Playful Play with Games: Linking Level Editing to Learning in Art and Design

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ABSTRACT

The title 'Playful Play with Games' refers to the possibility of creative involvement with games by altering their structure in a playful way. The focus of this paper is on modifying the first person shooter game Unreal Tournament as a learning process. Modifying the game means to become a creator or writer in addition to a reader and player, but nonetheless with a playful attitude and a good understanding of the game at hand. Understanding the game involves an understanding of the different levels of meaning of the game. Three levels of meaning produced in and around games can be distinguished: Meaningful play, meaning beyond play, and creatively added meaning. Five examples from courses to media management, architecture, and media art students as well as a group of activists illustrate the design of courses that are based on level editing.

Keywords
First person shooter games, game modding, level editing, meaningful play, learning, design, art

PLAY FOR LEARNING IN ART AND DESIGN

The title 'Playful Play with Games' refers to the possibility of creative involvement with games by altering their structure in a playful way. The focus of this paper is on level editing for the first person shooter game Unreal Tournament as a learning process. The aim is to describe such an approach and understand its impact on teaching beyond its empirically suggested successfulness thanks to the popularity of courses that involve gaming and therefore promise a high fun-factor.

The fields I have been teaching in are Architecture, New Media Management, and Media Art. Examples from these areas are discussed at the end of the paper. The common denominator in the teaching approach in the mentioned fields is the possibility for learning through a design activity, which is a reflective activity in the sense of reflection-in-action described by Donald Schön as "the thinking what they are doing when they are doing it" [12]. A particular characteristic of design-based learning processes is the assessment of the quality of the learning progress by analyzing and discussing the design outcome as opposed to examining the student's knowledge. The knowledge gained in a design learning process is not a direct adaptation of facts, but an experience, which individually needs to be coded into personal knowledge. The significance of the experience is an important common aspect in understanding the implication of a gaming environment on the learning process.

PLAYFUL PLAY AS CREATIVE ACTIVITY

Modifying games (modding) means to become a creator or writer in addition to a reader and player, but nonetheless with a playful attitude and a good understanding of the game at hand. In the end there is a split authorship among players and level creators in computer games and multiplayer computer games in particular. Multiplayer games allow the player to influence other players' experiences as well as having an experience influenced by others. The role of the 'creator' (which can be a collective authorship) of the game is to provide the narrative architecture (the virtual architecture that creates the potential for experiences [4]). The notion of architecture in this context refers to the design of the spaces including sound, light, and dynamic processes.

In "Understanding Media – The Extensions of Man" Marshall McLuhan describes games as 'extensions of group awareness that permit a respite from customary patterns' [9]. Antoinette LaFrage points in the same direction by saying that 'games are all about the constraints called rules.' By comparing them to art movements like the Oulipo (The Oulipienne literature is a literature under constraints, http://www.oulipo.net/) [6] she offers a base for the discussion of the poetic dimension of altering games. The term 'magic circle' in the context of games as described by Salen and Zimmerman in "Rules of Play" helps in understanding how games can be seductive and retaining. These are also the fundamental qualities that enable a state of flow, which, according to Csikszentmihalyi's theory on creativity [3], is a necessary condition for a person to engage in a creative activity.

THREE LEVELS OF MEANING

Marshall McLuhan states that 'the form of any game is of first importance' and declares 'the information content' as 'the noise and deception factor' [9]. With the ascension of video and computer games this second statement needs some revision regarding the relation of form and content. Antoinette LaFarge points out 'The ability of computers to store and quickly process large amounts of information translates easily into larger and more elaborate games.' And 'What one sees on a computer screen represents not only the imaginary world of the game but also the current state of the underlying software.' [6].

Three levels of meaning produced in and around games can be distinguished: Meaningful play, meaning beyond play, and creatively added meaning.

Meaningful play

Meaningful play in "Rules of Play" by Salen, Zimmermann [10] is described as "The meaning of an action in a game resides in the relationship between action and outcome." Meaningful play regards the fact that a game must have a meaning in itself to allow for gameplay. This meaning develops when the player or players enter the magic circle of gameplay and it disappears when the gameplay ends.

