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# FUSING ART GAME AND EDUGAME: AN INNOVATIVE DIGITAL GAME OF MODERN AESTHETICS

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## *Abstract*

Edugaming has seen many developments during the last decades, however, there are some omissions related to contemporary art. In the field of edugaming, the historical heritage of the previous century in art has been underrepresented. The author of this study has been carrying out research in the field of contemporary art in order to transfer its results to the game's players. The goals of the innovative game named Art Space that is being created in the framework of this project, are to educate its players concerning digital art and to suggest a new trend for edu- and art gaming focused on the intellectual education of players and artistic subtleness. The study discusses the development of the aspect of artistic design in serious games that could raise their cultural value. In the meantime, this research project has the goal of helping to clarify contemporary art's profile which often seems puzzling and even uncanny to the public not familiar with its specific language. The methods used are stylistic analyses of games as well as studies of the existing literature (game theory and theory of culture).

**Keywords:** Art game, serious game, aesthetics of digital games.

## 1. Introduction

This study intends to create a new method of digital edugame creation. The proposed approach is focused on the aspect of knowledge transfer and the artistic aspects of edugaming in the field of contemporary art. In this research, the concept of knowledge transfer means that knowledge gathered during the research phase is being transferred to society by the media of game as defined by Mettler and Pinto (2015). The proposed approach implies that research in the field of contemporary art can be used to construct the concept and design of the educational game. The results of this research are embodied in the game and thus transferred to the player while playing the game.

The new experimental game named Art Space is based on the results of research into modern art gaming, and it transfers the research results to the player. Art Space is an edugame devoted to the historical heritage and stylistics of contemporary digital art in the context of modernism in art. The game is being created in the framework of a post-doctoral project led by Ieva Gintere (Vidzeme University of Applied Sciences, Latvia) between 2018-2021 (see Acknowledgments).

The new game is a first-person sandbox-style constructing game. The player will be able to create his/her own artefacts in a virtual art academy using the current trends of digital art inherited from modernism, such as, glitch, pixel aesthetics, hacking, generative art, noise, futurism, photorealism, naïve art and the kitsch/camp style. After an initial introductory level to familiarize themselves with the gameplay, the players can explore a selection of styles of digital gaming, investigate their conceptual roots, see contemporary examples and operate with those means of expression. The player must complete the tasks by building and editing objects to represent the given art style. Building and editing mechanics give the player the freedom to replicate the specific styles. Thus, it is a "recreational" game that provides an "immediate feedback" according to the best practice of edugaming (Kaya & Isbilen, 2016, p. 1002).

In several rooms of the art academy, the player will meet the historical antecedents of the styles inherited from the period of modernism and their contemporary practitioners. Each room represents a particular art style. For instance, in the room of glitch, the player will be introduced to the games like the Memory of a Broken Dimension that represents the tendency of glitch in the digital art game area. In the generative art room, the player could be faced with its precursors of the modernism era such as the piece of silence named 4'33" (1952) by John Cage. Thus, the new game will encompass the historical background of digital art today. Apart from creative activities and the educative/informative nature of the game, there are no rules to follow and no specific goals to achieve. The player explores the stylistics and finds the magic of the artistic effects of each room.

The game familiarizes the player with each genre's cultural context by means of short informative texts that explain the theoretical references to the paradigm of modernism, intertextual links and other aspects of the historical background. The game hopes to raise the interest of a wide-ranging public in contemporary art, point out the newest creative tendencies in digital art, and describe their historical context as well as pave the way to a new type of edugame concerning contemporary art and theory of culture.

The game represents the 'learning by doing' approach, which is related to the constructivism theory, where the player learns by constructing knowledge while doing a meaningful activity. The learner actively constructs new knowledge by finding information in the game, understanding it and then applying the new knowledge to complete tasks (Mortara et al., 2014). Furthermore, this research refers to contemporary

research-based (research-related) art. It is an experimental practice of research that leads to new findings both in art and research. The author of this study aims to update the defined research-based art field that encompasses poetry, music, theatre, narrative and dance (Pentassuglia, 2017) by adding the art game genre to it.

