures of societies are transferred to the digital environment, produced or redesigned to be introduced and promoted to a wider audience. This promotion and transfer not only create a new interaction but also diversifies different economic resources.

Two important platforms benefitting from the infrastructure offered by informatics and digitalization are virtual museums and digital games. They both play an important role in digitalizing, promoting, and spreading cultures. However, it would not be accurate to consider all digital games in this scope.

The word "museum" was first used in 1732. This term originates from the Greek Mouseion, meaning *the temple of the Muses* (Djindjian, 2007). Today, a museum is defined as a non-profit, permanent institution, open to the public, serving society and its development, which acquires, preserves, researches, communicates, and exhibits *intangible* and *tangible* human heritage and its environment for educational, academic, and entertainment purposes (ICOM, 2007a: article 3.1). Virtual museums, introduced in 1947 by André Malraux (Sylaiou et al., 2009) (Wasser, 2018), are defined as a kind of museum which includes digital data and relevant information obtained by making use of various media opportunities, allowing for uninterrupted access for the visitors. They have unorthodox communication methods and does not necessitate any physical space (Schwibenz, 2004). Another definition of a virtual museum is a collection of historical, scientific, and cultural elements created with digital pictures, audio files, and texts (Britannica, 2022) (Walczak & Cellary, 2016). Furthermore, the virtual museum can be considered a platform where it connects with its audience outside the museum building (Li et al., 2012). As stated by ICOM (-2022), there are three types of virtual museums: brochure, content, and educational (Schweibenz, 2019). A brochure is a marketing tool that informs visitors about the museum and shares information about the museum's location, opening hours, and events (Teather, 1998). The content is in the form of a website created to provide information about the collections of museums and offers detailed data about the artifacts to its visitors. Educational museums, on the other hand, focus on context rather than objects. They welcome visitors from specific levels of age, experience, and knowledge. The websites designed for the museums include additional information that encourages the virtual visitor to learn. The main purpose here is to enable the museum visitors to see the objects in place. *Virtual Museums* can be defined as an advanced level of educational museums. As defined by Malraux, they are *museums without borders and walls, accessible from anywhere in the world* (Sylaiou et al., 2009).

Today, virtual museums can be defined as the transfer of a physical museum to the web environment. It also applies to those that do not have a real exhibition center but still aim to serve as a museum. Virtual museums should keep constant interaction with their visitors and establish a balance between the real and the virtual. For this reason, several elements constituting the technological infrastructure of the 21st century are designed with a virtual design approach. An effort is made to establish a close bond between the visitor and the museum by making use of some interactions such as high-resolution imaging technology, web3d

exhibitions, augmented realities, light technology, VR, AR, MR, haptics, and PDAs. There is no museum designed using all these technologies at this moment. Museums that are transferred to the digital environment as virtual museums are designed by transferring the physical museums to a 3D environment, where the visitor can navigate between the galleries with direction arrows or directions and see the exhibits. Major ones among this type of museums around the world include The British Museum (London), Guggenheim (New York), National Gallery of Art (Washington, D.C.), MoMa (New York) National Museum of Modern and Contemporary Art (Seoul), Vatican Museum (Rome), Pinacoteca di Brera (Milan), Pergamon Museum (Berlin), Uffizi Gallery (Florence), Prado Museum (Madrid), Pera Museum (İstanbul), Rijksmuseum (Amsterdam) Egyptian Museum (Turin), J Paul Getty Museum (Los Angeles), Musée d'Orsay (Paris), Guggenheim (Bilbao), South Tyrol Museum of Archeology (Bozen) and the National Museum of Anthropology (Mexico City) (Figure. 1-2).
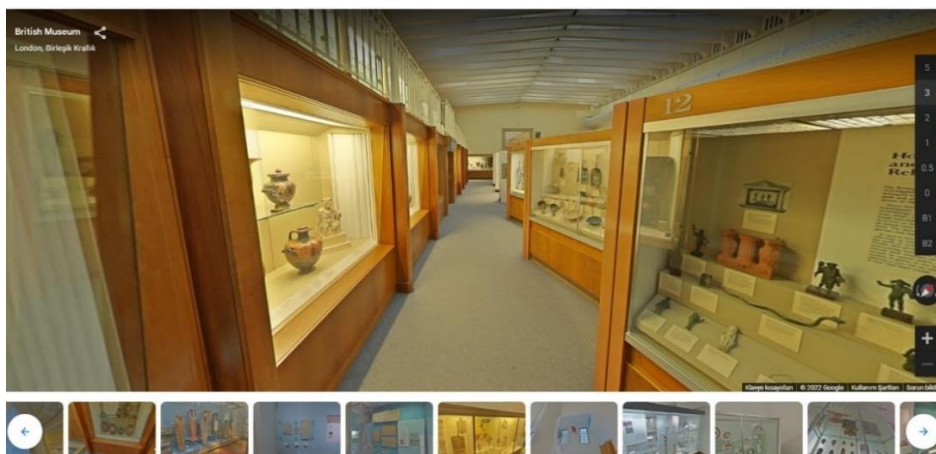

