

**MUSEUMS IN THE POST-DIGITAL AGE: CREATIVE EXPERIENCE DESIGN
AND CRITICAL PERSPECTIVE**

POST-DİJİTAL ÇAĞDA MÜZELER: YARATICI DENEYİM TASARIMI VE
ELEŞTİREL BAKIŞ

Assist. Prof. Özlem VARGÜN

ORCID: 0000-0002-4803-5929

İstanbul Yeni Yüzyıl University, Faculty of Communication, Visual Communication Design
Department

Abstract

While technological developments and innovations in museums are reflected in the forms of exhibition and presentation, the post-digital age evolved into a more human-oriented design experience in the periods. The purpose of this article; The aim of this study is to evaluate the use of technology towards experience designs in the Post-Digital Age, the methods of use of technologies, the contributions they provide, and the problems that arise in the methods of use of these technologies. As a research method, a literature review was made, the use of technology and design in museums was researched, the data obtained were reinterpreted with the descriptive method and findings were reached. According to the findings obtained, It has been seen that experience designs have increased in museums, and this has been effective in entertainment, curiosity and learning. It has been observed that the audience, which uses VR technologies and witnesses history, becomes free in the process of subjectivation. While virtual reality technologies enable us to witness history with an interesting and exciting experience, it has been seen that there may be problems in its editing. These; The dominance of today's value judgments, the transformation of virtual reality into hyperreality or anachronism, the new reality of homotopic spaces in the re-editing of heterotopic spaces, the uncertainty about which story should be written and how from whose perspective, and virtual heritage inflation.

Keywords: Post-Digital Age, Creative Experience Design, Heterotopic, Homotopic, Hyperreality, Anachronic, Subjectivity

Özet

Müzelerde yaşanan teknolojik gelişmeler ve yenilikler sergileme ve sunum biçimlerine yansımakla birlikte Post-dijital çağda, dönemler boyunca daha çok insan odaklı tasarım deneyimine doğru evrilmektedir. Bu makalenin amacı; teknoloji kullanımlarının Post-Dijital Çağda deneyim tasarımlarına yöneldiğini, teknolojilerin kullanım yöntemleri, sağladığı katkılar buna karşın bu teknolojilerin kullanım yöntemlerinde ortaya çıkan sorunları karşılıklı olarak değerlendirmektir. Araştırma yöntemi olarak literatür taraması yapılmış, müzelerde teknoloji ve tasarım kullanımları araştırılmış, elde edilen veriler betimleme yöntemiyle yeniden yorumlanarak bulgulara varılmıştır. Elde edilen bulgulara göre; müzelerde deneyim tasarımlarının arttığı bunun da eğlenme merak ve öğrenmede etkili olduğu görülmüştür. VR teknolojilerini kullanan ve tarihe tanıklık eden izleyicinin özneleşme sürecinde özgürleştiği görülmüştür. Sanal gerçeklik teknolojileri merak uyandırıcı ve heyecan verici bir deneyimle

tarihe tanıklık etmeyi sağlarken kurgulanmasında sorunlar çıkabileceği görülmüştür. Bunlar; bugünkü değer yargılarının baskınlığı, sanal gerçekliğin, hipergerçekliğe dönüşmesi ya da anakronik duruma düşülmesi, heterotopik mekanların yeniden kurgusunda homotopik mekanların yeni gerçekliği, hangi hikâyenin nasıl yazılması gerektiği konusundaki belirsizlik, kimin perspektifinden bakılacağı ve sanal miras enflasyonu olarak özetlenebilir.

