Games Atelier - A Challenge for Collaborative Experience

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ⓐ Waag Society

ⓐ Creative Learning Lab

Contents

Introduction

Waag Society

This research project was initiated by the Games Atelier project at Waag Society, Amsterdam. Waag Society was founded 1994 by Caroline Nevejan and Marleen Stikker, and was initially called Society for Old and New Media. Later on, the foundation was named after the place where it is situated right now: the Waag. Since 2005, Waag Society is also located in the Pakhuis de Zwijger, a building for creative industries in Amsterdam. Partly founded out of De Digitale Stad, one of the first public communities on the Internet, today Waag Society has developed into an innovative think tank on creative technology for social innovation. Together with its partners from different universities, schools and companies as well as its worldwide network of partners (in India, UK, and Canada), Waag Society is actively involved with research and development as well as experiments with new technologies, art and culture.
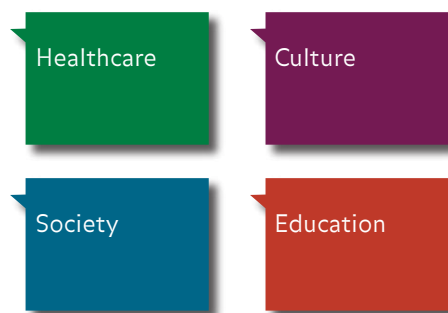

Fig. 1: Waag[1]   Fig. 2: Pakhuis de Zwijger[2]

Today, Waag Society primarily works within four domains:

Healthcare

Culture

Society

Education

The Education domain focuses on innovative ways of learning with the use of creative technology for students of primary, secondary and higher education, who get the opportunity to become media producers themselves reflecting their personal interest. The Creative Learning Lab is situated in the Education domain and provides students with tools that facilitate active learning, based on collaborative, creative, and playful experiences. Games Atelier has been developed by the Creative Learning Lab and the Locative Media department. The Locative Media department creates and investigates locative media and has recently developed 7scenes, the software that is used for Games Atelier. 7scenes Ltd. is a subsidiary of Waag Products - Waag Society's product company. The 7scenes platform consists of a location-based technology with tracing and multi-user functionality as well as real-time communication (from a distance). Within 7scenes, locative technology like GPS is combined with real time data traffic and a mobile device.

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1   www.waag.org
2   www.dezwijger.nl

Games Atelier

Games Atelier can best be described as an online learning environment and a location-based lesson outside the classroom for students from secondary schools with a collaborative and game-based learning approach. In our postmodern society and with the increasing amount of students playing video games, there is a growing demand for a game-based approach in education that focuses on the dialogue instead of the monologue.[3] Because games can be engaging and effective, they can have a place in learning. Games Atelier intends to provide such an engaging, self-reinforcing context in which to motivate and educate the players. This approach leads back to the concept of serious gaming, which came into use long before the Serious Games Initiative started in 2002.[4] To achieve that, serious games use competitive exercises, either pitting the students against each other or getting them to challenge themselves in order to motivate them to learn better. Also, they often have a fantasy element that engages students in a learning activity through a storyline. And these games motivate students to learn outside the classroom.

Just the latter is notably taken one step further within Games Atelier when students are enabled to create and play their own games in their urban environment via mobile phones, GPS and Internet, and are even encouraged to reflect on their play. The Games Atelier templates also involve communication between teams in the urban space and remote online players since they are enabled to work on location-based assignments collaboratively. And finally, the storyline in Games Atelier layers these locations with narrative elements that may as well be fictional.

Yet today, it still is the dilemma of serious games that they are often designed too educationally and less engaging.[5] It is the big challenge to make the learning objective integral to play instead of overwhelming. Games Atelier is taking this challenge, and goes one step ahead of the serious games concept by using motivating game principles such as interactive narration, the development of role-playing and characters, and location-based competitions.

Location-based games such as Games Atelier indicate that the entire world we live in is reflected as a game board, that the boundaries of urban social life and games are blurring. And also, Games Atelier is faced with the dilemma of how to leverage its engaging and effective principles. Taking this into account, how is this game-board-like urban space, how are the interfaces between this layered narratives experienced? And how can the students' collaborative experience be made more engaging instead of being too pedagogic?

Dealing with interfaces between the fictional and the real, urban and virtual spaces, the interaction between street and remote players, it is well worth to take a look at recent developments in theatre and performance art, which have been engaged with these prospects immensely during the past years. Particularly considering the fact that location-based games are blurring social boundaries, there is no doubt that there are a few things Games Atelier can learn from performance art practice and theory to make the overall experience more engaging for students. Thus, game developers can have some performance theory when designing a game.

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3   Marc Prensky's "Digital Game-Based Learning" (2001) and James Paul Gee's "What Video Games Have to Teach Us about Learning and Literacy" (2003) have argued that these days we may have overcome the stigma that games are "play" and thus the opposite of "work".
4   The Serious Games Initiative was launched by the Woodrow Wilson International Center in Washington to encourage the development of games that address non-entertainment purposes. However, already in the late 1990's, the edutainment space intended to apply games to new purposes.
5   Van Eck, Richard: Digital game-based learning. It's not just the digital natives who are restless. Educause Review, vol. 41, No.2. p.17.

The main research question of this paper is:
What design principles can be added to Games Atelier to enrich the collaborative experience and engage students more intensely?

Sub questions arise because of that:
• What are the main characteristics of current location-based games and mixed-reality art performances?
• How can these characteristics be embedded in theory?
• How does Games Atelier benefit from these insights?

The project Games Atelier officially started in January 2007. During the past year, the platform was developed and evaluated in Amsterdam, and in 2008, this platform is going to be implemented as a validated learning method for schools of the Netherlands. The Games Atelier environment will then serve as a toolkit for students and teachers to collaboratively create, learn and play. Students will use the mobile phone to collect information from and add information to the urban environment by means of video, pictures, audio and text. These voice and image recordings can be traced to certain locations on a dynamic map, which constantly tracks the players' location as well. This enables remote online players to follow and interact with street players during their walk.

Not only is Games Atelier using a learner-centred approach, the students are, above all, self-motivated to create their own game according to their personal context and environment. This is achieved by integrating certain game elements (rules, non-linear narration, tasks, character development, confrontations) to one of three available game templates. When students develop their own games, they are supported step-by-step by means of such a game template: They write their desired background story, create the assignments, and upload media to enhance the game environment.

Background

Earlier projects from Waag Society that have led to the development of Games Atelier include Amsterdam RealTime, the N8game, Frequency 1550 and the Mobile Learning Game Kit.

Amsterdam RealTime (2002) was initiated by artist Esther Polak and Waag Society for Amsterdam's city archive as an art project within an exhibition on maps. It visualized mental maps through examining the mobile behaviour of the city's users who were equipped with a PDA, which was connected to a GPS unit. The data from this tracer was sent to a central point and was simultaneously visualized in the exhibition space on a map with a black background. The lines that appeared constructed a partial map of Amsterdam that presented the sheer movements of people, their very personal routes.

Fig.3: The changes in colour show the intensity of the walks, for instance the duration of walking, the amount of stopping points and their most frequently visited locations.[6]

The N8game used Geotracing functionality and was a GPS-based drawing game for the Amsterdam Museum Night in 2005. Teams rushed out into the streets and competed on who would (geo)draw the most beautiful "8" by walking with a GPS and mobile phone. Photos and videos could also be linked to specific locations and could be uploaded.