Meaning beyond Play

Meaning beyond play is about the experience gained during play that continues to exist and unfold outside of the magic circle in the daily routine of professional or private life. The understanding of meaning beyond play is important with regard to questions of how games influence our daily life (i.e. the question of how games may or may not lead to violent behaviour) or how game-like features can actually be re-appropriated for learning environments. In both aspects false assumptions about the effect of games are made. In the case of learning environments game-like systems where implemented that can lead to very motivated and

concentrated play, but comparingly little learning. In other words: Environments that produce little meaning that continues beyond the playing of the game. But, as Malone points out, "experimental studies of what makes computer games fun identified design features that not only sustained focused attention but also facilitated learning, including self-directed learning" [8]. In the case of violence it can seem obvious that the violence of the game automatically gets transported into daily life. There is even some evidence for this assumption as well as counter examples. To understand better how games can have a negative effect it is necessary to take a closer look at how and when meaning is transported out of the magic circle of gameplay.

Creatively Added Meaning

Creatively adding meaning is what the rest of this paper is focusing on. It happens when the player becomes an editor of the game and modifies it in some way; this is generally referred to as modding. The possibilities include level editing in first-person shooter games, creating environments and new characters for the Sims, giving new names to the pawns of chess, or changing the rules of monopoly. These alterations require a creative process, which is a meaning generating action in itself. The player-creator indulges in a playful process by exploiting the system, fighting with the constraints, modifying the meaning, searching for a new sense, and repurposing the media. Modding includes the need to understand the game at hand and make conscious decisions about the way to alter it. The essence of the game as well as the implications of any changes to it have to be understood. Regarding the content or message there are different attitudes possible for modifying a game, like: Subversion of the original game, combination with features new to the game, overlay of information or specific messages, or the abstraction of the game to enhance specific features.

Game modding has also developed into an art form. An early example is Robert Nideffer's Tomb Raider patch that subverts the Nude Raider patch of Tomb Raider by adding a moustache and a beard to the overly female figurine of Lara Croft. "This patch questions whether Lara is a lesbian butch Mona Lisa or a drag queen who forgot to shave." [11]. Jodi's Untitled Game [5] is a collection of modifications of Quake reducing the graphics beyond the minimum. The game becomes almost unplayable, letting features like spatialized sound or shifts in the visual patterns gain importance for the perception of what may possibly be going on. Jahrmann/Moswitzer take a contrary approach in their Nybble Engine Toolz project. They increase the complexity of the overall behaviour in Unreal Tournament by replacing objects with programs. "The methodological framework of orientation for the Nybble Engine project is a radical/recon-structivist meta-art. ... This kind of art marks the end of the aesthetic era of the self-description of the art system." [2]. While the artists focus mainly on the message they are creating I have looked at 45 prominent examples from a designer's point of view and developed a taxonomy categorizing the design attitudes of the artists(http://maia.enge.li/gamezone/taxonomy.html).

COURSE EXAMPLES

The following examples illustrate courses that are based on level editing and including the presentation of a selection of results. Depending on the desired learning effect there are differences in the setup of the courses. Interesting observations regard the variations in the design attitude that can be observed as a result of the different fields of the participants.

Metaworx (Media Management, Hyperwerk Basel, Switzerland 2003)

http://www.hyperwerk.ch/~hyperdat/unreal2/

This course for media management students was designed as a confrontation with the changeable aspects of a known media. While many of the students have played with first-person shooter games before none of them had yet looked at the possibility of modifying the game. The aim was to develop a strategy for understanding possible alterations, define a project and implement it. The emphasis was on developing something beyond the known appearance of shooter games and challenge the visual appearance by exploiting the VR possibilities in novel ways.