Anahtar Kelimeler: Post-Dijital Çağ, Yaratıcı Deneyim Tasarımı, Heterotopik, Homotopik, Hipergerçeklik, Anakronik, Öznellik

INTRODUCTION

Digital technologies are brought together for one purpose in the post-digital age: *Creative Experience* Concepts like technique, technological innovation, shock, and difference, which are now being employed in museum competitions, are focused on how to effectively welcome the museum visitor and provide him with the finest experience. Museums can now integrate technology if necessary and offer more experimental encounters with role models if necessary. In his book titled “*Teknoloji Kimin Umurunda*,” Mehmet Doğan actually summarizes the spirit of the age through design experience. In the post-digital age, the ease of use, scope, and limits of the phones or computers have become important, not the power, technology, and capacity. According to Doğan in the Post-Digital Age, which he calls *Cilalı Ekran Devri* (Polished Screen Age), “we no longer consider our cellphone to be a ‘technological product’... we look for product attributes that *appeal to our intuition and experience*. It is not the number of technological features that matter in a product, but how it makes us feel..” (Doğan 2006: 14). This idea also applies to museums today. The purpose of visitors going to museums is to experience, collect memories and experience different emotions. Therefore, *content creation and how the content is structured* have become important for experience design in museums. Whatever technology needs to be used for this fiction should be used. In other saying, the point to be noted in the exhibitions that use technology is related to what the museum management and the curator wanted to show and how. This could be archaeological remains, a house, a city, or a person. “Are we going to show how the Part, the Building, the City, or the City-Person relationship is?” should be the question to be asked in preparation for the exhibition. The answer to this question, which may change as the museum policy and the curator’s preference, also depends on the budget and the characteristics of the collection. Even so, if an archaeological remain is to be shown, AR technologies or the use of object-oriented holograms may be a better option compared to VR technologies. Both of these preferences can be shaped according to the incoming visitor profile. Similarly, VR technologies or projection mapping can be preferred if the city-person relationship needs to be revived. This is also a preference that should be shaped according to visitor analysis. Museums, therefore, need to analyze visitor profiles well and shape their exhibitions according to their preferences.

Experience design originates from design thinking and forces museums to think in design. Design-oriented thinking and adaptation to innovations take place in the repositioning, branding/renewal/revision of the museum. First of all, it is necessary to define the problem correctly and produce a human-oriented solution in design-oriented thinking. Research methods in social sciences are used as much as anthropology, psychology, and art history knowledge for design thinking that requires an interdisciplinary approach. By looking at the

questions below, only the “*How Creative Design Should Be in Museums?*” question can be answered.

1. How can we gain New Visitors?
2. Which technologies should we use to show the collection in the best way, to take the journey of the story
3. How can we increase our corporate reputation?
4. How can we get people from different parts of society to come to our museum?
5. How can we improve the visitor experience of the museum?
6. How can we increase visitor engagement?
7. How can we establish long-term relationships with our visitors?
8. How can we ensure that the content we offer is valuable to visitors?

Time is the biggest competitor of today’s museums. Today’s people are busy with too many tasks at the same time and have to be much more selective about allocating time. This creates the problem of speeding through the competing museum. The Weatherspoon Museum of Art in North Carolina recognizes this problem and organizes the “Slow Look/Deep Seeing” exhibition. Slow Look/Deep Seeing “Researchers estimate visitors to art venues spend an average of eight seconds looking at each work on display. It’s an astonishingly short amount of time, and The Weatherspoon’s curators and educators organized their exhibition with works from the museum’s own collection to offer visitors a chance to slow down, make discoveries, and effectively connect with works of art.” is written in the text at the entrance of the exhibition (Wombell 2021: t.ly/goKi). That is to say; technology can provide a slow look at art.

On the other hand, the Pandemic forced the experience of people living their daily lives without leaving home to put an intellectual need such as a museum beyond its basic needs and taught it to meet this need in the digital environment without time and place limitations. Values have changed. The digitalization of information and its opening to the world via the internet was defined as the information age. Today, information inflation is occurring. Therefore, *finding the right question from this information and realizing the right experience* should be the most important value in the post-digital age. Besides, a museum experience should be more of storytelling or a journey than a presentation of information. By making meaning out of this journey, the visitor will reach the desired value, and thus the exhibition will have achieved its purpose. To sum up, as seen in Figure 4 below, in a museum exhibition in the post-modern period, information should be transformed into an experience, the exhibition should take a journey, and the focus of the institution should be turned into a human focus.