Fig. 4: The players' movements, tracks and media could be followed in real-time through a web browser.[7]

6   http://realtime.waag.org
7   http://www.n8spel.nl

Games Atelier – A Challenge for Collaborative Experience   *7*

Frequency 1550 is a mobile city game for students in the age of 12-14 and was developed in 2005 together with IVKO, part of the Montessori comprehensive school in Amsterdam. The game provides a real-time, location-based experience, transporting players into medieval Amsterdam of 1550 via a UMTS mobile phone and GPS. Amsterdam's city centre is divided into six sectors on a medieval map of Amsterdam. Each street team gets to explore a different sector of the medieval environment while receiving pre-recorded video clips with characters from the Middle Ages who provide information about the history of specific locations.
In contrast to Amsterdam RealTime and the N8game, the narrative was strong introducing the strange disappearance of the holy relic that is related to the Miracle of Amsterdam, a story that once made Amsterdam a famous place for pilgrims. The teams were competing against each other by collecting as many of the 366 (the period people had to be living in the city to acquire citizenship) "Days of Citizenship" as possible: They could decide to stay away from another team or call on a confrontation (winning team depends on order and takes away hard-earned "Days of Citizenship" from the loosing team), teams can also earn a monk's habit as a reward (makes them invisible to other teams), or they can throw a virtual bomb (disconnects the communication to other teams and their respective remote player). The remote online players (Headquarter teams) may consult Internet for additional media and textual answers, and they had an overview of the teams' achievements. This contributes to their rather increased overview in contrast to street teams who try to solve assignments by uploading media (photos, videos) at the respective spot. Also, the assignments force street teams to perform or act out specific roles linked to medieval Amsterdam.

Fig. 5: Together teams provide multi-media content resulting in a media-collage at the end.[8]

After playing Frequency 1550 ten more times in 2007 (comparing 10 classes playing the game to 10 classes receiving traditional lessons on the history of medieval Amsterdam), research into the game's effects on learning and collaborative skills was conducted by the Universities of Amsterdam and Utrecht. This research was mainly based on quantitative (tests) and qualitative (evaluation meetings, observations) data and demonstrated the potential Frequency 1550 can tap if dealing with the gaps in technology (street teams were cut off several times and experienced this as a failure of the game) and some overly educational tasks (i.e. too much text). The research paper[9] concluded the motivational and learning effects of this type of education to be considerably stronger in comparison with traditional education. According to the results, even more learning effects on knowledge transfer and motivation can be expected if children are actively involved in creating the game story and game play.

8   http://freq1550.waag.org/preview.html
9   Onderzoeksrapport Frequency 1550: http://www.waag.org/project/frequentie

Also using the urban environment as an emerging context for playing and learning, the Mobile Learning Game Kit (MLGK) guides its players by means of certain tasks through several locations in the city.

However, the MLGK was primarily created as a tool kit for students to create their own educational games, and educational institutions to meet the specific needs of their courses and levels. Since 2006, it provides a platform in which students can explore the city by collecting data on site (by uploading video, audio, images) and create their own thematic media routes. Additionally, they can research information online and, thus, create a virtual environment that visualizes a collage of all information collected.

Waag Society has gained valuable experience from these previous projects: Amsterdam RealTime tested out the possibilities of localization techniques and opened up questions for new related projects. While people were incidentally drawing lines when walking through the city, the subsequent N8game focused on this approach more precisely by enabling players to consciously draw routes in a competition between 8 teams. Frequency 1550 further enhanced this structure by adding narrative and additional game elements to it to develop an educational location-based game. Consequently, the MLGK then fulfilled the obvious need to build a platform that would enable educational institutions to adjust their educational level and requirements for a specific target group to a location-based game. This has led up to the idea of integrating a user-centred approach that is now primarily focused on the target group itself: the students as actual producers of a location-based game.

Research Method

To extract new and clear stated design principles from this study that can be added to Games Atelier to enrich the students' collaborative experience and engage students more intensely, this paper suggests a rather theoretic approach.

Taking a glance at recent developments in theatre and performance art, five main characteristics will be outlined and embedded in recent literature, prior to being confronted with the features of Games Atelier. Moving on from the interfaces between art and life/game and life to the intrinsic connection between art and game, the following chapter will investigate this phenomenon in theory.

Thereupon, some examples of recent performance art projects will be analysed to illustrate what location-based games can eventually learn from performance art.

The next chapter investigates in detail how Games Atelier can benefit from these insights.

Finally, based upon this background, the design principles for Games Atelier and its three respective templates will be depicted as well as the most important conclusions of this research project.

Inside theatre and performance art

From participation to collaboration

> „Why is collaboration such an important part of the new century? With increased use of more and more specialized, complicated technology, it is far less productive to be an artist delivering a monologue alone in the studio.“ (Jack Ox)[10]

The citation above corresponds to the latest developments in theatre and performance art: the increasing intermediality by means of new technologies which have led to new concepts such as mixed-reality performances, the effort to take the performance out into the streets which initiated site-specific art projects as well as artists struggling with the notion of efficacy[11] due to the new environment, and the theatre's shift from monologue to dialogue that is not only obvious in the growing attempt to make spectators participate in the performance, but is also visible in the shifting focus from the textual (drama) to the physical (body).

To understand this 'performative turn' that took place in theatre in the 1960s, it is well worth to have a quick look at developments in theatre from Ancient Greek traditions to postmodern theatre.

In an effort to transform theatre from the "monologue" of traditional performance into a "dialogue" between audience and stage, in the 1960s several artists like South American theatre practitioner Boal[12] experimented with various kinds of interactive, however, highly socially engaged theatre by integrating people in the streets - as an intervention - who were not knowingly part of the performance. Also Schechner was intrigued by this concept and wanted to find new ways to integrate "dark players"[13] in the performance. He further tried to investigate how theatre can enable theater-goers to influence society and their everyday behaviour after participating in a ritualistic performance[14]. This movement can be associated with large-scale changes during the 60s and 70s. In terms of aesthetics, it relates to Artaud who revolutionized the theatre with his cathartic concept of a "Theatre of Cruelty", which was closely linked to Surrealism and did not rely on text anymore but on the body to communicate meaning to the audience. Polish theatre practitioner Grotowski shared this imagery with him and - as Schechner - believed in the ritualistic nature of theatre and in "the theatre's therapeutic function for people [...] It is true that the actor accomplishes this act, but he can only do so through an encounter with the spectator - intimately, visibly [...] in direct confrontation with him, and somehow 'instead of' him"[15]. And, of course, also Brecht believed that theatre has an effect on people's behaviour and thinking. He suggested a visible distance between the actor and his character (as a moment of alienation, "Verfremdung") and the creation of a theatre that was also supposed to be a "ritual". However, ritual theatre was then only attempting to get back to its roots since theatre did once evolve out of ritual.

While most of these socially engaged performance concepts failed due to their utopian view of art being able to revolutionize the respective political system, there is no doubt that an even more interesting shift has taken place within this movement: the evolution from the spectator, who is witnessing an event on stage (in distance to the event), towards the spectactor (Boal), who is always already participating in the performance (while blurring the boundaries between auditorium and stage).

