# VIRTUAL MUSEUMS IN THE CONTEXT OF VIRTUAL REALITY AND SIMULATION

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#### **ABSTRACT**

In this study, the subjects of "speed of technological development" and "transition of museums to the virtual environment" are discussed in the light of virtual reality and simulation. Initially, the concepts of virtual reality and simulation are explained, then museums in the virtual environment are evaluated. The subjects are discussed in general terms rather than classical definitions, and their connections with museums in virtual environment are presented. In the second step, some predictions are made with respect to its reflections in the future and the social transformation is focused. Later, the study is exemplified with The Museum of Innocence of Orhan Pamuk and Women's Museum Istanbul.

Keywords: virtual reality, simulation, new media, virtual museum, museum

# SANAL GERÇEKLİK VE SİMÜLASYON BAĞLAMINDA SANAL MÜZELER

## ÖZ

Bu çalışmada teknolojinin gelişim hızı ile müzelerin sanal ortama geçişleri sanal gerçeklik ve simülasyon konuları ışığı altında incelenmiştir. Sanal gerçeklik ve simülasyon konuları öncelikli olarak açıklanmış ardından sanal ortamdaki müzeler için bir değerlendirme yapılmıştır. Klasik tanımlamalardan daha çok konular genel hatları ile ele alınmış, internet ortamındaki müzelerle bu anlamda bağ kurulmuş, gelecekteki yansımalarına dair öngörülerde bulunulmuş ve toplumsal dönüşüm üzerinde durulmuştur. Çalışma Orhan Pamuk'un Masumiyet Müzesi ve İstanbul Kadın Müzesi örnekleri üzerinden açıklanmıştır.

Anahtar Kelimeler: sanal gerçeklik, simülasyon, yeni medya, sanal müze, müze

# INTRODUCTION

Technology, which has existed since the beginning of humanity, emerged out of needs. Biological necessities have led to the invention of technology and technological devices. While tools like slingshots, arrows or clay tablets were considered as technological advances in the beginning of history, inventions like printing press, radio, telephone and television are among the technology of today. Technological advances in the field of communication and data transfer, which are the most important fields of human life, have led to outstanding inventions. The most important technology of the modern times is computer and the internet. The internet has not only brought speed and innovations to the flow of communications but also has become an abundant platform for various improvements for other aspects of life. Technology has advanced with every new development in life and every technological invention has transformed and evolved cultures in time.

Computers and the internet have also improved in parallel with the advance of technology and started to have an impact on every aspect of life. It is now possible for everyone to access data and store it whenever and wherever they want now that data is digitized and transferred to the internet. Today, almost everything is open to public in the virtual world.

The internet, which is unprecedented in terms of its ability to exceed boundaries, has managed to globalize cultural life as well. The internet's cultural role has not only enabled the development of new types of social and individual relationships, new identities and cultural

forms, but also led to the creation of a globally recognized and homogeneous culture. (Binark 2007: 177)

In order to be more visible in an environment of competition, to serve people more efficiently and to be more accessible, many fields have started to exist on the Internet. Museums are also taking the advantages of technology to keep up with the times. There is now a virtual world based on an entirely new plane, which is beyond the concepts of time and space. In this way, museums now have a new presence on the internet, aside from being physical places like many others. Additionally, there are now museums that only exist as virtual museums and serve online visitors without existing in a physical environment.

The rising development and evolution of technology has created a world that includes the user in itself. Users can experience the same things and even more than what they experience in real life. Museums on the internet have created a secondary field through the resources they provide to the users/visitors and have enabled them to see the works of art on a virtual platform. Today, this secondary field is only a small alternative and it is limited. However, as virtual reality improves, it will be possible to talk about a hyper reality that allows people to experience a real museum and do even more. The speed of technological advances confirms this prediction. When online space transforms into hyper reality the distinction between a physical museum and online museum will disappear. We can quote Jean Baudrillard's theory of simulation at this point: "Simulation is no longer that of a territory, a referential being, or a substance. It is the generation by models of a real without origin or reality: a hyperreal." (Baudrillard, 2014: 14) The museum on the online platform will be hyperreal, or become a simulation and go beyond the real from which it generated. Moreover, as the real gets copied "reality" becomes transparent and simulations replace the real and obliterate it.