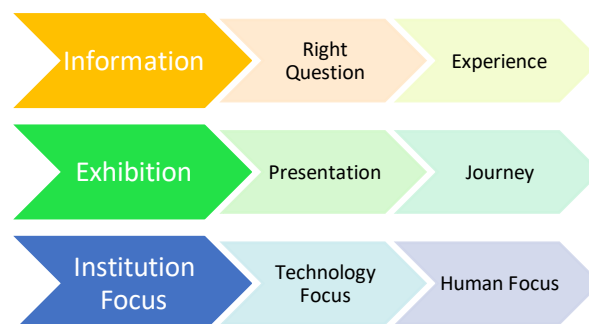


Figure 25. Series of Changing Values in Museology

The idea of design thinking or human-centered design was first discussed by Tom & David Kelley, the authors of the book “Creative Confidence.” But, the real architect of this idea is Steve Jobs. At the core of human-centered design, thinking is *empathy, problem-solving and aesthetic value creation*. That is to say; the design should be both functional and aesthetically pleasing. Hence, empathy and “*Trying to understand what people really value*” are necessary (Kelley, 2018: 35). This should not be made by guesswork but should be based on research and observation. The manager does not need to be a designer; the important thing to solve the problem in the applications to be made in the museum is to be able to solve problems like a designer.

Virtual Reality Technologies

In the post-digital era, artificial worlds are created for human-centered designs in museums, and the content must be presented in an interesting and easy-to-understand framework. Of the in-museum (*physical presence of the museum*) technologies, VR virtual reality, AR augmented reality, audio tours, interactive tutorials, and simulated environments with visual effects have been most used to enhance the visitor experience. Besides, the use of technology in experience design does not always have to be at the forefront. Changing different presentation, exhibition, and experience styles may be due to the institution to which the museum is affiliated, its mission and vision, status, content, and size of the collection. The use of technology in museums’ virtual life began with digitalization and the internet, then progressed to innovative designs that prioritize user experience by building their own autonomous cosmos.

With the development of MR Mixed Reality¹ Technologies, the exhibitions realized through the hololens that were introduced to the market have changed the atmosphere of the museum space and the experience of being in the museum today. Observing and engaging with the moving fossils, which have room-sized true measurements, has elevated this experience to a realm where fiction and reality collide.

VR virtual reality is defined as the experience of being there, immersion/teleportation. By breaking away from the real world, the audience teleports to virtual reality and enters a new reality. In AR augmented reality, as for that, the audience is still in the real space, the virtual and the real, side by side. VR virtual reality for the audience experience in the museum herein compares to AR augmented reality; there is a big difference in user experience in terms of trusting and being impressed. While the audience experiences the AR experience in the safe environment of history, in the VR experience, the audience is invited to be immersed/teleported to live in history. The first use of VR for cultural heritage in a museum was made for Dudley Castle in England in 1994. It took about 20 years for it to become widespread in museums due to high costs, technological inadequacy, and suspicious approaches of art to technology. With

¹ **Mixed Reality:** It is the merging of the virtual and real worlds to produce new environments and new types of visualization where digital and physical objects co-exist and interact in real time. The two worlds are “mixed” together, creating a realistic environment. A user can navigate this environment and interact with both real and virtual objects.

the release of the Oculus Rift CV1 in 2016, it began to be widely used in museums, and by 2017, many museums were offering unique VR experiences to their guests.

Increasing Engagement and Increased Accessibility

The purpose of museums' use of technology is to attract attention, arouse curiosity, and contribute to the quality time of the audience. Audiences who use these technologies interact both to learn about technology and to have different experiences. Museums continue to exist as long as they are in contact with this modern audience. The audience's involvement with the space and with one another is part of the interaction within the museum. The size of this varies according to the structure and characteristics of the experience design used in the museum. For example, an audience using AR technology can interact with other participants who see the same image by not leaving the real place. In VR technology, this communication is lost because it is disconnected from the real world. Instead, communication and interaction take place with objects or characters in virtual reality. In touch screens, holograms or gamification, on the other hand, the rate of interaction increases according to the content. Besides, common to VR and AR is the interaction with the assets brought to life by the museum. For example, in historical exhibitions, VR can communicate the realities of the past and humanize them by making a deeper connection. Similarly, a 3D tour connecting visitors to an exhibit can help visitors absorb the information and digest its meaning more clearly.