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10 Cited in Candy, Linda/Edmonds, Ernest: Explorations in Art and Technology. 2002. p.53
11   Many performance artists mainly in the 1960's and 70's experimented with the notion of efficacy, trying to use their projects as tools to evoke social and/or political change. For instance, theatre practitioner and theorist Richard Schechner pointed out that there always have to be both sides of the story: entertainment and efficacy. See: Schechner, Richard: From Ritual to Theatre and Back. 1974
12 Boal, Augusto: Theatre of the Oppressed. 1993
13 According to Schechner playing in the dark means that some or all of the players don't know that they are playing. Schechner, Richard: The Future of Ritual 1993, p. 36.
14   Schechner established his Environmental Theatre in the 1960s, willing to create an outdoor theatre that both moves and impresses an audience and achieves broad popular appeal. He wanted to create a theatre that embraces the outdoor context, and that acknowledges and responds to the presence of the audience.
15 Grotowski, Jerzy: Towards a Poor Theatre. 1968, p. 128.

But if one looks at projects by performance artists like Gob Squad or Blast Theory today - is the concept of the spectactor radical enough? There is a new form of theatre practice emerging, a form of participation that is precisely more than the opportunity for an individual to influence the artwork. Collaboration involves multiple interactions between participants who share a goal within the performance - at least a goal that incorporates everyone wanting participation.

Within this collaborative approach, participants are performing in a team of at least two. They become accomplices[16]. According to Gesa Ziemer, accomplices never out themselves alone, only in the collaborative act that can take a very short amount of time even. When they unite in opposition to something, they create simultaneous alternate systems which are very difficult to see through at times, also conspirative and clandestine, and yet effective at having an impact. They share a common interest from which both gain profit.

Having an actual impact as an accomplice on both the performance process and outcome can be regarded as a significant change in the concept of theatre. When collaborating in Games Atelier, students are also organizing complex issues spontaneously and on the spot instead of directing the outside environment from a distance. They are playing in a team, and are as well playing with the events that occur to them, which equally makes them accomplices.
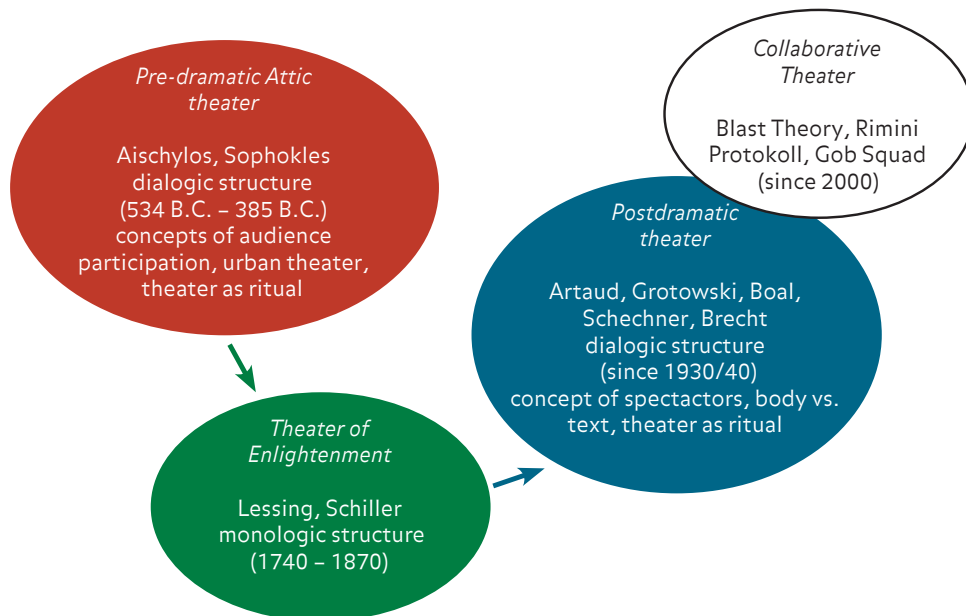

Fig. 6: History of participation and collaboration in theatre

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16 *Accomplices are rather tactitians than strategists: Instead of acting and operating from a specific place (i.e. the **stage, the auditorium**), they rather organize complexity from the place of the "Other". Accomplices play with events that occur to them, and organize them spontaneously.*

From place to non-place

Regarding the increasing interest in dialogic structures during the last 70 years, it is important to mention that already Greek theatre during the Attic period was intrinsically a dialogue and connected into the life of the polis. It not only tried to have, for instance, an effect of awakening its spectators/citizens to the imperfections of governments and social structures since it involved its audience into the play[17]. It is even more important to mention that it was performed outside in the urban space[18], however, still with a strict separation of audience and actors. Hans-Thies Lehmann, thus, has referred to this theatre as "pre-dramatic" while characterizing recent developments in theatre as "postdramatic theatre".[19] Today, theatre is not connected into our everyday life anymore. And mainly, there are less urban places, which are intrinsically filled with meaning. Since place and culture are intertwined, today many theorists claim that the public spaces that are so important for a thriving urban culture are under attack. The theory goes, that traditional urban spaces are disappearing and replaced by either privatized spaces or dead (sub)urban spaces that do not have an audience anymore. Cultural anthropologist Marc Augé has commented on this dilemma stating that, today, we are surrounded by non-places rather than places for an ever-increasing proportion of our lives is spent in supermarkets, airports and hotels or on motorways. This invasion of the world by what Marc Augé calls 'non-place' results in a profound alteration of awareness: something we perceive, but only in a partial and incoherent manner. Augé uses the concept of 'supermodernity' to describe the logic of these late-capitalist phenomena - a logic of excessive information and excessive space. He goes on to map the distinction between place, covered with historical monuments and creative social life, and non-place, to which individuals are connected in a uniform manner and where no organic social life is (yet) possible. And he argues that we are in transit through non-place for an increasing amount of our time.

Performance artists have been dealing with these prospects of 'lost' places by including site-specific elements in their work. Typically, the artist of site-specific works takes the location into account while planning and creating the artwork. But most recent postmodern site-specific performances can as well be understood as a remedy for a historical and decontextualizing modernist approaches, not necessarily introducing places but non-places to produce and/or gather uncommon local knowledge of the urban space.
Thus, these recent works could rather be called "space-specific" performances, while "place-specific" performances have engaged with cultural and social meanings. Site-specific production can be said to be one of the core practices of contemporary performance.

With respect to Games Atelier, there is at first sight little to be gained by understanding place as something lost. In fact, place becomes less an absolute location but rather a relative state of mind that students get into by testing out their boundaries and networks. Since their environment is being layered with digital systems, they most often get to experience places with sense rather than they are fully able to experience a sense of place.