Virtual world allows the user to reach the necessary data by bringing the knowledge at their fingertips. However, another important point should be mentioned is the emergence of the term "Information Society". "Melody defines an information society as one that has 'become dependent upon complex electronic information and communication networks which allocates a major portion of resources to information and communication activities." (McQuail and Windahl, 2010: 249) Computerization has revolutionized communication and there has been rapid increase in productivity. Therefore, information has spread and distributed widely and intensely. "The capacity to produce information has far outstripped the human capacity to receive and process information." (Mcquail and Windahl, 2010: 251) People are exposed to more information than they can consume and process because of easy and on-the-spot access. Therefore, instead of permanently processing data in the memory, a trilemma of "access-watch-delete" arises. Information is now stored in digital environments rather than memories. If we evaluate the issue of museums in on the virtual platform in the context of information overload, users of a virtual museum can easily and quickly visit one museum or even more than the visitor of a real museum. Thus, they become exposed to over information and there can be problems in processing data. However, as we are living in the age of "Information Society" or "The Age of Speed", the fact that information is accessible and circulated by everyone without discrimination requires the internet to be in the center of many aspects of our lives.

Virtual museums bring new issues into question, aside from fulfilling the basic need to keep up with new technologies. In this study, virtual museums are reviewed in the context of virtual reality and predictions are made about the possible repercussions in terms of simulation.

#### VIRTUAL REALITY AS A NEW TERRITORY

Today, technological tools and facilities, which are among the most important needs that make life easier, improve and transform more rapidly than the past. It is now difficult to keep up with and be able to follow and use the latest technology, which has been gaining momentum with the help of computer and the internet. The latest version of a technological device or utility is released before the previous one gets old. Therefore, it is possible to call this era "The Age of Speed" as many theorists do.

Each era is classified with names in respect to the course of life. However, this classification represents the areas in which societies and cultures have improved or transformed. Electronic utilities of today are used widely and actively in almost every aspect of life. Manuel Castells, the theorist of the power of communication, has said "The emergence of a new electronic communication system characterized by its global reach, its integration of all communication media, and its potential interactivity is changing and will change forever our culture." (Castells, 2008: 441) Thanks to the global reach of the internet, everyone is capable of accessing an intense communication media without the limitations of time and space. Thus, the societies and cultures transform and evolve. When Castells approaches this issue from two perspectives and mentions that "Interactive computer networks are growing exponentially, creating new forms and channels of communication, shaping life and being shaped by life at the same time." (2008: 2-3), he underlines the fact that technology also grows in this fashion. As people now live in a highly interactive environment rather than a closed circuit, technology will affect its own growth, just as it affects interactions between people.

Technology is mostly influenced by momentum and the internet possesses almost all the necessary means for the age of speed. Elements like "timelessness, spacelessness, instant feedback, instant access and ease of multiple interactivity" can be counted among these. Virtuality, which makes up the foundation of this study, is the source of these elements. People can access data, interact with others, and receive feedback instantly anytime and anywhere through the virtual environment which has emerged with the internet.

If we look from a cultural and social perspective, the age of speed has an aspect which can be considered both good and bad, depending on the use and perspective of the use of virtuality: "Information Society". The term is used for the post-industrial society. What is meant by this term here is the society that engages in one-way or two-way interactivity by using interactive communication networks and multimedia facilities in the electronic system. The information society theory also indicates a point which should not be overlooked. When McQuail and Windahl (2010) mention that "The information society does not mean the same thing as more informed society" they underline the fact that people are far from knowing how to deal with infinite amount of new information (also known as information overload) which is being produced and distributed. The high point here is the fact that two-way communication, which did not exist before, is now present in the system. Only by increasing the options can the two-way communication be incorporated.

