

The Exhibition Space through the Presence of Digital Games

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Abstract

The purpose of this work is to think about the exhibition room (gallery) based on the presence of digital games. This proposal is a specific development of a research project that studies the exhibition space towards the presence of digital technology. In order to achieve the goal, we will focus here on the Interactive Space of Life Sciences (EICV), which is part of the Museum of Natural History and Botanical Garden of UFMG, in Belo Horizonte/MG. Specifically, this article discusses the exhibition space and its curation when digital games are shown in it. Considering that, we debate about the configuration of the contemporary exhibition space, bringing up the relation among art, digital games, technology and science.

Keywords

Digital Games; Digital Art; Exhibition Room; Arcade.

Introduction

This work aims to study the exhibition room based on the presence of digital games. In order to achieve the goal, we will focus on the Interactive Space of Life Sciences (EICV), which is part of the Museum of Natural History and Botanical Garden of UFMG, in Belo Horizonte/MG. Thus, this article discusses the role and the curatorship features in exhibitions that show digital games.

The EICV is an exhibition space which focuses on the knowledge about the human body. Its proposal has been following the trends of Science Museums not only in Brazil but also in the world by using digital technologies as a way to bring the new generations to the scientific knowledge in a playful way. In such a way, spaces like that aim to provoke in children and young people some interest in science, knowledge, as well as involve them in the scientific field.

The space consists of seven rooms: 1) senses; 2) to feel, to remember and to act; 3) body and movement; 4) heart and circulation; 5) digestion and nutrition; 6) reproduction; cell at hand.

According to the curator Fabrício Fernandino, in

Catalog of Conception & Construction of the Interactive Space of Life Sciences:

(...) the *Interactive Space of Life Sciences* is a project that was implemented in Belo Horizonte, Minas Gerais and gathered the efforts of three major institutions and was a work developed over five years that brought together a lot of creativity, technology and determination to be implemented. (...) The structure was born with the proposal of presenting to the public the functioning of the human body, in a playful, digital and participative approach, a museological trend that is being followed in several museums in Brazil. The EICV has seven representative rooms of the cell and the physiological and biophysical systems of man - besides the reception, where the visitor is already in contact with the first structures on display. Each room deals with one of the subsystems of the organism (...) (FERNANDINO, 2013, pp. 5-8)

The exhibition is made of anatomical models, 2D and 3D animation videos, as well as interactive digital installations and digital games. The exhibition design is composed by the instructions in the screens and projections of the digital works, information totems and plots in the walls and the floors. By using these elements, the visitor is invited not only to see the exhibits, but to participate in them and to be registered by them during the interaction (Figure 1).

The great news about the place is that all the digital pieces were created exclusively for their permanent exhibition, composing a whole projected through research and development.

The work was developed by research groups, professors and researchers who thought the space up together (More information can be found at: <http://www.mhnpj.ufmg.br/eicv/eicv.html>).



Figure 1 Screen of *Digestion Game* Source: Research database and EICV

Related works

This proposal is a specific development of a research project that studies the exhibition space towards the presence of digital technology. In addition, it is the result of the reflection originated in the Laboratory of Front Poetics (CNPq/UEMG – <http://labfront.tk>).

As this work is a cut of the project, it will focus only one exhibition space: the EICV. In this way, it will not analyze and compare the exhibition spaces in its use of digital technologies with the exhibition spaces that do not use them.

As the EICV was inaugurated in 2013, there are no studies on it yet. In addition, the discussion on the exhibition spaces formed by digital technology is recent. We have, for example, the works of Fabbrini (2008), Paul (2008), Santos (2010; 2012) that deal with the issue of exhibition space and new technologies, besides some of those papers undertake the debate from the curatorship issues.

Between exposing and playing

Technology and Exhibition

The contemporary context allows the formation of new fields of knowledge. This work comprehends a reflection that combines the issue of the exhibition, and its expography, with digital technology. Contemporary digital technology, and its relation to art and culture, is a consequence of almost two centuries of approximations, separation, controversy and confrontation.

Knowing that the common idea between technology and art is at the origin of the word “technology” and the idea of “art” (from the Greek *techne*), we can assume that It is not by chance that we have been seeing the

expressions of culture and technology merging into a common construction to all in the globalized context more and more each day.

In the nineteenth century, more precisely in 1826, with Niépce and Daguerre, the technique of fixing images using light was achieved as photography (written with light). This technical base has become, over time, also an artistic base. Because of that it was possible to form two fields of action. The first field, of industrial interest, would allow the sale of the equipment known as “camera”, and in its use, it would allow the possibility of reproduction of the photograph.

The second field, of artistic interest, allowed new ways of working the image through the technique of reproduction of what is seen. If before an artist used to make a lot of effort trying to reproduce another frame from the skill acquired with his hands, with the camera the reproduction became easier as the technology has been improving (BENJAMIN, 1987a; 1987b).