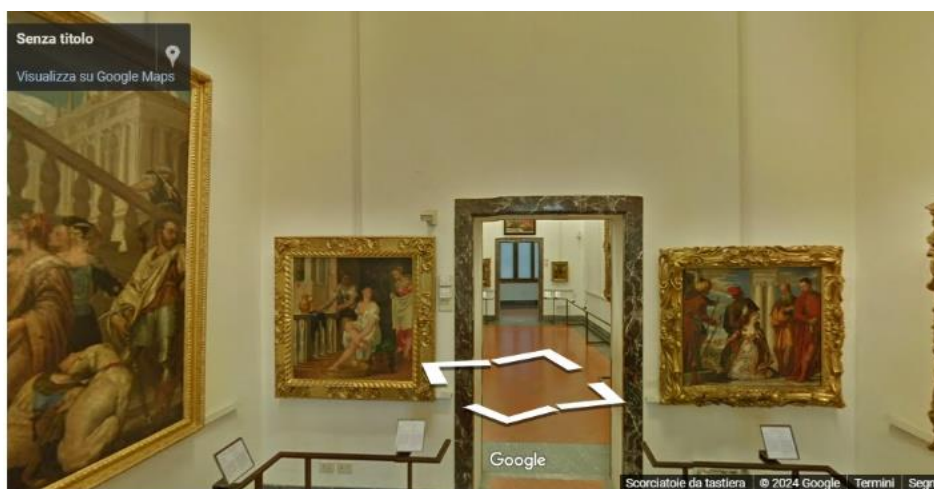**Figure 1.** Virtual British Museum (British Museum)

Figure 2. Uffizi Gallery (Uffizi, 2024)

Regarding whether digital games should be evaluated within the scope of a virtual museum, it is necessary to reveal what this concept means first and then examine it through examples. Digital game is a term used for versatile and interactive digital simulations shaped by the eye-hand coordination of the player and supported by animated graphics produced in the digital environment (Gökler, 2017).

Academic interest in digital games dates back to the early 1980s (Bryce & Rutter, 2006). The section opened at the Museum of Modern Art in New York, which includes digital games, in 2012 is very important (Antonelli, 2012). But whether games are art or not has always been a matter of debate. Even though Jack Kroll Mart argued that games are fun and rewarding but cannot be considered a work of art (Smuts, 2005), Jenkins stated that digital games are a type of art that is specific to the digital age (Jenkins, 2000). These debates have also continued among other researchers. This study aims to evaluate historical narrative games in the form of a virtual museum rather than determining the debates or which side the game is on.

Games with many sub-categories such as adventure, horror, racing, sports, strategy, simulation, and war can be accessed from anywhere in the world, with or without an internet connection. Games without limitations and borders offer extremely high-quality graphics and 3D services in terms of design but are also advanced in terms of VR and AR technology. This technology not only increases the sense of reality but also maximizes the impact on the consumer and better conveys what is intended to be conveyed to the other party. It advances more and more every day, bringing reality to the virtual.

Game designs can be a product of imagination for entertainment purposes only or have a design language based on history and facts, fed by history and reflecting the conditions, architectural practices, cultural life, clothes, artists, administrators, political events, daily lives, wars, street textures of the period directly to the player. Such a reflection creates a second cultural environment in the virtual world. The biggest component of the game is the player, who acts as if they were living in that period in the historical and cultural environment created and can establish an interaction by experiencing several elements that have not survived to the present day.

In order to better understand the situation, it will be useful to give examples from games. However, examining in detail all the games that were designed by major studios and cost them years is beyond the scope of this study. Instead, this study focusses on games with historical references. For this reason, it was deemed appropriate to choose a game that stands out with its commitment to history, which has been very popular in many cities around the world and has broken sales records.