Through the internet, we can now have quick and unlimited access to information, which used to have limited access and was impossible to reach because of geographical distance in the past. This can be considered the positive aspect of the information society. Information then becomes common property of humanity, is easily improved and transformed, and enables societies to grow. However, as part of the negative aspect we can ask the question: What will people do with infinite information? As it is impossible for humans to store all the information in their memories, they will resort to storing the information in artificial machines and maybe never feel the need to go back and process that information again. Additionally, reaching the right information in a repository of information overload can be considered another negative aspect that causes difficulty.

Technology is improved and updated in line with the supply and demand equilibrium. Efforts are made to go beyond in order to take part in the competition environment. New ways of influencing and immersing the user to the virtual environment and offering the user to go beyond are being sought in the internet technology. Aside from the virtually created environments, physical environments are also creating a secondary domain on the internet. They are trying to create structures that are as similar as possible or even better than the physical ones to impress more. An increase in similar cases will make the line between the real and the virtual thinner and maybe even eliminate concrete realities.

We can talk about the topic of the real and its reflection regarding Baudrillard's theory of simulation. Simulation is the reproduction of the operation of a tool, machine, system or a phenomenon in order to examine, demonstrate or explain, using a model or a computer program. "Simulation is characterized by a precession of the model, of all the models based on the merest fact." (Baudrillard, 2014: 35)

Certain areas-phenomena are constantly updated with an urge to do better to keep up with the speed of technological developments aside from moving into the internet in order to be more accessible, keep up with the new technology, be more visible in the competition environment. Besides, there are now new domains based on on physical models that only exist virtually. In this way, even though they are limited today, they will eventually become the exact copy of the original representation which can easily be applied in the future. They will even be more improved and go further than this, becoming indistinguishable from the original and eliminating it in time. A simulacrum (a representation that wants to be perceived as reality) contains much more and further than the original and has more possibilities, thus replacing the real itself. On simulacra, Baudrillard suggests: "The real is produced from miniaturized cells, matrices, and memory banks, models of control -- and it can be reproduced an indefinite number of times from these. It no longer needs to be rational, because it no longer measures itself against either an ideal or negative instance. It is no longer anything but operational." (Baudrillard, 2011: 3) When the distinction between the real and its simulacrum vanishes and simulacrum replaces the real, which is applicable to certain matters and phenomena of today yet is still limited in technological facilities in terms of reaching the public, it is obvious that we will be living in a different world as certain phenomena falls apart at the seams. As a matter of fact, to draw attention to this issue Baudrillard asks, "Now that we destroyed the real world, what are going to call the rest?" (Güzel, 2015: 69)

Even though the data network on the internet is limitless and the possibilities of the virtual world increases we cannot consider them as simulation. For example, when we compare a real store and an online store, the online one is not completely simulated as the customer is aware of what is real and what is virtual. The distinction is still clear. One needs to approach the emotions to eliminate this distinction. The customers need to stop being aware of their surroundings (where they connect to the internet such as home, office, outside location, etc), experience the feeling of walking in a real store and have something similar to in-store interaction. We need to look into the content of the term "Virtual Reality" and reach its opportunities in order to make these happen.

"Virtual reality is not real but it is experienced as something real." (Erdoğan and Alemdar, 2010:323) William R. Sherman and Alan B. Craig define virtual reality as "A medium that allows us to have a simulated experience approaching that of physical reality" (s.10). In an article published by Vienna University of Technology, virtual reality is described as "A clone of the physical reality." (Mazuryk and Gervautz, 4) Virtual reality is the environment that allows the user to have experiences that are artificially created but can be lived in real time and more. According to Sherman and Craig, there are four elements in the term virtual reality: a virtual world, immersion, feedback and interactivity. According to them, a virtual world is a description of a collection of objects in a space and the rules and relationships governing those objects. Immersion is the feeling of actually being present instead of observing from the outside. Sensory feedback is the accurate sensing of the user's sensory data about their position, location and actions. Interactivity is the virtual world's ability to communicate with the user's actions regarding browsing, objects and characters. In order to explain something created in the virtual environment to be explained and evaluated with the concept of virtual reality, it needs to be in accordance with these elements.

