

AN INNOVATIVE NEW MEDIA ENVIRONMENT AS A TOOL FOR EDUCATION OF CONTEMPORARY STYLISTIC HERITAGE

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Abstract

This article represents a Post-doctoral study in the field of digital art and educational gaming. The authors are creating an innovative new media environment with elements of gaming that teaches stylistic trends of contemporary gaming related to their historical antecedents in the era of modernism. This playful environment named Art Space informs the user about the conceptual context of stylistic trends such as glitch, noise, and pixel art to mention a few. In the meantime, it invites the player to act creatively in nine rooms of the environment, to experience the styles and build one's own artefacts. The target audience is students at colleges and high schools with a humanitarian profile. Globally, there is a very limited number of game examples that contain educational elements regarding contemporary art, and there are no games devoted to the stylistic profile of modern gaming. The creation of Art Space has been a challenge because of its specifically artistic concept. The game is entrusted to two new media artists and a researcher of art and cultural theory. The article demonstrates the idea of Art Space as an interdisciplinary project of art, education and technological possibilities that paves the way to a better understanding of contemporary gaming aesthetics in the light of its conceptual background and recent history. Art Space is a tool for illuminating knowledge of contemporary styles and philosophical messages they refer to.

Keywords: Art game, contemporary aesthetics, educational game, new media art.

1 INTRODUCTION

Art Space is an experimental virtual environment with elements of gaming created in the framework of a Post-doctoral project at the Vidzeme University of Applied Sciences in Latvia. It belongs to the fields of new media art, educational gaming, and contemporary aesthetics. Art Space is focused on audio-visual stylistics of gaming and has a unique status since there are no games to date with an aim to communicate the contemporary aesthetic ideas. There are some other edugames that might be considered unique regarding the subject they represent. For instance, theatre [1], comedy [2], noise [3], and theology [4] are rare topics in gaming. Art Space teaches stylistic trends of contemporary gaming that is a previously non-existing subject even though the field of edugaming is significantly large. It is a virtual art academy with nine rooms where the user can wander and build one's own virtual objects as well as be introduced to the historical context of contemporary gaming aesthetics. Each room is devoted to a particular style and teaches its antecedents as well as philosophical ideas. This article describes the creation of Art Space, its technological challenges and solutions found during the process of its realization. The team of Art Space consists of a researcher in humanities, arts, and theory of modern culture, and two new media artists. The team has created a subtle digital environment that embodies the ideas inherited in digital art mainly from the era of modernism.

2 METHODOLOGY

The methodological approach of this research project that has resulted in the concept of Art Space, is the analysis of intertextual sources in the fields of digital gaming, theory of culture and aesthetics, as well as musical scores and audio-visual materials of gaming. The virtual environment Art Space encompasses the results of examination of these sources and the conclusions concerning the references found in gaming aesthetics to the art of modernism. The team has also fused the methods of artistic research [5], and design science research [6]. These approaches do not always require a structured plan of research process, but rather suggest an experimental style of work where researchers use their imagination to a great extent leading to some unexpected results.

3 RESULTS

Work on Art Space has been a challenge to new media artists who implemented the concept. The starting point of Art Space was a theoretical model created by a researcher in humanities without a specific knowledge of computer science and peculiarities of programming. Initially, the intention was to create an innovative product of information and communication technologies that would serve as knowledge bearer and decode the intellectually sophisticated messages characteristic to the era of modernism in art. Despite the general concept set in the beginning of the project, the team has not suffered for miscommunication that is a common situation in cases when there are people from distant fields working on a game.

David Llansó and colleagues [7] have outlined the communication problems common to game development that employs a multidisciplinary team where some of the game creators are not technically educated but work as teachers and researchers. The team of Art Space has avoided this risk and successfully converted the initially abstract concept into a virtual product. Henrik Engström and colleagues have similarly underlined the collaboration problems common to projects with interdisciplinary team. As Engström has precisely stated, it was initially “hard to get artists” to work at Art Space because the author of the idea “experienced them as being too constricting” to carry out the creative concept. As a result, management has introduced programmers from the field of new media art who “accommodated for the particularities of creative processes and their comparatively unstructured nature”. Engström notes that “the awareness of challenges regarding software development is very low in the arts/humanities field” [8]. However, the authors of Art Space have found a balance and handled the dichotomy described by Engström. The key to this problem is team members that are all educated in humanities and arts with the only difference that the programmers have extra knowledge of software. Under these circumstances, their mutual understanding is good and work on the implementation of the theoretical model has been fruitful.

One of the most crystallized game elements in Art Space is the fusion of interface design with game mechanics that allows the player to operate freely. The challenge was to create an intuitive interface with a small learning curve, and to have all the functionality easily accessible with a less complicated interaction. The aim was to hide a complexity of game mechanics and to increase the capacity of creativity.

3.1 Implementation of the theoretical model of Art Space

In the framework of this article, the authors will describe situations and ways how the originally vague artistic ideas have been incorporated in the virtual environment. The artists were inspired by the sandbox-style games *Minecraft*, *The Sims* and the first-person puzzle game *Portal* to create a virtual environment where the user can playfully exercise his/her creative skills and build artistic objects using the various trends of contemporary gaming aesthetics, namely, the effects of pixel, futurism, photorealism, glitch, generative art, kitsch/camp, noise, hacking and naïve art.