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17 *The annual Dionysos festival depended greatly on the interaction between audience and actors. Before the actual performance, the audience accompanied its chosen actors to the stage. And even during the play, spectators were eventually involved by means of the choir who actively spoke to them.*
18 *Yet today, these monuments are present: The famous antic theatres mostly located in the centre of the city were the venues for theatre performances.*
19 *With an emphasis on the environment and the body rather than on text, this theatre may present a human being recognizing his own suffering in a gesture. Postdramatic theatre as well deals with the use of new technologies, strictly speaking, it includes mixed-reality performances that do not insist on any tragic discourse anymore, neither on plots or on how things come to an end. Lehmann, Hans-Thies: Postdramatisches Theatre. 1999*

From actors to "experts on everyday life"

When it comes to the role of the performance artist or the advisor in theatre, the concept has radically changed; they have even become slightly invisible. Artists are not directing a play anymore but rather choosing the setting(s) and providing a structure for actors (and non-actors) that is close to a "blackbox". Helgard Haug from the theatre group Rimini Protokoll mentions: "...we used the inherent dramaturgy of the spaces where they take place [...] it became the frame that helped us to communicate that tangle of material. When we start with texts and claim to stage them, we are stimulated by the dramaturgy they suggest: a sequence of events, a schedule according to which we can try to assemble the material."[20] But not only are artists allowing the material to perform. These days, many theatre groups give centre stage to "experts on everyday life"[21] neglecting the notion of the actor as well: These "experts" are people with more or less interesting jobs, more or less ordinary backgrounds, but most important, without theatrical training or acting ambitions. These experts, who introduce themselves on stage in everyday clothes using their real name are there to say: "We are not performing theatre. We are just us." The stability of the performances lies in their instability since the actors are continually remembering themselves anew. This would imply that on stage these "experts" ideally stay themselves, in a state of concentration, free of stage-fright, and without looking rehearsed.

But since postdramatic theatre is rather a presentation than representation of something, it is playing with the contrariness of such a desired authenticity and acting. Watching these people perform triggers the audience to doubt, to detect 'realness' rather than to observe a fictional act. And yet, authenticity cannot be staged.

This shift that has taken place in theatre is related to postmodern theories mentioning that, today, there are no heroes anymore. In modern times, heroes have enjoyed an increased moral complexity. 20th century playwrights such as Samuel Beckett and Tom Stoppard showcased anti-heroic protagonists recognizable by their lack of identity and determination. Postmodern approaches ask for a rather playful approach. In Lyotard's postmodern philosophy, the social subject also fragments and seems to dissolve but it uses irony to acknowledge the fact that we are inevitably separated from ourselves.
With the use of "experts on everyday life", this gap can be made visible on stage by presenting the process in a rather playful manner.

The strong analogy with Games Atelier is obvious. The assignments that require uploading a video enable the students to show their performing skills. In front of the camera they approach their tasks playfully and/or with irony and continually reflect on themselves since they have an audience (online and on the streets).

From artworks to relational experience

Regarding the interface between technology and art, in her "Kurze Geschichte des deutschen Theaters", Erika Fischer-Lichte states that many of the most interesting developments in theatre have developed from an investigation and reappraisal of the theatre as a medium and of what makes it theatre, distinct from other visual or performative media.[22] In the 21st century with its new generation of advances in computer, video and sensory simulation technologies, and at a time when the phenomenon of "virtual reality" finds its way into theatre, theatre has become an exceptionally collaborative experience: it can enable us to not only observe and witness something but most importantly enable us to reflect on how we perceive what we do, and of how we explore questions of personal and social identity.

20 http://www.rimini-protokoll.de/website/en/articles_date.html
21 Rimini Protokoll, for instance, holds the opinion that „experts" might be a better term to describe the new actors than „amateurs", since an „amateur" signifies deficiency.
22 Fischer-Lichte, Erika: Kurze Geschichte des deutschen Theaters. 2002. 410ff.

According to Bourriaud, today it is rather the relations between the people and the artwork, which count than it would be the artwork delivering a certain meaning put into it by the artist.[23] Other postmodern theories from Derrida have equally put the process over the product saying that there is no outside of the text; everything that we can know is text, that is, is constructed of signs in relationship. Thus, meaning evolves within the process of playing. The experience of the 'knowing how' prevails the 'knowing what'.

This relates to the Games Atelier experience since the game does not depend on the students' ability to deal with its prospects individually, but, more importantly, how students deal with themselves and even re-organize themselves when mediated in new, unexpected ways: Games Atelier makes students aware of each others' presence, and it enables students to overlay their personal fictional and non-fictional stories onto their urban environment. Thus, context is not a setting anymore but one's engagement with it.[24] Context becomes something you do, not something that is given. Or to borrow a famous phrase from Wittgenstein that relates to this experience enriched by mobile technology: "The meaning of things is in its use."

From drama to fragmented stories

Due to this movement, it is not at all surprising that theatre has passed its usual dramatic form of narration which once used to be linear and based on text. Today, theatre is focusing on questions of presence and absence rather than dramatic acts, is a presentation (with a postmodern 'coming into being' quality) rather than a representation (of things, of meaning), and last but not least, theatre is drawing on the notion of producing anecdotes instead of a narration as a whole.[25] Lyotard proposes that metanarratives[26] should give way to 'petits récits', or more modest and "localised" narratives.[27]

Since postmodern theories are constantly deconstructing 'the whole' and passing the "metanarratives" (Lyotard)[28], theatre has consequently blurred its own boundaries regarding its aesthetics. Performance art does not inhabit a symbolic space, and it is neither a piece of work that could be reduced to being a product by any means. It is a process and an activity, and an "artistic activity is a game, whose forms, patterns and functions develop and evolve according to periods and social contexts; it is not an immutable essence."[29]

Our postmodern world is characterized by a plurality of possibilities that are playfully related to each other just like the structure of a fishnet, or a network we can interact with, or how Lyotard puts it: "Let us play, and let us play in peace."[30] That is why we also speak of performance art rather as a process than as an artwork. Experience has replaced the artwork (Fried)[31].

Consequently, the 'performative turn' has also led to the merging of genres (strictly speaking of performance art and gaming). If we are not observing anymore but experiencing, and if there is no artwork anymore but relations, we can speak with Lyotard and claim that we have entered a state of playing between the genres[32]. These overlaps between games and art reveal the patterns of our postmodern culture that are specific to this historical moment. Before this paper will take a closer look at some current examples where performance art actually merges with gaming, the already mentioned concepts can be summarized and applied to location-based games such as Games Atelier with respect to narration, content, players and structure.

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23 Bourriaud: Nicolas: Relational Aesthetics, 1998.
24 Bonnie, Nardi: Context and Consciousness. Activity Theory and Human-Computer Interaction. (Cambridge, MA: MIT Press, 1996)
25 Brandstetter mentions the term "anecdote" in relation to the increased use of fragmented stories in art. Brandstetter, Gabriele: Bild-Sprung. Theatre der Zeit, 2005.
26 A metanarrative is an abstract idea that is supposed to be a comprehensive explanation of historical knowledge or experience.
27 Lyotard, Jean-Francois: The Postmodern Condition. 1979.
28 Ibid.
29 Bourriaud: Relational Aesthetics. 1998. p.1.
30 Lyotard, Jean-Francois: The Postmodern Condition. 1979. p.12.
31 Fried, Michael: Art and Objecthood. 1967.
32 Ibid. p. 34.