We know that virtual reality is not exactly used where it can be applied. However, this technology will be used more widely in the near future, considering the speed of technological developments and how rapidly technology is followed by people. There are important points that must be evaluated. The concept of virtual reality has many positive qualities, such as practicing medical operations, producing creative artworks, pilot simulations, more accessible practices in education or ease of communication. It also eliminates geographical distances (bringing far closer) and the concept of time (timelessness and synchronicity) and offers more opportunities than a physical entity. On the other hand, from the point of view of Baudrillard's theory of simulation, virtual reality can also be regarded as a threat that might "eliminate the real", as it creates a universe of simulation with its opportunities. It is important for users to have consciousness about the usage rather than opposing it altogether. While virtual reality practices play a vital role in our lives with its strengths, it might also be inclined to make people dependent on machines by improving the human-computer relations.

# Virtual Museums in the Context of Virtual Reality

The advance of the internet has brought along technological developments that allows us to have audio, video, image and text, or multimedia, in the same platform. Aside from multimedia, dual or multiple interaction-communication, customizable contents, ease of use are offered to the user through the current technology. Today, many museums take the advantage of recent developments and serve users on the internet. ICOM website defines a museum as "a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment." (http://icom.museum/the-vision/museum-definition/ Date of Access: 6.01.2017)

However, there have been variations in the traditional understanding of museums and museum environments with the advance of technology. Museums have launched websites to promote themselves and inform people with the intention of keeping up with the technology and having better service. They have also started to find alternative ways to exhibit the collections to their audience using the new developments. Therefore, concepts of online museum and digital museums have originated and these concepts have been defined in various ways. There have also been other innovations such as 360° virtual tours which allow user to gain easy access. Now, as museums keep up with the latest technology they can allow new practices that used to be impossible in the past. Visitors can have access to the museum from anywhere, be informed, examine and learn more about certain artworks or even all of them.

"Google Art Project" is a remarkable platform that can be given as an example regarding online museums. This project is a rich resource on art history, art events, artists and artworks, and it also hosts online exhibitions and museums.



Image 1: İKSV - The Museum of Innocence - Url 1

"The Museum of Innocence" is a good example of online and digital museums. This museum is entirely fictional and it is based on 2006 Nobel Prize of Literature winner Orhan Pamuk's novel with the same title.



Image 2: The Museum of Innocence – Url 2

First visual shows the physical space of The Museum of Innocence. Second visual is the home page of its website. Third visual is the museum's representation on Google Art Project. One can make a point of the museum's narrative of serving and reaching people based on these three visuals. Different displays of the same museum may create different reflections by breaking its uniformity. Narration has been shaped by presentation, service and access and new fictional fields have been created.



# Masumiyet Müzesi

Türkiye

Masumiyet Müzesi, Orhan Pamuk'un hem yazdığı bir roman hem de yaptığı bir müzedir. Pamuk 1990'lardan itibarer romanı ve müzeyi baştan beri birlikte düşündü. 1974 ile 2000'lerin başı arasında geçen aşk romanı, biri zengin diğer orta halli iki aile üzerinden geçmişe dönüşler ve hatıralarla birlikte 1950-2000 arası İstanbul hayatını anlatıyor....

DAHA FAZLA BİLGİ

51 öğe

Düzenleme ölçütü:

Image 3: Google Arts & Culture – Url 3

The Museum of Innocence in given as an example because it is a fictional museum based on the novel. A novel creates an illusion of reality in the reader's mind depending on how powerful the story and the author is (which can also be called virtuality in the mind). Orhan Pamuk has gone beyond this illusion of reality and created a museum depending on the elements of the book by collecting various objects from around the world. He has also taken advantage of technology and created a website to promote the museum and the merchandise. He has taken the principle of reality a step further and created a platform on Google Art & Culture where visitors can take a virtual tour of the museum, closely examine the pieces and read the author's various anecdotes. In the light of these examples, we can understand the impressiveness of the principle of reality.