## 2. Problem Statement

Researchers have documented the situation in serious gaming around cultural heritage, but they never mention the subfield of contemporary art. The art game genre has been unexplored as a tool for research and learning. This project intends to fill the gap in gaming where there are no contributions to art games in particular. Also, the study is focused on the artistic potential of serious games which currently are mostly oriented towards functionality and the storyline, while the audio-visual environment is insufficiently elaborated.

## 3. Research Questions

The study discusses the development of the aspect of artistic design in serious games that could raise their cultural value, as well as a potential of a new type of edugame focused on contemporary aesthetics. The article examines the aesthetic trends of digital gaming in the context of their cultural context inherited from the period of modernism and postmodernism. These trends are embodied in the new game Art Space.

## 4. Purpose of the Study

The purpose of this study is to initiate an experimental edugame that demonstrates a sophisticated design. Art Space will be a new type of serious game focused on the aesthetics of contemporary art, created by a multidisciplinary team. It hopes to open a new page in edugames devoted to digital art.

## 5. Research Methods

The methods used are audio-visual and stylistic analyses of games as well as studies of the existing literature (game theory and theory of culture). Referring to Mühl (2016), the study represents the approach of artistic research, as well. The aesthetical object, as Mühl has noted, is never made completely transparent to a beholder's perception. The author of this article intends to explain the cultural context of aesthetic styles in gaming using the approach of artistic research, taking into account that no indisputable assertions are possible because the stylistic elements are experienced "in a mode of indeterminancy" (Mühl, 2016, p. 11). This obviously does not mean that knowledge about the artistic message of styles is not possible, but only that the suggestions documented in this paper are not determining judgments.

## 6. Findings

Among the existing serious games, there are few that demonstrate artistic originality. Art Space fuses the areas of art and serious gaming by transforming edugame into an artwork, and evoking the metaphysical reverberation common to artworks.

### 6.1. Historical references to the period of modernism

Many tendencies of modernism in art (and subsequently postmodernism which was basically a critique and a continuation of modernism) have been transferred to digital gaming. Art games have a theoretical history that dates back to the end of the 19th century. However, because these tendencies are theoretically complicated, they are not easily accessible to the general public and should be explained in order to reach a wider audience.

For instance, the general meaning of hacking has appeared in the theory of deconstruction by Derrida (1967). He insisted that text has no absolute meaning and it has to be deconstructed to find new ones. The concept became trendy during modernism and is still being demonstrated today, most currently in the direction of stage art. Directors of theatre and opera have largely exploited traditional texts by "hacking" them, transforming them into contemporary visions and changing the original material. The cover-versions in popular music and jazz improvisations also show traits of hacking in a positive sense. The Italian painter Lucio Fontana interpreted hacking visually: he cut the surface of the painting as if breaking into it.

Hacking is related to the idea born in the era of modernism that the artwork is not a product of a single author. Artwork should not be governed only by its creator, but should transform according the actions of people who use it. This idea refers to the contemporary theory of literature, namely, to the writings of Barthes (1977) and his concept of death of an author. In the moment when the author finishes the work, he/she dies, stated Barthes, adding that the work continues to live when one reads it. Thus, the reader is an author, but the writer only makes the first version of the work that is largely changeable. The reader acts like a hacker because there is always a room for interpretation. The artwork is a collective area where everybody is capable of acting creatively. Finally, hacking refers to the concept of open artwork formulated by Eco (1984) who affirms that an artwork is not a conceptually closed entity. It is always flexible and reacts to the actions of its users, therefore art today is an act of collective creativeness.

This kind of theoretical information clarifies the trend of hacking and other styles that are represented in digital gaming. It is important to explain these trends in the light of historical heritage in order to help the player to better understand their artistic sense and logic, and to widen the intellectual horizon of the society. Digital game is a suitable media that can help to carry out the mission of cultural education by the pleasant activity of playing.