2. Assassin's Creed Origins Game

The Assassin's Creed series stands out among digital games with its predisposition to reality. This series, which is inspired by the history, mythology, culture, and heroes of different countries, is among the best uses of technology and fiction. The game series, released by Ubisoft in 2007, brings the historical, political, and cultural events of various periods to players and audiences from 431-404 BC (Assassin's Creed Odyssey) to the present day (Assassin's Creed Chronicles: Russia). Assassin's Creed: Origins, which was produced in 2017 and covers the dates 49-43 BC, is one of the prominent projects that the company worked on for 4 years (Ubisoft, 2022).

Assassin's Creed: Origins focuses on a historical event that takes place in Ancient Egypt and goes all the way back to Rome due to political events, describing how the assassins emerged. The game, which offers visual effects, sounds, figures, nature, and historical events in 6 different languages, creates three different world experiences, transfers them to the player, and successfully makes the transition between dimensions. The first of them is the present time. The character named Layla Hassan, is a researcher, who is controlled by the player. The second part is the section where Bayek, the main character of the game, experiences his own life and the period in which he lived by placing a sample of his own mummy on the animus device. In the third part, an open discussion is conducted between Bayek and the person he killed.

Bayek, who was born and raised in Siwa, is very important in terms of his presence in Egyptian hieroglyphs. At the beginning of the game, the arid geography of Egypt does not go unnoticed, and the scene begins with the accession of Pharaoh Ptolemy to the throne. While the pharaoh on the elephant, one of the indispensable animals of the period, greets the people, Bayek is in the crowd. Bayek's duty in the region is the medjay. While this term and the introductory scene convey the first glimpse of Egyptian culture to the player, the eye of Horus, the Egyptian god of the sky, on each character is the first thing that draws attention. However, Bayek's symbiotic relationship with Senu the eagle, his eye in the sky, and his superhuman powers indicate the influence of mannerism. They are also reminiscent of the Kams in the Shamanistic faith of Central Asia.

Bayek encounters events beyond vengeance on his way to revenge and finds himself in civil war, political turmoil, and a corrupt order. In this direction, a struggle in the form of a pyramid, starting from the bottom and continuing until the person at the top is killed, is analyzed from the player's point of view. Although many phenomena provide the scene with the resolution of these events, cities, political figures, architectural works, cultural events, and daily lives provide the connection between the present and the past.

The people and events that have left their mark on political history are presented to the player, allowing her to relive the excitement of history. The political relations between great characters such as Alexander the Great, Julius Caesar the Roman Emperor, Cleopatra (an ancient Egyptian Queen), Brutus, Cassius, and Septimus take the player to the depths of history. The players associate themselves with these characters and witness the events by participating in them. Especially the discovery of the tomb of Alexander the Great

in the game is exciting. In addition, there is the opportunity to see the appearance of Cleopatra closely, and the magnificence and clothes of the Roman Emperor Caesar revive the culture of the period (Figure 3-4).

A historical event is manifested through the assassination of Caesar and the fact that the player watches this event. In addition, the sentence *You too, Brutus*, which is recorded in history while Caesar was stabbed in the back to death, is emphasized in the game. Such scenes can reenact things that will never happen again and present them to the player/consumer.

Cities, cultural life, and architectural works are the major factors that transform the game into a museum. Established by Alexander the Great, the city of Alexandria, which is one of the regions where the arid geography of Egypt is reversed by the Nile and has a hippodamian plan, is waiting to be rediscovered. Being able to visit the city, which allows for understanding the urbanization of that period, from street to street, creates the perception of walking around an open-air museum.

Along with daily life outside the city, the region's unique hieroglyphic script, clothes, haircuts, marketplaces, products used in trade, daily goods, war tools, painting, games, trade of wild animals, and mummification are the main cultural details that can be examined by the player.

The script, which is indispensable for Egyptian art, is seen in every aspect of the game. In addition, the wall paintings, where torsos and legs are illustrated from the front view and heads and feet in profile, add value to the gameplay and allow it to be identified with Egypt. In addition to the palmette motif, which is among the decorations frequently encountered in the art of ornamentation apart from writing and painting, figurative and geometric decorations are the reflection of a rich artistic understanding.

In the daily life portrayed by the game, it is very important to choose local clothes that are thin and suitable for the hot weather. This is accompanied by the skin color of the selected characters. The use of ornaments such as mummified cats and crocodiles, as well as the sale of fruits and vegetables in the stalls set up in marketplaces, interactively show the goods of the period to the player. Reviving its era with the decorations on war tools such as swords, spears, and shields, apart from commercial goods, the differences in the clothes worn by the Egyptian, Greek, and Roman soldiers reveal the geographical diversity and the level of advancement in this field (Figure 5).