Regarding the matter of creating reality from fiction, a new museum type called "virtual museum" has emerged with the development of new domains on the internet.

"An application area that is based on content presentation and can benefit from this emerging technology is 'Virtual Museums', i.e. computer generated environments that present exhibit collections from real or fictional museums and aim to educate and entertain users by offering them an experience similar to an actual museum visit." (Bonis, Stamos, Vosinakis, Andreou and Panayiotopoulos, 2008: 139)

"A virtual gallery essentially comprises two aspects: the recreation of a spatial experience, which is traditional of virtual reality applications and the dis play of high quality images within it." (Cavazza and Mend, 2001: 590) Even though there is still not an exact definition of virtual museum, it is widely accepted that virtual museum does not derive from a (nonexistent) physical museum but is a separate museum in itself.



Image 4: Women's Museum Istanbul – Url 4

Women's Museum Istanbul is the world's third and Turkey's first women's city museum that exhibits important women figures from all cultures and time periods. It is an entirely virtual museum and does not have a physical space. It is a good example of a virtual museum in this sense.

However, we can use the term "virtual" for everything that has been transferred to the internet whether it has a physical existence or not, as the internet is also known as the virtual environment. After all, virtual museums are not necessarily a reflection of physical museums but they are inspired by museums which have physical spaces. The aim of this study is not about these distinctions but about the facilities of the presentations on the internet and the illusion of reality they create. Below is a table about these visuals:

Table 1 Elements of virtual Reality in The Museum of innocence and women's Museum Istanbul				
	Image 1	Image 2	Image 3	Image 4
PHYSICAL SPACE	YES	YES	YES	NO
VIRTUAL TOUR	NO <sup>1</sup>	NO	YES	YES
REAL TOUR	YES	$NO^2$	YES	NO
SHOPPING	YES	YES	NO	NO
APPEAL TO SENSES	YES	YES – VERY	YES - LIMITED	YES - LIMITED
		LIMITED		
IMMERSION	YES	NO	YES - LIMITED	YES - LIMITED
ILLUSION OF	YES	YES - VERY	YES - LIMITED	$NO^3$
REALITY		LIMITED		

Table 1 Elements of Virtual Reality in The Museum of Innocence and Women's Museum Istanbul

As can be seen above, none of the visuals have straight "YES" in their columns. When these elements and more can be found in a museum and the boundaries are removed, the illusion of reality can be created along with appealing the senses and immersing the audience. Therefore simulation can be achieved with virtual reality.

The most important aspect of the museums on the internet is the fact that their access is unlimited whereas a real museum can be accessed by only a number of people. There is also no limit on visiting hours. Therefore, museums on the internet create a new "timeless and placeless" environment. This is a very important aspect as users/visitors will immediately embrace this innovation in our increasingly computer based age. The internet environment has increased the desire and possibility to invest in the internet as it addresses the user directly. It is obvious that online, digital or virtual museums that live on the internet will appeal to more senses with their illusion of reality and attract more visitors. As Tjahjawulana and Sabana suggest,

"Now reality is not just to be told, represented and extensively spread, but furthermore it can also be created, engineered and simulated, and even it is able to create new reality using menmade images, manipulation of fantasy, illusion and even hallucination and turns it into reality" (2005)

It can be seen that technological race and speed play a crucial role. Recreation and simulation might mean creating a separate museum/area. Based on the idea that each simulacrum annihilates the real, in time it will be clear whether virtual museums will annihilate the physical museums, as virtual museum is derived from physical museum. However, we cannot call the virtual museum as a simulacrum as virtual museums cannot exactly be created in the context of virtual reality yet. Therefore, physical museums will remain to exist until this can be achieved. Even though we cannot evaluate virtual museums in the context of virtual reality yet, it can clearly be seen that a switch to virtual reality is possible in the near future when we look at the advantages of virtual museums over real museums.