Marc Champion and Matthias Branger designed a level around different music compositions. Their worlds were built in a way that the player would move or even be moved in accordance to the music he or she was hearing. Luca Vincente created a space that would hold the exhibition of finished theses but also made it possible to experience the process of developing a thesis, by a number of hidden traps that lead, for example, into a huge dark space or a circular, cloudy space. These examples were successful in exploiting the VR aspect in aesthetically unexpected and wonderful ways, but less successful as actual shooter levels.
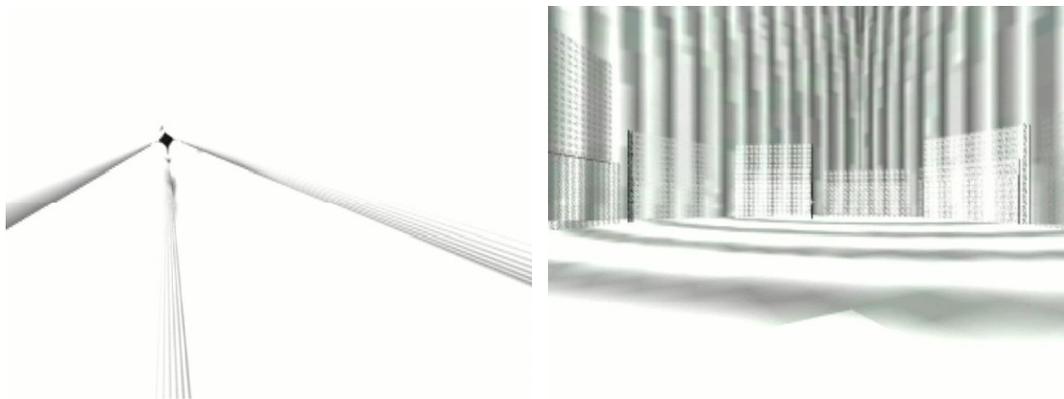
Figure 1: "Studio 7" by Marc Champion, Matthias Branger and "Golden Calf" by Luca Vincente.

outside-inside-out (Architecture, Technical University Delft, Netherlands, 2003)
„outside-inside-out" was a redesign of the mandatory multimedia course at the architecture department. Instead of image processing, web-design and Flash the focus was on 3D-multimedia, mainly 3D-plotting and the virtual reality of Unreal Tournament.

3D printing was introduced to work on forms from the outside and level editing to formulate the spatial narrative of the inside. First the students deformed a torus by virtually applying forces that represented a chosen emotion. This form was printed in 3D. The next step was to design the inside of the form as a game level for Unreal Tournament. In the last step the inside was projected onto the outside and a color 3D-plot produced. In this sequence the possible expression was closely related to the media.

Since the design of the spaces for the game started from the deformed torus, the raw spaces were rather small and simple. The students became eager to develop means that would make the spaces appear larger or more intense. For example by triggering changes of surface textures so that the space seems larger because it changes appearance, or by creating challenging trails that were hard to follow and included the danger of dying by falling or getting squashed, or by adding imagery that adds meaning to spaces like happy faces, scary faces and eyes observing the player.

Figure 2: "Blocks" by Armand Bos and Jeroen Keuvelaar , "Faces" by Sven Spiering and Denis Vermeulen.

Medieval Unreality (Activism, Cultural Center Lindart, Tirana, Albania, 2003)

http://maia.enge.li/gamezone/lindart/

"Medieval Unreality" was part of a larger project "E-mail from the medieval ages" started in 2003 by group of activists in Albania to look at the problem of blood feud in Northern Albania and to search for possibilities to create some relief. The goal of the course was to understand more about blood feuds and to evaluate Unreal Tournament's potential use in the project.

Blood feuds create a vicious circle. Shooter games are circular in a similar way; bots and players die and are replaced immediately so that the game can go on. It was an important insight gained in the process of designing new maps: There can be no promise of 'solving' the problem, only small changes in attitude can be introduced and eventually lead to some changes.

The resulting levels blurred the boundary between game and reality in different aspects. There were frightening correspondences in the rules of the game and blood feud. Importing imagery from the actual Albanian location situated the levels in a specific geographic context. And it became possible to experience a desperation similar to the desperation affected families are dealing with.

Figure 3: „Go with the Heart" by Eleni Laperi and Elona Hasko.