Next to hacking, other trends may as well seem to be fuzzy and not easily understandable. This is caused by the intellectually charged tradition of modernism that still governs our cultural arena and requires a specifically educated public. Because the public today is mostly orientated towards gaining practical knowledge, it might miss the metaphysical information that can be obtained by studying arts' theory and philosophy and thus becoming familiar with contemporary cultural capital. Gaming possesses a complex stylistic language that can be difficult to understand if the public is not informed about its reasons and cultural context. The particular styles might need to be "decoded" in order to be acceptable (Hunter, 2018). People may become emotionally invested and intrinsically motivated to gain new knowledge concerning contemporary gaming styles if they feel supported in the process of education regarding styles that can seem to be quite bizarre. Since appreciation comes when the artistic agenda in artwork is stronger than its complexity, the intellectual baggage that each style encompasses must be put as simply as possible and be easy to perceive in order to be enjoyed, and this is one of the general goals of Art Space.

The pair kitsch and camp is an example that shows how the stylistic elements that might seem unacceptable for a spectator with traditional insights, can be explained so that he/she appreciates them. The kitsch/camp style with its weird taste might have a confusing effect and even repel the viewer because of a seeming superficiality. Yet this style has an important role in the contemporary artistic thought because it embodies a vivid experience and a lively, positive spirit that is mostly missing in the art of modernism. Kitsch and camp are said to be fake art, yet they have an ironic value and play a critical role.

Stylistically, they are close but not identical. Kitsch embodies cliché and excessive garishness. The purpose of a kitschy object or design can be utilitarian, solely ornamental or decorative, but it may also represent academic art and a humorous concept that belongs to serious art expression. Camp is related to kitsch since it represents poor taste and irony, but it can be more vulgar, bizarre, and showy. It is less naïve than kitsch may be. Camp is defined by Susan Sontag as exaggerated, flashy and frivolous. In the meantime, Sontag writes that camp is playful, its' goal is "to dethrone the serious", and it is good because it is awful (Sontag, 2018). Kitsch and camp criticize the seriousness of modernism as well as the ultimate need for reflection on the essence of art that it requires. Kitsch and camp glorify the capacity of art to please and to invent new accents even if they seem inappropriate to be classed as high art. These styles suggest satire as an essential element in art. Consequently, they add topics and means of expression to the artistic language that were so far excluded from the area of academic art and did not match the concept of a good taste.

### 6.2. The situation of historical accents of contemporary art in serious gaming

The historical references to contemporary art have been underrepresented in serious gaming so far and need to be highlighted to understand the origins of digital gaming aesthetics. Because the aesthetics of digital art games is strongly affected by the aesthetics of modernism, the analysis of its historical aspect is one of the crucial things needed to carry out a meaningful analysis. Game researchers have named several aspects of game analysis, however, as the field is relatively new, the historical aspect of art games in particular has not been explicitly designated.

Kūlis (2015), the Latvian theorist, has published a magnificent book about interface aesthetics that shows the influences of modernism in graphic design and gaming as well. This work is only available in Latvian, but it is a valuable input into the discourse of modernism heritage that covers tendencies of futurism, cubism, constructivism, surrealism, minimalism and others that form the background of contemporary gaming. Yet authors working in the area of gaming theory have not payed enough attention to it. Michela Mortara and other researchers have documented the state-of-the-art of the historical heritage in digital gaming, although they never mention the subfield of contemporary art. Mortara et al. (2014) discuss a large number of serious games focused on cultural awareness and "intangible cultural assets like tribal beliefs, customs, and ceremonies" (p. 319). The author has named serious games devoted to ancient Rome, Jewish culture, Japanese etiquette and many others, however, there are no games that would exemplify heritage in contemporary art. Likewise, Bontchev (2016) confirms the inclusion of cultural heritage in serious games and provides illustrative examples, nevertheless, there is not a single game from the niche of contemporary art in these articles. Other authors of the recent gaming studies seem to forget the historical references and use, for instance, the term "abstractionism" with a universal meaning without mentioning its historical origin in the context of visual art (Gee & Dolah, 2018).

In order to enrich the theoretical framework of the digital art game discourse, this study proposes to emphasize the historical aspect in art gaming.