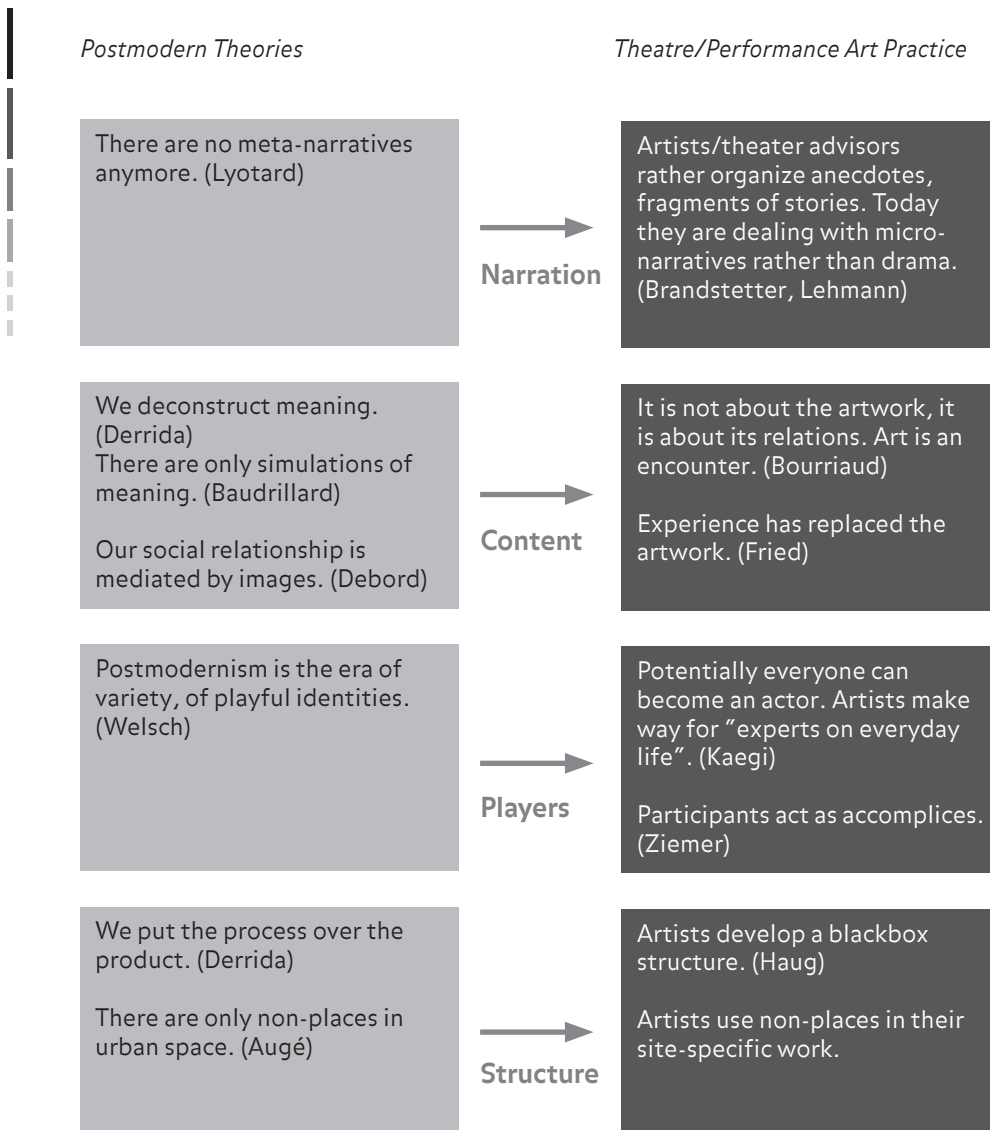| Postmodern Theories		Theatre/Performance Art Practice
There are no meta-narratives anymore. (Lyotard)	**Narration**	Artists/theater advisors rather organize anecdotes, fragments of stories. Today they are dealing with micro-narratives rather than drama. (Brandstetter, Lehmann)
We deconstruct meaning. (Derrida) There are only simulations of meaning. (Baudrillard) Our social relationship is mediated by images. (Debord)	**Content**	It is not about the artwork, it is about its relations. Art is an encounter. (Bourriaud) Experience has replaced the artwork. (Fried)
Postmodernism is the era of variety, of playful identities. (Welsch)	**Players**	Potentially everyone can become an actor. Artists make way for "experts on everyday life". (Kaegi) Participants act as accomplices. (Ziemer)
We put the process over the product. (Derrida) There are only non-places in urban space. (Augé)	**Structure**	Artists develop a blackbox structure. (Haug) Artists use non-places in their site-specific work.

Fig.7: Postmodern Theory and Theatre/Performance Art Practice

"Art is a game"

To actually understand the blurring boundaries between performance art and games, first, one has to move away from using a different critical approach to games from the approach that is apparent in the retrospect about performance art described in the last chapter. While the images, stories, and objects in games very often used to be cliche, game developers of location-based games are creating more sophisticated approaches to design that combine more complex modes of narration, content, role-playing and structure.

Location-based games are a subset of pervasive games[33]. According to the current EU-funded Integrated Project on Pervasive Gaming (IPerG), pervasive games are game experiences that are interwoven with our everyday life[34] while in a location-based game the game play evolves and progresses based on a player's location respectively. Yet in both ways, these games are more and more blurring the boundaries between the real and the virtual. And according to the Institute for the Future, Palo Alto, they will continue to blur boundaries in the future.[35] The following paragraphs point out how location-based games get more and more entangled with everyday life such as performance art has.

Narration

The many forms of content that are created in location-based games are based on narrative or contain narrative elements. Within location-based games, characters are related to locations and become involved with micro-narratives. And as narrative has shifted from the linear progression of text to a rather non-linear and visual mode of communication that includes interaction, new methods of narrative, of storytelling, have been emerging. There are mixed opinions of how interactive storytelling should be approached. Just like in performance art, there have been many issues concerning the conflict between artist and audience control.

A story, according to Chris Crawford[36], is the presentation of a sequence of events that form a recognizable pattern teaching lessons in the telling. But interactivity is almost contradictory to this goal, because allowing players to make choices that affect a story might upset this beforehand structured pattern. Thus, the location-based game structure must be able to allow stories to generate on the fly, for example based on players' feedback, without relying on pre-scripted action or a chronological series of events too much. Such a structure enables a player to make choices that determine the future course of events, which means that the story actually can develop in many different directions based on the player's decisions. Crawford mentions, however, that:

> *"the absolute number of choices isn't important; it's the number of choices offered, compared to the number of possibilities the user can imagine. If the user has reached the climax of the story and must choose between leaving his girlfriend for the war and shirking his duty, having only two choices doesn't detract from the power of the interaction; it's difficult to imagine any other reasonable possibilities. "*[37]

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33 *It should be taken into account that pervasive games just like location-based games are no genre in itself, but a sub genre.*
34 *see: Waern, Annika and Åkesson, Karl-Petter, et al. (2004) IPerG position paper. In: Workshop on Gaming Applications in Pervasive Computing Environments, Second International Conference on Pervasive Computing: Pervasive 2004, Vienna, 21-23 Apr 2004.*
35 *Tester, Jason: All the world's a game. The future of context-aware gaming. 2000.*
36 *Because locative media is a relatively new creative medium there is only a small body of existing literature. This chapter will mainly use citations from game theory that can be applied to this sub genre and will offer insight on how to approach it.*
37 *Crawford, Chris: Chris Crawford on Interactive Storytelling. 2004. p. 17*

If the players deal with an interactive narrative where they can truly change the narrative, the artists/developers are not able to control its development. What might be fruitful for performance art experiments to a certain extent,38 can be critical within a location-based game. Therefore, Crawford suggests to design many possibilities in the game that communicate the same message. Herewith, players get the illusion of wandering around freely instead of just walking forward. Creating such an interactive narrative does not mean splitting a narrative in different segments players can navigate through. This would imply that only the manner in which they experience the narrative is interactive, but the narrative itself is not. To make the experience of these micro-narratives truly interactive, it is necessary for the players to become aware of the different choices they made and how they have made an impact on the game. The options have to frame the decision-making process.