With the Lumière brothers cinematograph at the end of the nineteenth century, it was created not only the possibility to fix the image but to give those fixed images the impression of movement (CARRIERE, 2006; EISENSTEIN, 1990). The fixed images by machine have begun to move and the arts have remained in crisis towards the emergence of those new techniques, enabling new ways of thinking art and its role. But the advancement of mechanical reproduction techniques, as we can see, has made possible new forms of **exhibition** since its beginning.

Another form of exhibition of images (XVIII and XIX centuries) was studied by media archaeologist and theorist Erkki Huhtamo (2013, p. 35). In the book *Illusions in motion* the **peepshows** appear as hardware that people can put images inside: like software inside a machine. Peepshows invite spectator to see your images and made their body change to adapt to a specific way to see “what’s happening” inside the machine.

In twentieth century the technological evolution continued with television, which emerged from the patent registered by Vladimir Zworykin (1923/1924) establishing itself as the beginning of an entertainment industry. With the evolution of the industry we got to know a more accessible way to record and reproduce what was produced: the video (MOTA, 2001; 2010).

Video means “I see” in Latin. That meaning is not by chance. The evolution of the video has an intimate relationship with what was called by Walter Benjamin, in

the third decade of the twentieth century, of technical reproduction. For him technical reproduction, as a technological evolution, allowed not only more people to know the art, but also brought people closer to that world, reducing the separation that existed between those who make art and those who appreciate it.

Technical reproduction is the possibility of making indefinite copies of an artistic object. And more than that, in the case of film and video, it is a primordial mode of those forms of expression, because to see (and expose) the product (in that context) it is necessary to copy and reproduce it.

Video, as an evolution of those new technologies of the nineteenth and twentieth centuries (photography, cinema and TV), becomes a representative technique of the culture of the second half of the twentieth century (DUBOIS, 2004), the culture of the media. Surviving to the present day, and with the advent of digital, that cultural formation has started to compose a digital culture.

For Lúcia Santaella, when thinking about media culture, we have to: With the emergence of equipment and devices that enabled the emergence of a culture of the available and the transient: photocopiers, videocassettes and video recording devices, walkman and walktalk equipment, accompanied by a remarkable industry of video clips and video games, along with an expansive industry of video films to be rented at video stores, all culminating in the emergence of cable TV. Those technologies, equipment and the languages created to circulate in them have as main characteristic to offer individualized choice and consumption, as opposed to massive consumption. (SANTAELLA, 2003, pp. 26-27)

In this context, the lower cost of equipment in the digital culture, and the access to those equipments allowed them to be modified for other uses. As photography is used today to make 3x4 photos and at the same time we have artists like Sebastião Salgado taking their images in his exhibitions around the world, the computer is used to perform digital art. At the same time, knowledge exhibition spaces use digital technologies to promote culture, science and technological innovation.

The idea of exhibition is inaugurated, in a modern way, with the Universal Exhibition in France (as well as in the United States and England) in the nineteenth century. Brought up by Walter Benjamin in his work called *Passages* (BENJAMIN, 2007), the exhibitions -

or the great art salons from which they originated in a sense - had as their role exposing the art made during its time, and from earlier times, to artists and critics by establishing new canons and artistic paths.

Universal Exhibitions did more, according to Benjamin. They made it possible to place, in the exhibition space, objects that were not exposed: the creations of the industrial revolution.

It became possible - and common - to display wonderful machines that would make the job easier and would be present in factories soon. Also, incredible productions of the human being with the use of the machine were exhibited.

At the same time of that change, the artistic vanguards of the early twentieth century also problematized the artistic exhibition space. Due to the happenings and various interventions, there was a rupture with the classical spaces of art, whether those of visual art that erupted into people's daily life, the musical art that could be conceived in people's day by day and with the participation of the public, or of the theater which happened to have moments of intervention beyond stage, incorporating the spectators as object of its execution.

These events pointed out as something strange to their time. According to Giorgio Agamben (2009), the notion of contemporary has an intimate relation not with the idea of actuality, but with the notion of nonactuality. For the author, that which is contemporary is what is formed as non-actual. While nonactual and existing at the same time as people of its time, the contemporary is able to see that time more skillfully by being in a privileged place while making up its difference. In this way, the artist and his work, when nonactual, reach a space of reflection on their time.

Unlike Agamben, and specifically thinking about art, the philosopher Arthur Danto (2005; 2008; 2009) considers that contemporary art has as its main contribution to its time the composition of a class of philosophical artists. That means that contemporaries are precisely the artists who through their work are reflecting on the world and what composes it.