Architectural structures are one of the major factors that make Origin's game a digital museum. Two-storey, mudbrick civil architecture examples and traditional houses covered with bamboo and palm trees used in the upper cover represent the characteristics of that period.

The obelisks, associated with Egypt, as well as its civil architecture, and also found in Istanbul and across Europe, are depicted down to the smallest detail and can be examined by the player, which reinforces the perception of reality in the game.

Apart from the obelisks, the *Saccaras*, which are tomb monuments, and the pyramids, which are considered one of the seven wonders of the world, present an artistic environment to the player. The fact that these pyramids are presented in their original forms (as opposed to how they are in the present day), reveals the commitment of the game to artistic reality. In addition, in the game, which also reveals how the pyramids were built, it is an important experience to go up to the top of the pyramid, to view every detail in its interior, including the mummified tomb. Examining every single stone of the Alexandria Lighthouse, which is one of the seven wonders of the world and has not survived to the present day, cannot even be experienced in museums. The most important evidence of the reality of the game and its reflection of the period is the display of the National Geographic Museum in Washington in the game's video sequences addressing the Egyptian section (National Geographic, 2022), as well as the Library of Alexandria, which is home to the most important resources of the period.

Besides the pyramids, temples, sphinxes, statues, palaces of high-ranking officials, tents and caves can also be visited and observed in detail by the player.

Other important elements that the player can interact with are the races held at the Hippodrome, the gladiator battles in the Colosseum, and the theater buildings. In the game, which also includes Ancient Greece and Rome, the players can visit the Hippodrome, experience the quadriga race, or examine the Pompeii theater building. Similarly, after reaching a certain level of strength, they can go to the Colosseum and fight as gladiators. Besides Egypt, the magnificence of Greek sculptures and Roman architecture can also be seen.

Another important gameplay element enhancing realism in the game is inclusion of sandstorms and mirages associated with the desert climate, which serve as details that inspire other phenomena. These details not only enhance realism but also amplify its effect on the player. (Figure 6-7).

In addition to Assassin's Creed Origins, there are many games that are inspired by historical events and cultural elements, including Assassin's Creed Odyssey, which features ancient Greece and cultural elements such as the Pantheon and the Temple of Zeus; Assassin's Creed Syndicate, which features cultural elements of London; Assassin's Creed Revelations, set in Istanbul and Cappadocia in the 1500s; The Legend of Zelda, which features references to medieval Europe, Japan, and Greek culture and civilisations; Horizon Zero, about the Mayans and Egyptians; Red Dead Redemption, about America in general and its ethnography in particular; Total War: Attila and Civilisation V, which include many cultures and civilizations.

3. Evaluation and Conclusion

Museums generally host, protect, promote, and exhibit artifacts belonging to the history and culture of the geography where they are located. Due to the necessity of technology and the age, historical museum buildings and the artifacts in them have been moved to the digital environment and the concept of virtual museum has been created. To date, many national and international studies on virtual museums have been carried out, and many surveys have been conducted and evaluated. Generally, virtual museums are defined as collections of digitalized audio files, text documents, images, and other historical and cultural data (Rodriguez, 2017). The general characteristic of virtual museums, which have three different types, is the exhibition of historical and cultural artifacts in 3D digital platforms. Although not every museum in the world offers such an option, museums that are aware of the importance of the digital age pay attention to this point.

In a virtual museum that has been transferred to the digital environment and navigated, visitors can explore the exterior architecture, garden, and interior spaces of a physical museum, and the way the artifacts are exhibited within a specific plan. Visitors can visit the artifacts in the museum through the direction signs, or they can select the desired section and examine the artifacts there. Thus, they can tour the museum to the extent that the museum is available in the digital environment and the technology allows. However, it was determined that important details cannot be conveyed to the visitor due to the high costs of such virtual processes. Visiting a virtual museum, a room with paintings can be viewed as in a physical museum. However, the textual data of the paintings cannot be presented to the visitor in some virtual museums. It means that the painting remains only a visual detail for the visitor. Based on such a small detail, it can be interpreted that virtual museums do not have a responsibility to transfer all existing details of an artwork. However, this type of information can be easily accessed in content museums, which are sub-types of virtual museums. However, some basic determinations emerge when it comes to virtual museums.