### 6.3. Serious game as an artefact

Aside from the historical context regarding contemporary art, the field of serious gaming is missing an aspect of artistic metaphysics. As Marcos and Zagalo (2011) have put it, serious games' developers mostly concentrate on the "digital story, the excitement of their final work on side of the end-user and their related functionalities to achieve it" (p. 144). For instance, Trauma Center: Under the Knife (2005) is a surgical simulation created in the attractive style of a comic book. Spore (2008), a game used to teach biology, demonstrates plastically moving creatures placed in colorful environments. CodinGame (2012) teaches programming and imitates coding processes on a realistic, modern screen. Elude (2012), a game about depression, incorporates a lyrical atmosphere in blue-green coloring, with scenes of nature and a symbolic struggle with depression presented as wandering in a dark underground hole. Although the design aspect of these serious games as well as many others is undoubtedly important, easy-to-learn features are pivotal.

Marcos and Zagalo (2011) have suggested treating serious games as artefacts with an educational function. The benefit of such an approach is a perceptual experience for the end-user that transforms the edugame into an artwork, giving a level of metaphysical "reverberation". The motivation for marrying serious game to an artwork is "to reach the depths of interpretation" that we reach, for instance, by watching a good movie. Marcos and Zagalo believe that serious gaming can gain valuable dimensions if its artistic value is enriched. By "giving emphasis to artefact aspects", serious gaming can become "highly engaging". This "can take serious gaming to another level of interest for the user and transform its playing into a profound cognitive and philosophic experience" (Marcos & Zagalo, 2011, pp. 146-147).

The ideas of Marcos and Zagalo could be well used if the area of serious gaming was narrowed to the games about art and culture as the goal of artefact cannot be applied to all the areas of serious gaming. Also, the terms that Marcos and Zagalo are using are quite opaque just like all the attempts to define artistic intentions. Their point could be illustrated with help of examples from some art games that possess moments of immersion, artistic originality and surprising stylistics. For instance, Memory of a Broken Dimension (2015) (Figure 01) is a journey into an abstract black-and-white space with no strict rules that generates a unique and mysterious feeling of an alternative reality. Some waporwave style games such as Islands, Non-Places (2017) (Figure 02) invite the player to immerse him-/herself into a relaxing world of neon colors. It represents a particular aesthetical experience as well as a high level of inspiration and existential contemplation.
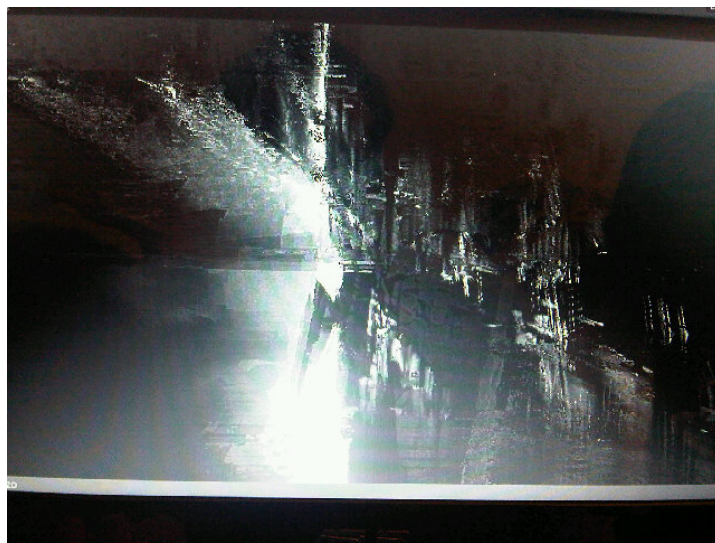
**Figure 01.** Memory of a Broken Dimension, screenshot (Interactive visions, 2020)
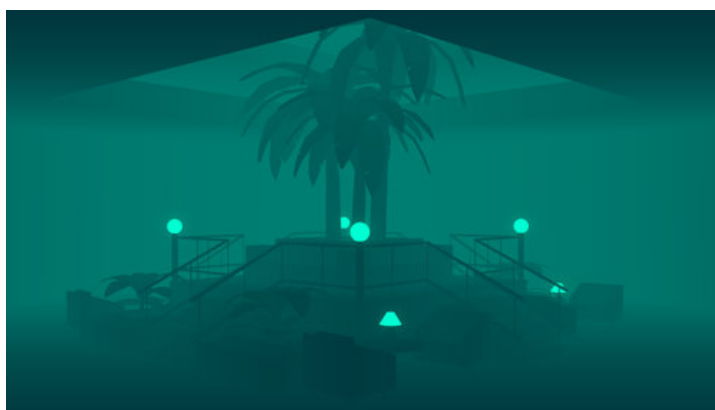