The fast availability of digital technology in various sectors of society is something that surprises people, just like artists - and Walter Benjamin himself! - were amazed at the exposed capitalist industry products such as the work of art in the nineteenth century and earlier.

The surprise becomes smaller every day, especially when people start to get used to the touch screens, with

the various sensors that identify the movement and proximity of individuals, sensors that map their bodies as in biometric technologies etc. The multiplicity of digital devices causes the usage and prior preparation, as well as the taste of people for them.

It seems inevitable, considering the ability of artists to reflect their time and the emergence of digital technology and its various devices, that the technology appears not only in works of art but also in the various places in the society. It remains to study the modifications that the emergence may or may not provoke from the exhibition space.

New Exhibition Spaces

At the same time that material means allowed the appearance of digital reproduction modes, the advent of a large number of new exhibition spaces in contemporary society is related to the evolution of material conditions and the access that it brings to the new digital goods (BRUNO, ARAÚJO, 1989; SANTOS, 2010; 2012; OBRIST, 2010).

Due to the technological advance, the public space for exhibition (whether made up of private or public funds) has become the scene most recognized by the people. Not only the museum as a place of exhibition, but all public spaces mingle with the private (and vice versa) inciting what had already happened with the arrival of modernity.

The “appearing” in contemporary space generates a greater interest of people for what was, rather, the domain of the private. Then the memory, something exclusive of who constitutes it, becomes an important object of interest of the people. The creation of blogs since the origin of the internet in the 1990s was only the beginning. Memory needs and the search for what was private are now found from the microblog format and as profiles on various social networking platforms. Considering that, it is understandable the taste for biographies and autobiographies, as well as the growth of biographical studies in various areas of knowledge, and the emergence of the genetic critique of artistic works.

Life exposed widely in the digital environment is only the surface tip of the discussion. Surface that shows the subject submitted (sic) to the need to make available his life, whose memories were only his, in the digital public space (GOBIRA, 2010).

Since that, some questions arise, such as: is this overexposure due to digital media only? Is it just a new custom of exposure in the digital environment that

stimulates the appearance of new exhibition spaces in which digital technology is not a mere medium or has a supporting role, but it starts to become a great part of what is understood as exhibition design today?



Figure 2 Gallery of the International Electronic Art Festival (FILE), Brazil, 2015 Source: Research database

As it is known through several studies (KERN, 2011; RUPP, 2010; OBRIST, 2010), the curator is responsible for keeping the collections on display or making them available somewhere to have works exhibited. He is responsible for the organization and constitution of the meaning that carries what is exposed, especially in the relation between the objects that make up the same exhibition space.

The curator, too, is one of the mediators in the relationship between the public and the exhibit and also between the artist and the public (HONORATO, 2012; HOFF, 2013). In this way, we see the immense responsibility of the curator in an exhibition space as well as his importance in understanding the needs of a curatorial project to be constituted each time an exhibition space is established or modified.

It is the curator or body of curators who are responsible for understanding exhibition design.

In the case of the EICV under review, we have the curators David W. Ellis, Fabrício Fernandino and Jeter Jorge Bertolotti who are responsible for not only for the curatorship of the exhibits, but also for the conception and contents.



Figure 3 1980's Arcade House Source: Research database

Thus, when we affirm in this work that the EICV, as an interactive space, selects the play as a central discourse when organizing what is exposed in it, we are affirming that there is, in a way, an exhibition design of the action of “playing”. The exhibition design of “playing” can be, in a way, compared to that of the old and current arcades (and game houses) (Figures 3 and 4).



Figure 4 Hotzone Park at a mall in Campo Grande, Brazil. Source: Research database

Another concept that can correspond with this new reality is “gamification”. The exhibition space influenced by games is in a process of “gamification”. Gamification is understood (2014, p. 510) when we bring mechanics of games to a traditional non-game place. But with this we have to ignore that other places have ludic characteristics.

For this controversial concept that ignores a ludic presence in all human society, as taught by Huizinga (2001), we have an important discussion by the imminent game theoretician Ian Bogost. The scholar

considers “gamification” a “bullshit” because of its major marketing uses (2014, p. 65). From one way or another we can consider the exhibition space with game presence as a gamified place.

The most imperative is to comprehend that we are having modifications in exhibition spaces as not seen before. We have industrial technologies of all types inserted on exhibitions. And we have industrial game technologies inserted in all kind of exhibitions, since art, history until life science, like we have here. It all is changing the way as we see what is exposed just like photography, peepshow machines, cinema, video, television did before.

The Exhibition Space as an Arcade House

In portuguese, the other name to “arcade house” is “fliperama”. The use of the word “fliperama” (arcade house) come from the junction of the word “flipper” with the suffix “rama”, and came up with the electronic (and mechanical) machines of Pinball (Figure 5), in which game balls are struck by a part much like a flipper.