3.1.1 *The Virtual Building on Nine Floors*

The idea to create an environment where the user can play with the aesthetical trends was implemented in a virtual art academy on nine floors. It is designed as a building with an elevator that takes the user to nine halls each of them representing a particular style. The halls are designed using the elements of the afore-mentioned styles such as pixel and others. Game uses the first-person graphical perspective and classical controls to move around. The user can open some Graphical User Interface (GUI) menus on screen to use different functionalities like a build menu where he/she can choose an object to work with, and manipulate it by using the tools of digital art. Finally, the individually created objects can be saved by the user in the database of artefacts. Gaming rules of Art Space support the user in creating artefacts taking into account that the more one engages into creative activities, the more effective tools and possibilities one gets.

The build mode is made by using a simple inventory system that is well-known in games. The user can open the GUI build menu and choose an object to build. Building mode is made for creating the source object, as well as its further manipulation and editing using the digital tools from GUI menu. With each new level the player earns new objects, materials, and effects. In the edit mode, the player can use multiple functions like changing textures, location, rotation, size, and adding effects such as deformation and glitch. When the artefact is created, the user is invited to take a picture for the database and save his/her work in the picture format by opening the photo GUI menu.

3.1.2 Holistic Effect in the Build Mode

The visual aesthetic trends such as glitch, futurism, generative art, and others were planned to appear in Art Space as holistic effects. In other words, they had to be demonstrated using the whole screen so that the user can experience the effect holistically. This idea was implemented in a build mode as a possibility for the user to choose the amount of a particular effect. While exercising the effects, the user can magnify its representation and thus obtain an image of modern digital painting on the screen (see Fig. 1) or stay with the objects of a small size. The holistic effect is created using the combination of the build mode and edit mode functions so that the user can change the size of the object and add some effects like distortion or visual noise. The mechanics allow the player to place the chosen objects everywhere in the given space so that they are not limited to a single position.



Figure 1. Holistic effect of the glitch trend [9].

3.1.3 Orbs of Knowledge

In the project proposal, Art Space was theoretically planned to be an educative platform with an aim to support the creative activities of users and to educate them into contemporary aesthetics of gaming as well as to explain the coded messages and complicated ideas of modernism that have been largely inherited in digital art. The educational goal of Art Space has been practically achieved by creating the Orbs of Knowledge (Fig. 2). These are colourful and partly transparent spheres. The user can enter the Orbs and find information about the aesthetic styles of each room. The Orbs are structured in four sections. Firstly, they contain audio-visual representations of modern gaming that belong to a particular style, videos from several contemporary games. Secondly, one finds the antecedents from the era of modernism that illustrate the inherited features from the previous paradigm. Some antecedents are also placed outside the Orbs in the halls of the academy, but others have been located inside the spheres. Thirdly, the Orbs offer the textual information about the theoretical context of styles. Finally, there is a list of ludography with the examples of games where the particular style has been used.

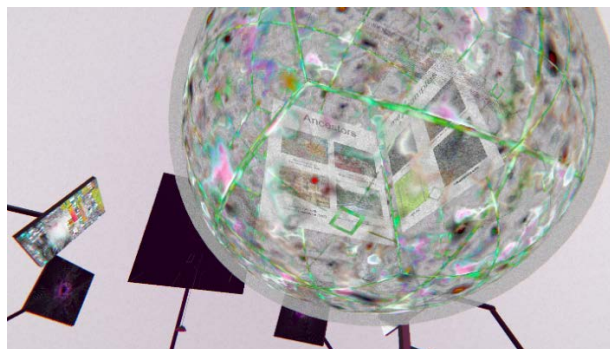


Figure 2. Design of the Orbs of Knowledge [9].

3.1.4 Noise and Hack rooms

Noise is of one the most specific rooms in this environment. In this hall, the user is invited to play with the acoustic samples and create one's own artefacts of sound, as well as to familiarize oneself with the antecedents of the noise-related music in the modern world. The player can create a noisy sound work by building and mixing objects from the noise category in the build mode that plays looping sound

samples. There are also several pieces of music that the user can hear just by approaching them; these are chrestomatic pieces of noise-related sound by John Cage, Karlheinz Stockhausen and some others. Furthermore, in the Orb of Knowledge of the Noise room there are historical antecedents designed as audio-visual examples of works by Jean Tinguely and Luigi Russolo.

Art Space is an ambient environment with features of slow gaming. Many of activities in the environment require lingering and reflective attitude. One of the most important functions of Art Space is to let the user experience the aesthetic peculiarities of styles. In this regard, a speed of play would not be a benefit. Yet gaming elements are also important to keep the interest of the user. In the hack room, there are extra elements of game mechanics that foster the user to act proactively. The user must build his/her virtual artwork in a vertical dimension in order to leave the room and enter the next level of the game (Fig. 3).

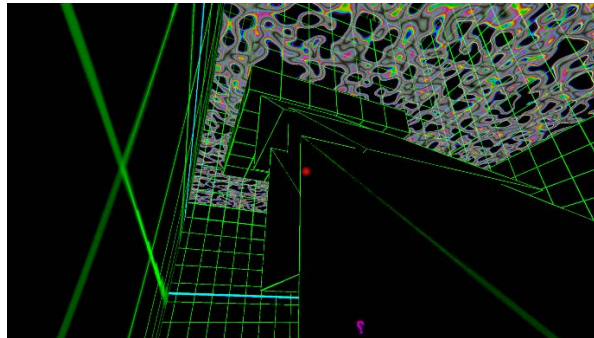


Figure 3. Design of the Hack room [9].

4 CONCLUSIONS

Art Space is an innovative project that tends to open up a new horizon for educational games in the area of contemporary art. The creators of Art Space suggest a fresh approach to gaming with an emphasis on contemplation and slow gaming as well as transfer of intellectual knowledge. Since contemporary aesthetics is one of the fields that lack any educational examples in the field of digital gaming, this experimental project hopes to evoke ideas of the other game designers and researchers in order to enrich the modern culture and develop the educational tools.

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