During the pandemic, when access to the museum's physical presence was restricted,² there was a significant increase in virtual museum visits, which bypassed time and space constraints. In this process, museums were able to use their digital assets more effectively for recognition, sustainability, and visitor loyalty. During this period, the museums, which organized events and panels on various digital platforms, provided the experience of being in the museum in a virtual environment with the digital games and virtual tours that they had previously made available. One of the most successful examples of this period was in the Troy Museum. Troy Museum Director Rıdvan Gölcük turned this crisis period into an opportunity with a proactive approach and won many awards for the museum. The Troy Museum, which became the owner of the "2020/2021 European Museum Academy Special Award" after the "2020 European Museum of the Year Special Commendation Award", became the first Turkish museum to receive the most prestigious awards in Europe. In the "8th Museums in Short" competition, the museum was awarded the "Special Mention" award for the first time from Turkey" (Akay 2021: t.ly/2A6v). By actively using their social media accounts, Gölcük managed to increase its visibility by 278% in a very short time, with various promotions, interviews, congresses, shootings, and applications in the museum, where he could go with his team in limited times during the pandemic. As seen in this example, social media, which is a very powerful mass media tool, is very important for increasing the awareness of the museum, providing customer loyalty, and maintaining its digital presence. In this process, many museums that have sought to increase their visibility by opening their VR exhibitions online have also implemented a new type of remote exhibition, unlike the virtual tour.

² Including visitors with or without disabilities

The two most important features in museums are interaction and accessibility. As mentioned above, there may be an interaction between the institution and the visitors, as well as interaction with the interface or exhibition applications of the visitors. Here, accessibility should also be two-way. In terms of sustainability, the access of the visitor to the museum and the access of the museum to the visitors is also important. This problem has been overcome to a great extent by opening social media accounts of museums.

A Close Look At History and The Subjectivist Audience (personal perceptive)

Museums as cultural institutions are the windows opened to a period of culture and history. At the same time, museums (museions) are the windows to the future as the temple of the Muses, the muses that inspire the future. These two windows are linked by museums in the Post-digital age with virtual reality technologies. By using the technology of the future, it invites its visitors to look through the window of history, teleport into the screen, and witness history. These inspiring technologies are the previously mentioned AR, VR, MR technologies, and interactive applications. One of the contradictory problems here is the belief that historical representation cannot replace truth. While museums quickly include deep-sea or space experiences in their collections, they are selective in reconstructing history. Even though the re-construction of history and presenting it with virtual reality does not reflect the representation itself, it is accepted as an exciting method to have a historical experience. The correct construction of the relationship between *form and content* and the ability to convey meaning using *symbolic language* is what needs attention. The meaning of form and content will change in line with which ideas, concerns, and values are prepared (Vargün 2020: 95). Every aspect must be represented and displayed in virtual reality, where history is created by adding sound and effects. Credibility increases by supporting the authenticity of the content here with visuals. The important thing in transferring information is to make the audience believe and interact in virtual reality. The what and how questions are included in the semantic dimension of content transfer. "The main problem in the form and content factor used when transferring information is how to determine the similarity between "what is to be taught" and "how to be taught" Emphasis is placed on distancing from tradition as a result of heritage management, mythological and alienated effect by bringing form and content closer together. In other words, it approaches historical reality. If form and content are separated, an ordinary experience can take on an exaggerated atmosphere, but it can enrich the collective image. It depends on the path to be followed in the management of culture." (Vargün 2020: 96).

From a subjective point of view, interactively presenting history via simulating in virtual reality enables free and permanent learning. After immersing in virtual reality, the audience finds themselves in historical time and space. Now, he/she has the freedom to see, experience, and learn the subject and detail he/she wants with the "Personalized Inquiry-Based Learning" approach. They can move away from unnecessary details and turn to the center of attention. When viewed from this aspect, interaction experience in virtual reality makes the audience the subject of the media. While experiencing a freeing experience, the audience as a subject can make material and interactively reproduce knowledge.