Alice (Media Art, University for Applied Arts, Vienna Austria, 2004)
http://www.dieangewandte.at/alice/

This course was taught at the University of Applied Arts in Vienna. The task was to enter the game world and become creative by blurring the boundaries between the game and other media, by subverting the game with alien messages or by combining it with other games. The game was understood to be more than a media to express something, but a space to be explored and twisted. Two remarkable projects resulted:

Valentina Vuksic's 'Desimulat' is a combination of a mistake in the graphical representation of Unreal Tournament and an interpretation of Stanislaw Lem's novel 'The Futurological Congress' [7]. The title "Desimulat – An Object That Pretends to Exist but Does Not" is a reference to the drug influenced perception by the people described in the novel. At the final presentation of the course, Valentina Vuksic had the players wear headphones and let them listen to a monotonic, old-fashioned reading of 'The Futurological Congress', which became like a subliminal whisper, analogous to the way the drugs were distributed over the air in Lem's story.

Synes Elischka created "MÄDUnreal", a hybrid of the ego-shooter game Unreal Tournament and the board game ludo. He redesigned the board to become a landscape with different paths to follow and to make it spatially and strategically more challenging. Then he introduced health packs, teleporters, frags which counted as points, and partial frags, which partially injured the opponent so that he or she could not move or fight with full power anymore.

Both of these examples distorted the game in ways that it still retained its core characteristic, but got enriched by being combined with other cultural artifacts.
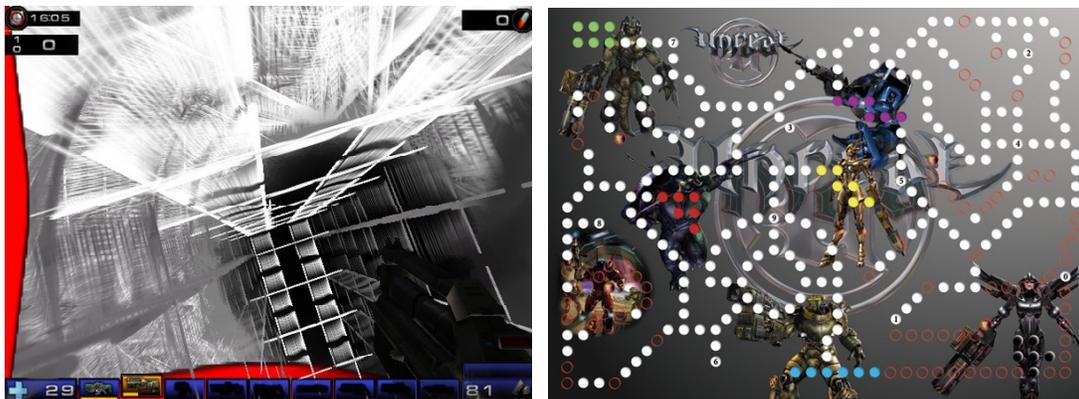
Figure 4: "Desimulat" by Valentina Vuksic and "MÄDUnreal" by Synes Elischka.

Dollhouse (Architecture, Technical University Graz, Austria, 2005)
http://iam.tugraz.at/dollhouse/

Dollhouses and shooter games provoke contradictory associations: There is the idealistic world of the dollhouse versus the ethically subversive character of the shooter game. But there are similarities as well: Dollhouses as well as the virtual reality of games create the potential for spatial stories, a term emphasized by Henry Jenkins in relation to games [4]. While it is

commonly known that games can retain players in a state of flow [10], there are also accounts of intense, lasting involvements when looking at dollhouses [14].

This course was also special in another regard: The class worked in a collaborative fashion on just one map. The authors of the individual rooms of the dollhouse were shifted every day. The quality of the overall design results from the synergies of a collective authorship. While maps in shooter game are usually a first-person experience of a game reality, dollhouses provide a third-person view into a miniature world. The dollhouse level can actually be experienced from a 1st, 2nd, and 3rd person perspective.
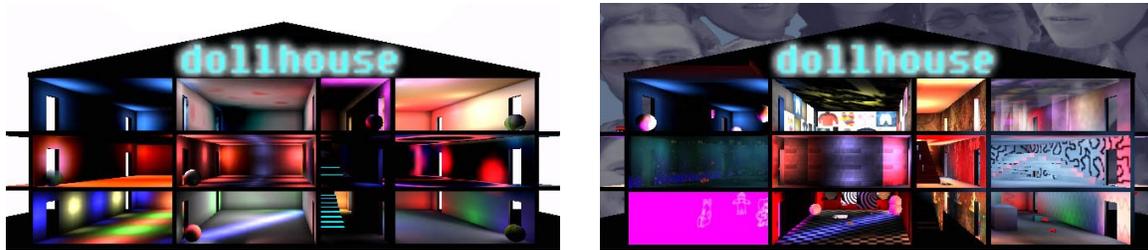
Figure 5: The dollhouse after the first and after the fifth day of collaboration.