This structure relates to the theoretical concept of the rhizome by Deleuze and Guattari, differing very much from the concept of a tree or root, which plots a point and fixes an order. A rhizome represents the principles of connection and heterogeneity, where any point can be connected to another. Today, players expect that freedom in a location-based game as well: "If you twist the branching tree system around enough (...) so that the lower-level branchpoints can feed back to the upper-level branchpoints, you can transform it (the game structure)[39] from a tree into a network."[40]

Narration in location-based games is, thus, rewriting the rules for making choices.

Content

Regarding their content, the actual challenge for location-based games is to provide believable environments where game content is matched to the environment in an evocative and persuasive way. Yet, the environment is not everything it takes. Crawford, again, mentions that "you can set up a gigantic stage, equip it with a calvacade of fascinating props, create (...) magnificent sound effects, and still have nothing. Actors make the stage come alive."[41] Indeed, stories in location-based games can become much more powerful when attached to a place and experienced through mobile technology. But speaking with Crawford, the game content, the stories, should be about the people. This means that players encounter the location and may find it in a different context each time based on the choices they made. If the stories dynamically vary due to interactive narration, the location allows exploration, and is not just a story to be passed through.

Content in location-based games is, thus, challenged by the encounters with players.

Players

How people get involved with location-based games has a strong analogy with theatre and performance art: There are spectators, players (accomplices) and non-players ("dark players"). Spectators have no direct influence to the game but can be actively involved in it as an audience. Non-players are often passers-by who are unaware of an ongoing game, yet, can get involved with it. For the players, this creates an uncertainty of not knowing who else is involved in the game. These non-players or "dark players" may also shift roles and become actual players of the game when they are invited to join it.

Players in location-based games are, thus, challenging the blurring of roles.

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38 This applies, for instance, to the „experts on everyday life" whose performance includes the element of chance very much.
39 Note from editor.
40 Crawford, Chris: Chris Crawford on Interactive Storytelling. 2004. p. 129.
41 Ibid. p. 144.

Structure

Games were often considered to happen inside a defined social boundary, which serves as a protective frame that defines the events as happening outside the players' ordinary lives. The "magic circle" is a key concept that Salen and Zimmerman promote which is originally adapted from Johan Huizinga. The classical notion of a game implies that there is a clear and unambiguous border between the game and the world outside the game: "To play a game means entering into a magic circle, or perhaps creating one as a game begins." The authors argue that the "magic" of this circle is due to the "new reality" it creates.[42] A "magic circle" accounts for the "second-order reality" or "holding power" of games, to use the terms of other theorists (Roger Caillois and Sherry Turkle, respectively).

Huizinga's view has become widely known within contemporary game studies, and it has also been widely criticized, as it has become increasingly obvious how urban environments play an important role in current location-based games. Playing then is ambiguous and often blurred with players' everyday lives. Gadamer defines a "not taking part" as being contrary to play.[43] But location-based games also expand socially beyond the limits of regular games[44], most often inviting non-players to participate, and obviously breaking the "magic circle".

When it comes to rule-breaking within the game, Salen and Zimmermann feature three player types in their analysis that can be of significant interest in this context: the unsportsmanlike player (who violates rules of etiquette but follows the operational rules), the cheater (who breaks the operational rules), and the spoil-sport (who refuses to acknowledge the authority of the game).[45] This rule-breaking goes far beyond simply wanting to break the intended game rules for fun. Moreover, it is a way of presenting the own skills and knowledge as a personal reward of playing. Rule-breaking is said to be a common phenomenon in gaming and according to Salen and Zimmermann the New Games Movement is likely to create games with rules that are meant to be broken and modified by the player which can lead to the player creating entirely new contexts for play.

The structure of location-based games challenges such behaviour to the players and makes them aware they can impact the game.

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42 When players become the "makers" of the game today ("players-as-producer paradigm"), they interact with the game outside the boundaries of the magic circle. However, some semblance of the magic circle will remain, according to Salen and Zimmermann. Salen, Katie/Zimmermann, Eric: Rules of Play. 2003. p. 587.
43 According to Gadamer, play is always serious (a "sacred seriousness") and thus, the contrary of play cannot be seriousness. Players are not entering a sovereign and imaginary world where one is freed from all the pressures how Schiller once defined it. Gadamer insists that one has to be drawn into playing since "in playing we are not so much the ones playing, as the ones played, perhaps even the out-played." Gadamer, Hans-Georg: Philosophical Hermeneutics. 1977.
44 Montola, Markus: Challenges of Pervasive Game Studies. IPerG Newsletter, November 2006. http://www.cbsnews.com/sics. se/news.html.
45 Ibid. p.284

Where performance art and urban games meet

The following artistic experiments are not about following rules either. Instead, they are about breaking them and inventing new ones; they are about exploring the frame and the interactive narrative.
If one writes about performance art instead of making it, it can rarely be about anything but form.

Day of the Figurines

Day of the Figurines is the first multi-user performance for mobile phones and has been developed as part of the European research project IPerG (Integrated Project on Pervasive Gaming) in collaboration with Blast Theory, the Mixed Reality Lab at University of Nottingham, Sony Net Services, University of Gotland, Interactive Institute and the Fraunhofer Institute. The game plays on the tension between intimacy and anonymity of text messages. It is set "in a fictional town that is littered, dark and underpinned with steady decay. The game unfolds over a total of 24 days, each day representing an hour in the life of the town that shifts from the mundane to the cataclysmic." (Blast Theory, 2007) Players have to respond to certain events via text messages and thus create and sustain a community. Each of the players is represented by a small plastic figurine which is moved by hand on a model town every hour for the duration of the game and according to the choices players make.
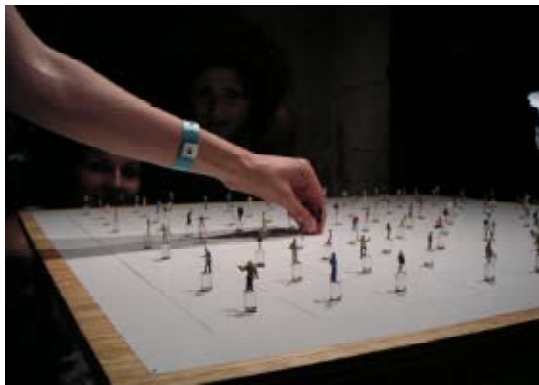

Fig. 8: The figurine players choose as their personal avatar at the destination table during the registration process is moved by hand hour after hour according to their desired locations and the choices they make in the game.

Fig. 9: The more choices they make the more text messages they receive. A key feature of Day of the Figurines is that it is a slow pervasive game that unfolds over 24 days through the exchange of just a few text messages each day. This slowness opens up new artistic possibilities for creating interactive narrative that mixes pre-authored rules and content with improvised responses to players' actions. This structure makes it possible to explore the temporal issues of how a pervasive game can be mixed with the patterns of players' ongoing daily lives, an aspect of pervasive gaming that has so far been ignored in favor of location-oriented issues.