The Benefits of The Technologies Used in The Museum and Their Contribution To The Introduction of The Museum

Technologies used in museums are determined according to the needs of the age. It also meets the audience's and the museum's mutual needs. The increase in the use of technology with digitalization has allowed museums to both meet the audience's needs and express themselves better. The benefits of museum technologies are listed below:

1. The technologies utilized in museums' internet presence have mostly eliminated *time, space, and financial* limitations. Thus, remote access has become possible for visitors, accessibility has increased, and a window to the world has been opened for the museum.

2. The need to fully and effectively learn the features of new media arose with *digital literacy* as digital transformation accelerated in museums.

3. The technologies in the physical existence of the museum, which *increase the time spent in the museum and its quality*, have given the opportunity to use time efficiently.

4. Providing *learning by experiencing and having fun* has been instrumental in the *accumulation of memories* of the audience.

5. By providing a better perception of the museum collection, a *slow look*, it gave the opportunity to see details that were not noticed before.

6. On the other hand, looking slowly enabled me to look at the collection/work again, which triggered *an inquiry-based rethinking* about the collection.

7. It provided the completion of the missing parts of the collection and *the perception of the whole* habitat of the painting/object.

8. It helped to *bring out-of-date exhibitions up to date*, as well as make the exhibiting and presenting methods more appealing.

9. *Experiencing history*, looking closely, and learning by personalizing and *witnessing history* have become possible with Digital Technologies.

10. It has led to *the subjectivation and liberation of the audience*, who use VR technologies and witness history.

11. Technology has increased the recognition of museums and increased *audience loyalty* by creating more *intimate*, not corporate, environments with social media.

12. Digital technologies have contributed to the *introduction of the museum by arousing curiosity*

It is thought that museum technologies provide many more contributions to the museum and its audience. However, there are some doubts about how these technologies are used and how museum policies are conveyed. Therefore, in the next section, these doubts will be critically addressed.

Excessive Use of Technology, Simulating Reality, and Critical

As the use of technology in museums increases, the question of "*Is it the right approach to use digitalization and technology too much in the museum?*" comes to mind more and more. There is no measure in the use of technology, but the main purpose should be how to best exhibit the collection and how to reflect the content most accurately. As Jane Alexander, chief digital information officer at the Cleveland Museum of Art, said, "The best use of digital is to not make you aware of the technology but to make you aware of the art."(Charr 2020:

t.ly/qU5F). That is to say, the task of technology is to help visitors take a closer look at the museum and the history it represents. When used intelligently, it has the potential to increase the interest in the museum and its collection. This approach also emphasizes that the museum's use of technology should evolve primarily based on the people's and the museum's visions.

Reality can be manipulated through visual illusions or media tools. According to Baudrillard, meaning the reconstructing of cultural elements in the fields of news, advertising, and marketing of media tools, simulation blurred the fake and the real and eliminated the difference between reality and image (Baudrillard 1995: 44). Perceptions are directly affected by the reality presented in movies and are perceived as hyperreality, that is, a simulacrum. "Reality and virtuality are related to perceptions. Perceptions may differ, but reality really does exist. Reality is not a mental design, but *a projection on the mind*" (Türk 2014: 23). In the Virtual Reality system, the real environment is replaced by a simulated (representational) environment. In the circumstances, this new reality that the audience encounters can create subjective reality and *objective reality* that does not depend on value judgments. This objective reality creates a kind of *hyperreality*, which, according to Jean Baudrillard, is "*a new reality made up of media images*." "Hyperreal, or simulation, is the derivation of a reality without a genesis or a reality through models" (Baudrillard 2011: 14). This new reality replaces reality as synthetic reality, devoid of imagination as hyperreality. This causes "*the loss of reality or the disappearance of the truth*." In this definition, Baudrillard implied reality devoid of an origin by using historical references in virtual reality. But it still does not "pretend" to be a simulation of history; fiction becomes a simulacrum by replacing reality. This is why museums are so late in reconstructing history in virtual reality. This is a big responsibility. The greatest risk is to fall into an *anachronistic* state.