Virtual museums are simple three-dimensional digitalizations of existing physical museums, use media facilities, offer uninterrupted communication, do not need a physical space, provide information about the collection within those museums, are free of cost, and have no profit or commercial purpose. There are many levels of benefit and positive aspects such as the fact that each artifact in the virtual museum is concretely located in the museum and has value and educational aspects, is functional, encourages research, is open to scientific research, has no age limit, and that the artifacts in the museum are processed as digital data and numerical data are presented.

There are some important factors for digital games to be considered as virtual museums. It is not correct to consider all types of games, which can be categorized as digital arts, within the scope of the virtual museums. The primary factor in this study applies to games with historical narratives; namely, games that draw on history, culture, mythology, and traditional elements. Especially in video games, which is a new branch of the digital world, the use of cultural heritage has recently become quite widespread and popular.

In the present study, games with similar narratives and design elements could be considered within the scope of the virtual museum.

Digital games provide uninterrupted and unlimited communication, utilize media possibilities, and do not require physical spaces. In addition, many of the architectural and artistic elements constituting the digital game have a physical counterpart in real life (such as pyramids, temples, palaces, and tomb monuments within the game being examined). Although it does not have a direct educational aspect, it informs the player, piques her interest, and is constantly interactive. As in Assassin's Creed Origins, the game introduces the player to the religious, political, economic, social, and architectural aspects of the period, expanding the

knowledge and increasing the curiosity of the players, as well as offering fun. Players can witness historical events, conspiracies, discoveries, and characters (Pharaoh Ptolemy, Cleopatra, and Julius Caesar). The portrayal of mythological elements and the creation of symbiotic relationships, the superb visual and three-dimensional experiences, the simulation of natural phenomena unique to specific regions, the recreation of artifacts that no longer exist, the inclusion of video sequences illustrating architectural construction processes, the ability to explore architectural structures in meticulous detail, and the freedom from being confined to a single location are among the notable advantages of these digital platforms.

There also are some disadvantages to digital games. The first one of them is the commercial motive. However, the existence of free online games should not be overlooked. Nevertheless, there also are certain limitations, including age restrictions that target specific audiences rather than the general public, the absence of a collectible dimension, a predominant focus on entertainment, the requirement of special equipment to play the games, the emphasis on guiding players within the spatial-narrative context rather than fostering scientific or informational engagement, and the material cost associated with the games themselves.

When the characteristics of virtual museums and digital games with historical context are evaluated together, the most important point that unites the two is that both are produced in a digital environment and presented to the visitor/player. While there are physical buildings and artifacts that museums feed on, concrete artifacts are directly encountered in the games as well, and even destroyed artifacts can be recreated and examined, as in the Origins game. While museums are limited to buildings and only artifacts being presented, many elements such as geography, flora, climate, vegetation, history, important personalities, architectural artifacts, traditional clothes, equestrian animals, marketplaces, war tools, wars, civilian dwellings, land structure, and political events are presented as a whole and experienced by the player in games. From this perspective, it offers more than virtual museums. Video clips of games are so connected to reality that they are projected on screens in physical museums. The most important aspect of virtual museums that distinguishes them from games is that they have no commercial concerns and have an educational aspect. As commercial concerns are at the forefront in digital games, the educational aspect is debatable, but it has an intriguing and guiding aspect in the promotion of cultures.

As a result, digital arts produced in the digital age have more than one sub-genre and digital games can be considered in this context. Drawing on history, mythology, and cultural factors, the games offer past-oriented animation, and characteristic features that go beyond digitalization, as opposed to artifacts displayed directly in museums. Games with a high level of interactivity present not only a building and artifacts but also an entire country, historical buildings, characters, and other details via technological advancements. This is a platform that provides a connection between the past and the future and reflects this in the best way rather than the digitization of a museum. In addition, historical events and phenomena are reenacted. This means that digital games inspired by historical events are within the scope of digital virtual museums of the digital age.
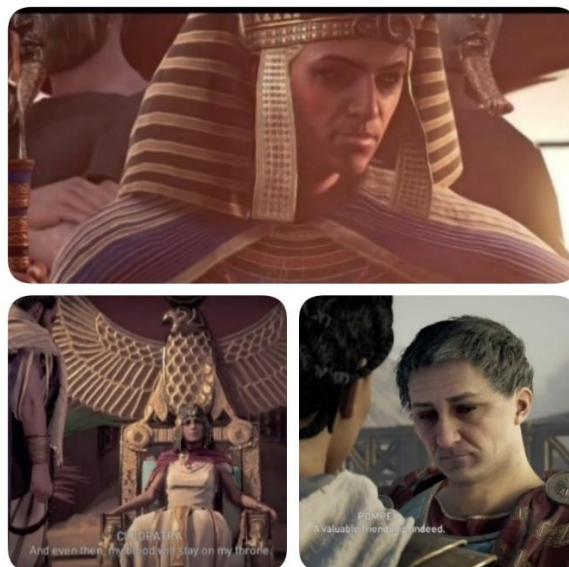