<sup>&</sup>lt;sup>1</sup> No virtual tour in the place, only in Google Art Project.

<sup>&</sup>lt;sup>2</sup> No tour in the website, only in the physical space.

<sup>&</sup>lt;sup>3</sup> Exhibiting true stories of women may give the illusion of reality in line with the museums aim but there is no illusion of reality in the environment.

**Table 2.**<sup>4</sup> The Comparison of Virtual Museums and Physical Museums in the Context of Virtual Reality

Qualities	INTERNET MUSEUMS	PHYSICAL MUSEUMS
Access	Unlimited	Limited (geographical distance, physical disability, lack of time and money etc.)
Interactivity	Unlimited (ability to zoom into the artwork, interacting with other visitors in the comments section)	Limited (limited approach to the artwork and limited interaction with other visitors)
Arrangement	Unlimited and Easy (arrangement of the space, changing the place of the artworks, adding and removing artworks)	Limited and Difficult (arrangement of the space, changing the place of the artworks, adding and removing artworks)
Number of artworks	Unlimited (artworks in the storeroom that cannot be displayed because of their value and fragility or limited space)	Limited (artworks in the storeroom that cannot be displayed because of their value and fragility or limited space)
Time of visit	Unlimited	Limited (opening and closing hours)
Visiting route	Individual	Semi-individual (museum route, guide etc.)
Visitor profile	Easy to specify	Difficult to specify, inconvenient
Feedback	Easy, instant	Difficult, in time
Universality	Unlimited	Limited

Considering that virtual reality and simulation allow the visitor to experience both the real and beyond the real, these qualities prove that we are close to a simulated museum environment. Virtual museums may also "enhance traditional museum visits by offering the ability to adapt, expand and personalize the artifact collections." (Bonis et al. 2008) Therefore, visitors can be attracted to the virtual environment more than the more limited physical museums. By arranging the collections, visitors can see the museum from different perspectives, and by customizing they can create the ideal options for visiting, examining and researching the museum. Besides, visitors can take an online tour of the museum to learn more about the museum before visiting in person which allows them to visit the real museum more properly and consciously. This way, cultural interactivity and cultural level of the society increases, which can be considered an important step towards the raison d'être of the museum. Culture becomes more portable and accessible and the innovations on the virtual platform "bring huge and fundamental change in social and cultural order at global scale and change the meaning of society, community, communication, social interaction and culture." (Tjahjawulan and Sabana: 2005: 40) The universalization of culture is essential for more individuals and the society to meet in the middle and interact with each other.

As mentioned above, virtual museums cannot be considered within the scope of virtual reality and simulation yet, as the visitor is still aware of the distinction between the virtual and the real. More immersive practices should be developed in order to minimize or eliminate the distinction. The audience can be integrated into a simulation and this simulation can walk around museum, controlled by the audience's movements. This practice is now used in some video games. Virtual environment, appealing to senses, being present in the place and detaching from the current location are among the

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<sup>&</sup>lt;sup>4</sup> The article "Creating Virtual Exhibitions for Educational and Cultural Development (Dumitrescu, Lepadatu and Ciurea, 2014) was used in some parts of the chart.

features that can be offered by using these methods. In addition, the visitor can interact with other visitors by filtering the region, age or gender and exchange information with them. Visitors can be ranked by others in certain categories through a ranking system. Other practices can be added to integrate the visitor in the system and encourage them to visit more museums and have more intense cultural exchange. Similar practices can be included in the system. When we consider these aspects, virtual platform makes culture/information the universal possession of humanity with is timelessness, spacelessness, universality, limitlessness, customizability and the illusion of reality.

On the other hand, when virtual museums become improved with virtual reality and are offered to public it may become dangerous in terms of causing physical places to be abandoned and making people addicted to machines and deprived of natural environments. When the visitors can experience the facilities of a physical museum and even more with the help of technological applications they might lose the urge to go to the physical space. This might cause "visitors estranged from the place-places without visitors". Virtual museums might cause physical museums to become extinct or isolated as there cannot be a museum without visitors. Considering these assumptions, precautions need to be taken to prevent the extinction of physical museums and protect the existence of virtual museums in the context of their benefits.