David Lowenthal says, "*the past is a foreign country*" (Lowenthal 1985: XV). The same also can be said for this date. No matter how closely we try to look at history, it is foreign to us, value judgments have changed, and culture has changed. Change is inevitable, and when we look closely at history, it is viewed with present value judgments. In VR virtual reality, when the artist's life is experienced in the reality of his own time by going to Modigliani's studio, the past is interpreted with the values of the present. These fictional images are the new reality referenced from history. Herein, other generations will be more skeptical and adapt. In parallel, Modigliani's studio does not have the character himself and his human relations as per the museum policy, traces of daily experiences. The painter who lived there has a presentation devoid of human traces in his work area. This results in virtual reality fiction looking like "*still lifes*" away from human presence. The "single person" in virtual reality here becomes the "*I*" who looks from today, which is a deficiency in experiencing this history.

The use of AR technologies in the museum actually presents a structure that creates discussion environments that attract the attention of the audience and adapts to today's technology. However, it also brings some risks. One of these risks is that new technologies can exclude older generations. Digital natives and millennials will likely adapt to such setups more easily. Elders can potentially struggle or feel left out. PAMM has once again demonstrated that this is not the case. Many of the visitors to their AR exhibition were aged 55+. This age group reported having a positive experience (Coates, 2021, t.ly/tSp5). In museum visits, creative and imaginative projects such as observing extinct animals, traveling through the layers of history,

and creating a new language are very promising. Thanks to these technologies, the audience who has the opportunity to spend more than 2.5 seconds (Wombell, 2021, t.ly/goKi) in front of an old painting can also find the opportunity to discover details that they could not notice before.

There are also museums with virtual reality exhibits that take these risks and offer the opportunity to animate, interact and even talk with historical characters. However, this is over a very short period, and practically all historical allusions are based on documented evidence. The idea, which emerged as a reenactment of a painting, was immersed in RW Ekman's Alexander II painting *The Opening of the Diet 1863* with VR glasses. In the painting, the period of the Russian Empire in the 1860s, Finnish life and politics can be seen. This is a less risky fiction. Of course, this painting is presented with the artist's reality; that is, it is not a photograph, but it still gives an idea about that period. This exhibition is an exciting experience for visitors. Because the daily life of the Finnish nobility has been the only reality of the audience, who has forgotten the reality of the outside world. But weren't their slaves, peasantry, and community in this period? Some of the difficulties arise when all this reconstructs the history and presents it to the museum audience in virtual reality.

"While representations of cultural heritage shed light on memories, events, places, namely the past, they are actually the re-construction of the past. Two problems arise. First of all, nothing is the same as representation; second of all, re-construction can cause falsification. Against the changing value judgments of the society, this re-construction is done according to whom and according to what?" (Vargün 2020: 89). Therefore, a mere representation is perhaps not possible. For example, whether a period of legal slavery was depicted through the perspectives of a noble or a slave will be determined. Similarly, will the historical reality of the city of Istanbul be conveyed according to the Pagan culture, the Byzantine or the Ottoman Empire, or the events that took place in the War of Independence? Some of the major obstacles in the construction of this virtual reality are the questions of whether the truth should be conveyed in the city where there are settled beliefs or should the beliefs be given without damaging them.

Historical places are reconstructed in virtual reality, but it is not possible to know and present history in all its dimensions. Conversational style, details of a destroyed building, customs, daily life, behavior, and character structures are only limited by the imagination of the cinematographer. A historical story can be fictionalized very differently. Peter Burke stated that it is not the question of whether to write a story but the question of what kind of story to write (Burke 1991: 241). "*From whose perspective it will be constructed*" comes to mind as a second question here. The media is not objective; it has to take a side. John Calvin says, "The biggest challenge in designing a character is how to most accurately reflect a valuable, respected historical personality built into the collective memory" (Simon et al. 2017: 396). In the circumstances, during the design phase, both the simulation of the historical area and the simulation of the historical figure should be done. The "*Behavior Management System*" technique is used in the simulation of the historical figure.