CONCLUSIONS AND NEXT STEPS

With this brief presentation of level editing as learning process in art and design I intended to illustrate a set of possibilities for the conceptualization of such an approach. The question of the generation of knowledge and meaning will need further elaboration and will profit from new insights in game theory as well as design as learning process.

The evaluation will take the form of a design assessment through the discussion of the result, verification of its appropriateness, comparison with other designs, and the estimation of its importance. This process has a long tradition in art and design education. The formalization of this process and its adaptation to learning processes that involve game modding is not straightforward, because on the one hand design cannot be captured in words alone and evolves in an evolutionary, memetic manner by relaying on previous designs; and on the other hand the final design may not directly reflect the overall quality of the learning process.

In the series of courses I have developed the actual shooting has gained more and more importance. In the last example, the dollhouse, we started every morning with a gaming session. This and the collaborative development of the dollhouse may be the major reasons for the appreciation of the final result by habitual first-person shooter players at the final LAN party as well as at a recent media art exhibition in Dallas, Texas.

REFERENCES

1. Biggs, J., *Student approaches to learning and studying*. Melbourne: Australian Council for Educational Research. 1987.

2. Climax Team, "Nybble-Engine-Project", in *Nybble Engine*, Climax Team Eds., CLIMAX, Vienna, Austria, 2003. p. 47.

3. Csikszentmihalyi, M.*, Creativity: Flow and the Psychology of Discovery and Invention*. New York: Harper & Row, 1996.

4. Jenkins, H., Game Design as Narrative Architecture. in Wardrip-Fruin, N. and Harrigan, P. eds. *First Person - New Media as Story, Performance, and Game*, The MIT Press, Cambridge, MA, USA, 2004, pp. 118-130.

5. Jodi, (visited 11/30/2004). *untitled game*, http://www.untitled-game.org.

6. LaFarge, Antoinette. "Winside out - an Introduction to the Convergence of Computers, Games, and Art." Available at http://beallcenter.uci.edu/shift/essays/lafarge.html, 2000.

7. Lem, St, *Der futurologische Kongress*, translated by I. Zimmermann-Göllheim, Phantastische Bilbiothek, Suhrkamp Taschenbuch, Germany, 1979 (1972).

8. Malone, T. W., and Lepper, M. R., (1987). "Making Learning Fun: A Taxonomy of Intrinsic Motivations for Learning", in *Aptitude, Learning and Instruction*: Vol 3. Connotative and Affective Process Analyses, R. E. Snow and M. J. Farr, Eds. Lawrence Erlbaum, Hillsdale N.J. USA, pp. 223-253.

9. McLuhan, M., *Understanding Media - the Extensions of Man*. 5th printing 1997 ed. Cambridge, MA, USA: The MIT Press, 1964.

10. Salen, K. and Zimmerman, E., (2004*). Rules of Play: Game Design Fundamentals*. The MIT Press, Cambridge, MA, 2004.

11. Schleiner, A.-M., "Does Lara Croft Wear Fake Polygons", Available at http://www.opensorcery.net/lara2.html.

12. Schön, D., *Educating the Reflective Practitioner*, Jessey-Bass – a Wiley Imprint, San Francisco, USA. 1987

13. Tschumi, B., *Architecture and Disjunction*. Cambridge, Mass.: MIT Press, 1995.

14. Wilckens, L.v., *Das Puppenhaus - Vom Spiegelbild bürgerlichen Hausstandes zum Spielzeug für Kinder*. Verlag Georg D.W. Callwey, München, Germany, 1978.