Figure 5 Pinballs Source: Research database

The “fliperamas” (game/arcade houses) are establishments that exposed those machines to consumers to use them. Over the years, the Pinball machines started to live with arcades, electronic machines with video games that have become very popular in many cities around the world. The use of the term “fliperama” (arcade house) to name those spaces became common during the 1980s and 1990s and continued with the advent of digital technology when video games evolved technologically and could be purchased for use on televisions in homes around the world. The use of this term in this work is related to the focus of the study while it is a metaphor

that seeks to problematize critically the contemporary exhibition space.

By stating that an exhibition space such as the EICV is different from a traditional exhibition space, we also affirm that its exhibition design differs from traditional ones. The exhibition design, from what is read in Desvallées (1998), is the inscription in the space of objects or events through the search of a language. Usually, this registration and research is conducted by the curator. Exhibition space, therefore, is the place permanently or temporarily dedicated to the physical (or non-physical) exposure of objects (or events). The role of the curator is essential for the configuration of the senses of the exhibition or of the space itself.

As we all know, digital technologies are increasingly taking part in contemporary social dynamics. Digital machines are “hidden” (ubiquity) in various objects of our daily life: from telephones to televisions, from vehicles to appliances, etc. It was to be expected that the exhibition spaces would suffer that insertion at some point.

That insertion influences the space in order to modify not only the process of exposing but also seeing and existing in that space. If before the visitors were considered like that, we now understand them as interactors, because their enjoyment is based on the interaction with the exhibits. If before his vision about the work was decisive, now it is allied to the other senses, because one hears, touches, and/or is seen by cameras of an interactive installation.

In this way, we are dealing with something that since the end of the 20th century has been called “new intelligence technologies” (LÉVY, 1993), since those new technologies have influenced the way of seeing and existing in the world. When they are included in the exhibition space, they also change their specificities. And in those spaces, they relate to the formation of a new way of interacting with the exhibit. Mainly because the exhibit is often not just material objects, but formed by projections on walls or appearing on screens.

The Interactive Space of Life Sciences, when analyzed as an exhibition space, contains several elements that bring it closer to the “flipperama” places. Their colorful plots on the walls and the sounds of the installations as soon as we enter the environment already explain the first sign of the game environment and provoke in the visitor an immediate desire to know what is exhibited (Figure 6).



Figure 6 Digestion Game, in EICV-Source: EICV's Website

That first impression can be reached by looking at Figure 6 and Figure 7.



Figure 7 Heart and Circulation Room in the EICV
Source: EICV's Website

Even if the EICV was not made up of games like the Memory games, the Digestion Game, the other forms of interaction based on the motion capture of the interaction and response already establish the play element in the relationship between the body of the visitor and those interactive installations. The configuration of a new relationship between the visitor and the exhibit, as in a game, creates a new world, new rules, a reality of its own that is established from the door into that space. The stimulus to the knowledge of this world and its new and particular rules lead the visitor to the world of Life Sciences, the theme of that exhibition space.

In addition to all this, the artistic creation involved in the production of games and the visual production of space (and screens) is an invitation to visitors and

lead to determine the forms of that new world. That image constitution - and why not imaginary? – based on research and artistic production, is performed in diverse teams as necessary on the productions of digital games.

We are facing a technological convergence that makes the exhibition space really look like a game space. The production of that exhibition space also resembles that of the production of digital games for industry, distancing itself from it only in the establishment of a curatorship specialized in the exhibition space of art and/or science.

Final Considerations

The Interactive Space of Life Sciences really reminds us of the well-known game spaces of the 1990s: the “flipperamas” (game houses). As soon as we entered those spaces, with or without visitors, we heard the noise of the arcades and the pinball machines. When there were visitors, in addition to the sounds of the games, we also heard the screams, cheers and taunts of the players and spectators who watched the players beat each enemy or stage.

In the EICV that scene is reproduced during the visits of classes of students or other groups and the interest is proven through the interaction and the playing generating learning. The visitor becomes instigated to build a world view from their relationship with those games and those facilities, from their interaction. The learning that takes place through what is shown by the machine extrapolates in part the metaphor of the arcade and its space in which learning turns to the game itself, its rules, its magic circle (HUIZINGA, 2001).

In an exhibition space of arts or science, we see the learning focused on reflection which is caused by the object: artistic or non-artistic; physical or virtual; ubiquitous or explicit.

The learning does not only concern the direct narrative that the game evokes: that of the spermatozoid process in the game Sperm race; or attaining the completeness of a food pyramid, within the rules of Digestion Game. It is instituted new regulations that serve not only for the game but for the life of the visitor. We see the exhibition space incorporating the game seriously (serious games) in which is essential its relation with society and with what this society produces, researches, studies and with what it has the potential to create.

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