That is to say, real human behaviors should be synchronized with the behaviors of the designed character. After all that stages, the user/visitor will want to talk when they encounter this character in virtual reality. This is where artificial intelligence and software technologies

come into play. For now, although it only includes answers that will include certain speech patterns and simple “Emotion Recognition” systems, this rapidly developing technology will inevitably be integrated into museums simultaneously.

The use of VR technologies allows curators to bring topics to life and change the audience’s perspective. However, such exhibitions can also harm cost, usage errors, and physical effects on the audience. First of all, creating projects is extremely expensive. It carries problems such as breakage of headphones and hygiene. Further to that, simulation sickness may arise, and there may be disconnections between the physical body and the mind’s immersion world. These symptoms can be listed as headache, eyestrain, disorientation, vertigo, and nausea.

If we look at the subject from another aspect, according to Michel Foucault, museums are places that are organized and institutionalized after the invention of the discipline of history (Foucault 1967: 1). Foucault sees museums as timeless spaces, neighborhoods outside of society, the opposite of other places. The museum is a palimpsest, the place where time is constantly flowing, “a *heterotopia*³ in which the construction of time never stops and is constantly surpassing its own zenith” (Erten 2021: 1). One of the accumulated heterotopias of time is museums. Museums are areas where structures brought from real-time and space are reduced to representation and exhibited. It contains many times and places in a single space. This situation also presents a subjective experience independent of the fiction of power, as well as presenting the re-construction of space and time within the space. According to Erten, “With a Foucauldian approach, museums are *mummified spaces* that can exist outside of normal flow, construction and destruction. Organized and categorized spaces are spaces that are composed of stop corridors, which have marked stopping points for visitors, and which destroy the definition of the corridor that creates the familiar flow.” (Foucault 2021: 2). Just at this point, when virtual reality is reconstructed in place and even in time and presented to the audience experience, these heterotopic spaces turn into *homotopic*⁴ spaces. That is to say, museums that fictionalize history in virtual reality in space and time and present it as a new reality transform these new realities into the same similar spaces as homotopies. Wearing VR glasses allows the audience to travel back in time and see history as it was at the time and place it was created.

Finally, failure to analyze and control the data correctly is one of the problems that may occur in the construction of virtual heritage. Data inflation is increasing both in design and interaction. Increasing historical and cultural studies, academic studies, multiple perspectives, and comments on a field complicate the selection of data to be used. While excessive data entry complicates the selection at the stage of reconstructing the cultural heritage, the emergence of

³ **Heterotopia** is a concept elaborated by Michel Foucault to describe certain cultural, institutional and discursive spaces that are ‘other’: disturbing, intense, incompatible, contradictory or transforming. Heterotopias are worlds within worlds, mirroring and yet upsetting what is outside. Examples include ships, cemeteries, bars, brothels, prisons, gardens of antiquity, fairs, Muslim baths.

⁴ Homotopia - (Greek); homos: same, similar; topos: place, space. According to the Algebraic Homotopy theory, a continuous transition between two continuous transformations of topological spaces, i.e., continuous deformation from one transformation, can be obtained from the second analogy.

the same content in different projects brings with it the problem of “*virtual inheritance inflation*.”

Despite all these reservations, virtual reality applications are interesting exhibition forms that museums are increasingly using in terms of giving the audience experience and immersion in history.

CONCLUSION

Today, the use of technology has become an indispensable need of museums and visitors. In the post-digital age, these uses have changed from object and learning focus to focus on people and experience. Besides, the main purpose of digital technologies used in museums should not be to use new technologies but to present the collection and artwork in accordance with the conditions of the age in the best way and to reflect the historical and cultural knowledge in the best way. The essential distinction here is how museums are affected by new approaches following the digital age. Namely, while it is important to digitize all data and transfer it with different methods in the digital age, the transformation of technology into a tool in the post-digital age is the glorification of human-centered experience designs. Although these experience designs are presented under different titles, such as gamification and interactive museums, they all come together on a common point in emphasizing the spirit of the post-digital age: Human-Centered Experience Design.