Blast Theory's work constitutes a complex interdisciplinary investigation of the aesthetics of new media theatre within everyday life as well as the ideologies present in information technology around us. Not only does Day of the Figurines allow for the co-presence of virtual and real spaces, but also it shows how the virtual can have an impact on the real, on people's everyday life, since players are encouraged to regard their chosen fragile figurine as part of their life. In the very beginning, during the moments of choosing their avatar-like figurine, players are asked to answer (personal) questions about it[46]. The figurine's absence is then rather an "essential absence" (a concept by postmodern architect Peter Eisenman who pointed out that a site always inherits the notion of memory) since there are arrows added to the figurines on the destination table. These arrows indicate the direction of the desired journeys as well as possible encounters with other figurines. They have performing potential since they state: You are going to do (and imagine) this. While these arrows are not visible for the players during the game, they yet characterize the experience of their movements and encounters to be "essentially absent". The fundamental relationship between presence and absence is an in-between, an always already loss.[47]

There is no doubt that it is for this reason that Day of the Figurines wants to take a closer look at the culture of SMS, a medium that obviously reflects on this in-betweenness. By pretending that people could eventually play whenever they want to, this temporal 24-days-6 hours-a-day-structure can, however, be quite challenging for the players who would receive messages on some days where they are not at all in the mood for playing. This makes it hard for players to stay in the game. Thus, looking at the structure, there is an ambiguity of enabling players to make decisions while at the same time they are being 'defined' or forced in a certain direction due to the amount of SMS players send[48] which constantly prohibits players to be fully in control of the game.

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46 For example: The figurine's name, what shoes it wears, a name of someone the figurine would feel safe with. This is a very triggering and theatrical moment: Although players are obviously not wearing their figurine's shoes, they might provide them with their own qualities, their gender etc. and feel related to it.
47 This relates to the Heideggerian expropriation ("Ent-Eignis") you cannot grasp either. Heidegger, Martin/Blochmann, Elisabeth: Briefwechsel 1918-1969. 1969
48 It has happened that players received an SMS asking if they were sick due to the small amount of SMS they sent.

However, this sequence-driven structure is immersive in a sense that it distracts you from your context in situations you would not expect an SMS rather than dislocating you in your own environment. Thus, Day of the Figurines plays on the tension between the image of virtual and real locations, an image that is (de-)constructed here in a very postmodern way: According to Derrida, Deleuze and Baudrillard, representations only refer or apply to other representations, so that language and thought are literally cut off from the real world. This reveals the dilemma of Day of the Figurines because no matter how hard players try to refer to the non-representational, they cannot do it.

Call Cutta - A Mobile Phone Theatre

Call Cutta is the first mobile phone theatre created by German/Swiss artist trio Rimini Protokoll, with no actors appearing on stage. Instead, call-center workers in Calcutta are guiding theatre-goers through Berlin's Kreuzberg district with the aid of a mobile phone and an elaborate timetable, while alluding to secretive stories (about i.e. the freedom fighter Subhas Chandra Bose) and maintaining a friendly and cheerful, even flirtatious conversation. Call Cutta is an improvised theatrical performance, but also an experiment on cultural exchange with people from different cultural backgrounds. What content did they exchange? German players tended to ask every conceivable question about Bollywood, Indian education, the typical marrying age for Indian women, and how arranged marriages work. In return they told the Indians extremely private things that they would normally keep to themselves. How come people trusted each other that much? How come two of the players actually fell in love despite this theatrically framed experience?

Fig. 10: Indian call-center workers admit to be usually adopting British and American accents to fool western callers about their true location but they maintain their Indian accent during this performance. However, their question "Have you ever lied on the phone or used a false name?" appears to be contradictory after this confession.

First of all, Rimini Protokoll is on the search for the causes and developments that take place behind reality and at the borders of reality where aesthetics and ethics merge. Wittgenstein already pointed out that both realms are fundamentally linked to each other ("Ethics is transcendental. Ethics and aesthetics are one."[49]). At all times, theatre consists of an element of risk taking since the audience is always involved. Yet, this notion is altered when theater-goers are thrown in the streets of Berlin, guided by an Indian call-center agent on the phone, while being both forced and offered to experience the "uncanniness" of that situation. Without trust people cannot and will not take risks. Thus, they are pushed in the ethical space. But at the same time, Call Cutta enables them to perceive this offered guidance aesthetically as their own personal desire to trust.

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49 Wittgenstein, Ludwig: Tractatus logico-philosophicus, Logisch-philosophische Abhandlung. Suhrkamp, Frankfurt am Main, 2003.

Secondly, ever since theater-goers are provided with a sense of a special occasion, that what they are seeing is something unique and is shared just with the other people in the same space. Call Cutta results in a combination of fictional events taking place as well as actual events happening live as the theater-goers walk around which creates a theatrical narrative mixed with personal experience. And while being guided through the city, theater-goers in Berlin share another form of space with their counterpart in Calcutta, a space that is rather an "arena of exchange" to borrow a term from Bourriaud. This means its form suggests a symbolic value of the "world", an image of the "world" they share with each other rather than the same physical space. Yet this image does not reside in an augmented view for it is perceived in-between the connection of both worlds, both maps, both cities.

Thirdly and in terms of structure, this artistic experiment visualizes both the emergence and disappearance of the individual and the narrative. Art always asks us to look in two places at once, strictly speaking, to experience both the meditating aspect of meaning and the aspect that the art "occurs". Call Cutta is highly reviving this notion of looking in two places at once for it shows that "what we cannot see is equally relevant to what meets the eye" (Eduardo Kac)[50] or as Daniel Wetzel puts it: "Theatre is all about the senses. In this case the feeling that you're talking to a real person is important even though it's from a great distance."[51] In the end, the street runners finally see their Indian counterpart waving from a small screen in a window of a consumer electronics store.

Uncle Roy all around you

Uncle Roy all around you by Blast Theory and Mixed Reality Lab at the University of Nottingham is an artistic performance in the form of a game that encourages online players to collaborate with street players in London's urban space. Online players can cruise through the same virtual model of the city helping (or even hinder) the street runners who were sent out equipped with handheld computers in search of the elusive Uncle Roy. Using web cams, audio and text messages the players are working together. At the end of the game, street players and online players who made a commitment to be there for a stranger whenever he is in a personal crisis paired up and passed on their contact details. Players receive a message that during one year a particular person would be there in case of need.

Fig. 11: The online players can follow the street players' path, guide or manipulate their steps, and even watch them via live stream in Uncle Roy's office. Whenever a street player enters the office, online players are invited to join him.

50 http://presence.stanford.edu:3455/Collaboratory/9
51 Florian Malzacher, Miriam Dreysse (Hg.): Experten des Alltags. Das Theatre von Rimini Protokoll. 2007.
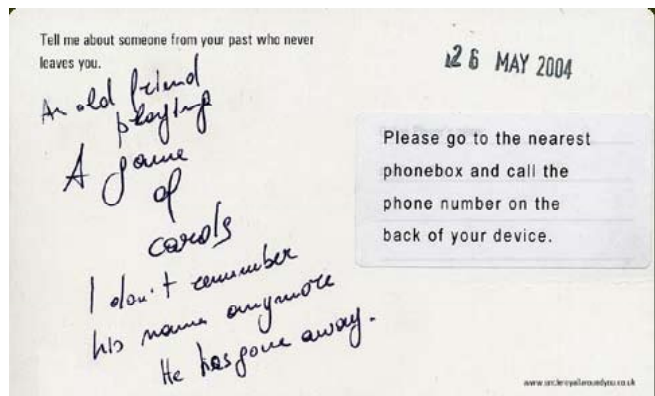
Fig. 12: Players who finally reached Uncle Roy's office were invited to write about someone from their past who never leaves them and send this anecdote on a postcard to elusive Uncle Roy.