**Figure 02.** Islands, Non-Places, screenshot (Burton, 2020)

Softcrash (2020) is a futuristic game where technological objects created as a result of car crashes show emotional vibrations. These 'crashforms' have wild, chaotic shapes revealing an intimate connection between a human being and machines. The sculptures "elicit an affective response in the viewer"; the residue of car accidents "echoes the organic through mechanical forms". They are "part relic and part creature, inert yet imbued with a faint sense of liveliness" (Gamescenes, 2020). The Night Journey (2018) is another unique game that can been described as a videogame-enabled dream. It is a black-and-white soundscape trying to communicate something that is beyond the edge of making sense, and in order for the player to grasp it, their sanity must slip into a dreamworld.

The feeling of artefact can be additionally explained by the concept of ne-baroque aesthetics described in the illuminating book by Angela Ndalianis, 'Neo-Baroque Aesthetics and Contemporary Entertainment'. The author states that contemporary digital art often represents a tendency to glamourize that was characteristic of baroque aesthetics. It tends "to evoke states of amazement in the audience that have little to do with rationality". This trend demonstrates a magical atmosphere, "leaving the spectator in a state of wonder at the hyperrealistic status of the representation". Ndalianis (2004) examines the nature of the "spiritual presence" that the neo-baroque illusions elicit. It is concerned with the states of euphoric

226

transcendence as well as the feeling of wonder that is evident in the baroque era. A neo-baroque interaction between affect and effect comes into play and creates the other-worldly experience.

The moments of emotional affect, unusual, even sublime experience and a metaphysical dimension that might be called a spiritual reflection the above-mentioned art games tend to provoke, might be among the core features of an artefact, although it is certainly not possible to strictly define the meaning of this concept. These elements could be more effectively used in serious gaming in order to crosscut the areas of art and education, especially in edugames about contemporary art that need to be developed as there are no games to date devoted to the contemporary aesthetics, its historical context and relation to the theory of culture.

## 7. Conclusion

This article details the research results of the post-doctoral project carried out at the Vidzeme University of Applied Sciences, named 'Leveraging ICT Product Innovations by Enhancing the Codes of Modern Art'. The task of the project is to create an innovative digital game in the cross-cutting genres of art game, educational game and research-based art. It examines the trends of contemporary art that were mostly formed during the period of modernism and still constitute the basic trends of intellectual culture today. The study aims to create a new profile of art games that would exemplify modern interdisciplinary and analytic thought. The author is exploring aesthetic developments within history of digital gaming, with an emphasis on art- and edugames and their relationship to traditions of the avant-garde. The author has previously analyzed the aesthetical tendencies of digital games in the context of their historical heritage to support this endeavour (Gintere, 2019, 2020). The paper is a part of an ensemble of articles presenting the results of a post-doctoral research project and encompasses trends in art gaming that will be introduced to the Art Space player in the virtual classroom.

Art Space is being created as a prototype for edugames with the main objective being to support gaming methodology. The new game Art Space will serve as an educative platform for the end-users from humanities-oriented colleges and university courses. Art Space can make very complex ideas accessible to a variety of students and to help them to systematically build an understanding of contemporary stylistics and its relation to the large spectrum of cultural theory. The game will integrate the players into the aesthetics of contemporary art, inviting them to understand the offspring of modernism while supporting the knowledge flow from research to the public of players. Including the artistic aspect in the area of serious gaming is proposed as a way to create serious games as artefacts and thus to enrich the profile of serious gaming. Adding elements of contemporary art into the process of development of serious games would be helpful to enrich their design. Serious games can reach another level of interest for the user, and transform the playing into a profound artistic experience.

## Acknowledgments

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