In the Post-Digital Age, it has been seen that the use of interaction on the face of museums and the increase in experiences, and this is effective in entertainment, curiosity, and learning. It has been observed that the audience, which uses VR technologies and witnesses history, becomes free in the process of subjectivation. The contributions of museum technologies to museums and their function in museum promotion have been assessed throughout this process. According to the findings, the technologies used in the digital presence of museums have primarily removed the time and space barrier. It has made it possible to look closely at history and witness it. Technologies in the physical presence of the museum have provided an increase in the time spent in the museum, a better perception of the collection, a slow look, and an inquiry-based rethinking about the collection. It contributed to the updating of outdated exhibitions. It provided the completion of the missing parts of the collection and the perception of the whole of the painting/habitat. It has improved the quality of time spent at the museum by allowing visitors to learn while having fun and allowing them to create memories. All these contributed positively to the perception of the museum and the promotion of the museum.

While virtual reality technologies enable us to witness history with an interesting and exciting experience, the issues that need to be considered in the editing are conveyed with a critical view. Accordingly; Looking back at history in virtual reality, the dominance of today's value judgments, the transformation of virtual reality into hyperreality or anachronism, the new reality of homotopic spaces in the re-editing of heterotopic spaces, the uncertainty about which story should be written and how from whose perspective, and virtual heritage inflation.

Consequently, museums have rapidly integrated the technologies of the era into their structures under the determinism of technology and evolved towards interaction and experience designs in line with the post-digital age, towards approaches that both show the collection in the best way and give priority to human experience. The use of technology has not only

increased the experience of the museum visitor but also has positively changed the perception of the museum by contributing to the introduction of the museum.

REFERENCES

- Akay, Burak. “Avrupa’nın Ödül Avcısı Troya Müzesi Kısa Tanıtım Videosuyla İpi Göğüsledi” Anatolian Agency (2021) 01.01.2022. t.ly/FZLm
- Baudrillard, Jean. *Kötülüğün Şeffaflığı*. İstanbul: Ayrıntı Publication, 1995.
- Burke, Peter. “History of Event and Revival of Narrative”, *New Perspectives on Histourical Writing*, Pennsylvania: Pennsylvania State University, 1991.
- Charr, Manuel. “Michael John Gorman on ‘Play’ in Museums. Museum Next”. (2019) 01.01.2022. t.ly/IQtx
- Coates, Charlotte. *How Museums are using Augmented Reality*. (2021) 01.01.2022. t.ly/tSp5
- Doğan, Mehmet. *Teknoloji Kimin Umurunda*. İstanbul: Alfa Publication, 2006.
- Kelley, Tom; Kelley, David. *Yaratıcı Özgüven*. Çev. Pınar Şengözer. İstanbul: Optimist Publication, 2018.
- Lowenthal, David. *The Past is a Foreign Country*. Cambridge: Cambridge University Press, 1985.
- Simon Se’né’cal vd. “Modelling Life Through Time: Cultural Heritage Case Studies” *Mixed Reality and Gamification for Cultural Heritage*, ed. Marinos Ioannides • Nadia Magnenat-Thalmann • George Papagiannakis, Cham: Springer, 2017.
- Türk, Mehmet Sezai. *Algı Yönetimi ve İletişim: Algının Ötesinde Bir Gerçeklik Var mı?* Ed. Bilal Karabulut, *Algı Yönetimi*. İstanbul: Alfa, 2014.
- Vargün, Özlem. *Kültürel Miras Eğitiminde BİT’in Rolü ve AR Mobil Uygulama Projesi*. *Yayımlanmamış Doktora Tezi*. İstanbul: Yıldız Teknik University, 2020.
- Wombell, Rebecca Hardy. *Can Digital Technology Help us to Learn to Look Slowly?* (2021) 01.01.2022, t.ly/F2pw