# **CONCLUSION**

Museums that provide services on the virtual platform have a new and expanding field thanks to the speed of technological developments. Aside from the many opportunities they offer to users, there are some hypotheses that can be considered disadvantageous as their future state cannot exactly be predicted. Even though virtual museums are areas developed in the light of technological advances and derived from a physical entity, they cannot be considered in the context of virtual reality. However, it is possible that they will serve in the context of virtual reality in the future and then they can be considered as simulacra. In this case, people may lose interest in museums that depend on spaces and become addicted to the virtual platform.

Virtual environment serves the user by eliminating the problems like geographical distance, physical disability, lack of time and financial resources. Any user with the internet access can easily visit a museum, stay as long as they want and examine the artworks however they like. Interactivity establishes a ground for a homogenous culture by allowing the user to communicate with others. Users visit the physical museum more efficiently after visiting the online museum and being informed. Museums, which are dependent on physical spaces, have gone from being local to global, this way they have come closer to the user's living space. Accessing information in compliance with the qualities of the age of speed as "Information Society" is another important point.

It is clear that virtual museums will be considered in the context of virtual reality as they become more improved. They need to appeal to all five senses to be perceived as virtual reality. The users should perceive the same things they perceive in a real museum with their five senses. They should separate themselves from where they are feel like a part of this new reality. They should feel the illusion of completely being present in this new space. However, it is understandable that some precautions need to be taken as a simulation carries the risk of eliminating the real. Baudrillard gives the example of natural parks and botanical gardens which are created to preserve animal species by allowing them to breed. These areas are not natural, they have been constructed, yet they have replaced the original and appear as indistinguishable twins. "[They are] ...presented with transparent precision totally lacking substance, having been derealized and hyperrealized." (Baudrillard, 2014: 173) From this perspective, once they are in the virtual reality system, virtual museums will appear as a twin of physical museums and even become a hyperreality by offering much more. As hyperreality is a step beyond the real, it will turn the real into fiction and eventually annihilate it.

There are a few more points to consider as information has come as close to as our fingertips. One of them is the state of humanity that will enter a virtual reality system. According to an expert quoted in an article by Interactive Advertising Bureau:

"Virtual Reality will change the world for all of us as individuals, and also for other industries and businesses. It will radically improve the way we access information, open up new experiences, and make things that we are doing today much more efficient." (2016: 12)

Therefore, information will transform much more rapidly than ever before and developmental evolution of societies will be faster. However, this ease of access and each area's efforts to be integrated on the internet may cause information overload. The distribution of information, which used to be limited, has been increasing rapidly. Users are exposed to too much information while searching for the right information and picking out what they need. Humans are inclined to turning into beings who can easily access information but also become more isolated. They can interact with the world but lose ability to have face-to-face interaction.

In the light of all these arguments, both the virtual museums of today and virtual museums in the system of virtual reality of tomorrow now offer and will offer a wide variety of resources to users. On the other hand, physical museums are under threat of becoming extinct in the future. In this context, it is necessary to remove this threat, take advantage of new formations (virtual platforms) as much as possible, solve the problems to ensure that both can coexist in newly created areas, find new ways with creative thinking and find solutions to prevent the visitor from detaching from both fields. New ways of presenting remarkable artworks can be sought, both in virtual and physical context. Various game-like techniques directed towards the perception of the audience can be implemented. The participatory impact should be used in both contexts, like we see in exhibitions, and different experiences should be used to ensure variety. Technologically supported light-shadow plays which can be seen in virtual reality museums can also be exhibited in physical museums, creating a more interesting magical environment. Innovations like these should be made using various techniques that will lead to different results in the user's perception in both contexts. In short, museums with physical space should create immersive and magical environments and regularly update them to compete against the attractions of the visual platforms.

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