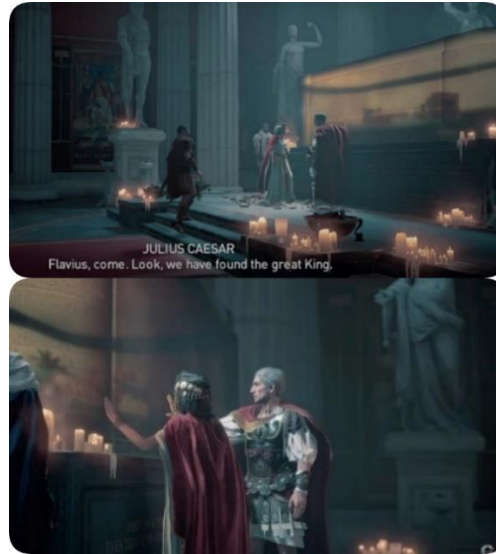**Figure 3.** From Historical Characters in the Game Phorah Ptolemy, Cleopatra, Julius Caesar (From the Game)

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Figure 4. Julius Sezar and the Tomb of Alexander the Great (From the Game)

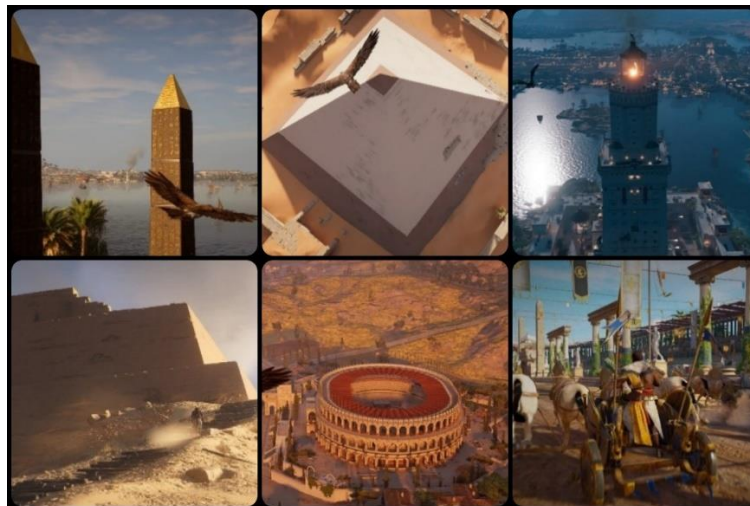**Figure 5.** Hieroglyphs, Pictures, and Daily Life Reflecting Egyptian Culture in the Game (From the Game)

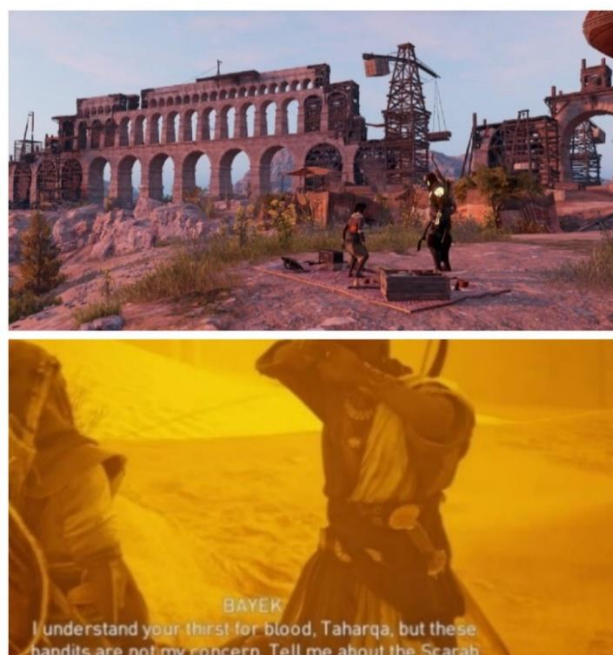**Figure 6.** Architectural Buildings Featured in the Game (From the Game)

Figure 7. Construction Process of Architectural Buildings and Sandstorm (From the Game)

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