When street players arrive at the venue in the very beginning, they are asked to hand over all their belongings (bags, mobile phones, wallets) in order to get a handheld computer. This ritualistic behaviour tends to increase the players' feelings of vulnerability and uncertainty already in the beginning and draws them even more into the performance. They are symbolically disconnected from their usual environment though not being in a symbolic space at all. An actor explains them their mission, which is an actual encounter with Uncle Roy (that will never happen), then they head out in the city. Uncle Roy all around you is focusing on a non-linear structure although players are encouraged to eventually find Uncle Roy's office. The route they take largely depends on the clues they get: The pre-scripted clues are attached to different regions of the game map and are designed to be ambiguous – some are relatively direct and useful, while others are misleading to the point of being mischievous, encouraging players to follow diversions[52], drawing on the history of the local environment, heightening the sense of being watched and also casting doubt on the intent and personality of Uncle Roy, especially the extent to which he can be trusted. Clues also constantly remind players that they have limited time in which to reach Uncle Roy's office.

Uncle Roy all around you also exploited a technique called self-reported positioning in which street players would report their new position, either explicitly by declaring their position to Uncle Roy[53] or implicitly by their PDA sending information about which area of the map they were looking at to remote online players. This is interesting since players may generate and interpret positional data in subtle ways that go beyond understanding exactly where someone is and that raise implications for the use of automated positioning systems such as GPS. In this sense, GPS is rather created as one way of locating than being the only possible way.

Unable to orient themselves without clear references from the online players, the street players cannot but continuously reposition themselves in a world of flickering and deceiving signifiers, work out what is life and what is fiction, trust one rather than the other and deal with the consequences of possible mistakes. Uncle Roy all around you displays the spectacle of the global city, in which everything is made of information.

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52 For example: "Watch a tourist cross the road and follow him/her!" This creates a sense of looking at everyone and thinking that they are part of the game. Everyone is a performer in such an experience.
53 In this case they would declare their position by dragging the 'me' icon on their PDA map to their current location and then pressing the 'I am here' button.

As street players receive text messages[54] from remote online players who apparently are following their progress through the city and who appear to know vital information about Uncle Roy's office, they can reply to these messages by uploading short audio messages and so can try to establish a relationship with online players and enlist their help. However, online players have their own objectives. They have been told to enlist street players in the task of retrieving a postcard from a location in the city so that it can be posted back to them.[55] In this way, street players are encouraged to cross the boundaries of normal behaviour in the city which in turn tests the limits of their trust in online players and in the game structure itself. Players are not competing but collaborating in an ambiguous sense (helping vs. hindering) to search the city for Uncle Roy. But while 20 online players and 12 street players are swapping information, however, Uncle Roy is always one step ahead and players never find him. When they finally arrive at his office he has always already left.

After the players' commitment in the end and them exchanging contact details some people did meet as a result, others never used the number but kept it and felt a connection with the stranger out there who had agreed to be there in case they needed to talk to someone.[56]

Super Night Shot

Super Night Shot is an art performance by Gob Squad that is taking place exactly one hour before the audience arrives at the theatre. The four members of Gob Squad are on a mission declaring war on anonymity armed with video cameras allowing the public to become co-stars in this journey of surprising encounters. Back in the theatre, the audience is taped welcoming the group with silly string and confetti before the footage is mixed live by Gob Squad on four screens, culminating in a wide-screen urban adventure.

Fig. 13: The performance also contains staged elements. Gob Squad is always searching for the actual picture behind the stereotype, trying to challenge Debord's notion of the "spectacle".

54 Uncle Roy all around you uses web cams, audio and text messages.
55 Postcard locations include bars, telephone boxes and even the saddle bags of chained up bicycles.
56 http://www.blasttheory.co.uk/bt/work_uncleroy.html

Fig. 14: Simon Will, aspiring to be the hero in this performance, asks people in the streets if they have anything heroic they would like him to do. However, later on he decides to be the villain. There may be no more heroes today, but that does not halt the desire for them.

Super Night Shot is an experience that bestows upon everyday life a second layer of story: the allure of an entertaining movie about the identity of a city. In order to make their movie, the four members of Gob Squad transform the city into a film set, a place in which cigarette butts in a gutter become props and every passer-by a potential friend, lover or liberator. Whenever passers-by are implicated in the performance they evolve from being "dark players" (Richard Schechner) to players that are aware of the performance being enabled to actually collaborate with the respective Gob Squad member. During this encounter they are deeply intertwisted with each other, they act together and turn their fear (of each other, the unknown) into desire. They are not strangers anymore: they are accomplices. In this performance, they are even exchanging ideas of what the city lacks for instance (i.e. by asking "What do you think is missing here?").

Further, having the video camera included (as an element of surveillance technology), it shows how the urban space is no longer just what we encounter in the city but also its mythology and fiction even, as well as the informational flow that at once locates, directs and defines us. Again, this world is entirely made of signs in which, in Baudrillian fashion, everything is creating value in reference only to itself[57]. However, Gob Squad try to challenge Baudrillard's world of simulation here, the being torn between different sign elements and the relationship between them[58], by having the audience in the end (or is it the actual beginning?) of the performance negotiate between the two worlds: The videos are mixed together live, videos of playing with signs, staging a dance together before continuing their different missions, playing with stereotypes when searching for the strange lover who would eventually add a "Happy End" to this performance. By performing this dialectic tension between surroundings which are at once familiar and "uncanny", real and virtual, informational and material, this process of alienation is allowing a multiple perception which leads to the assumption: "Is this "Happy End" maybe more than the end of a performance? Could it possibly be an attempt to end Debord's notion of the "Society of the Spectacle"[59] that is exclusively build upon the image?

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57 Baudrillard, Jean: The Conspiracy of Art. 1998. p. 124
58 Ibid. p. 120
59 Debord, Guy: The Society of the Spectacle. 1967. p.11

Second Life Walkie Talkie Walks

Second Life Walkie Talkie Walks (2007) by Sander Veenhof is a simultaneous walking tour for Second Life avatars and people in the urban space of Brooklyn. Therefore, Second Life residents pick up an in-word walkie talkie while real people can check out the availability of the specially developed virtual walkie talkies on their mobile phone.

Fig. 15: By clicking on one of the avatar names, the mobile phone becomes a walkie talkie communication device that connects players to their desired walking partner.

Also in SL Walkie Talkie Tours, players find themselves trying to identify things, orient the space in the image, attaching real, imagined or fictitious events to it. The desired walking partner from Second Life is an avatar. In the very beginning of the performance, players negotiate about who will be in control, guiding the other person through their environment. They can even set up a time frame themselves for the duration of the walk. Compared to Call Cutta or Uncle Roy all around you, the structure does not allow for an equally strong feeling of uncertainty during the starting point, it does not introduce a narrative they can interact with either. To make it 'virtually real' players are messaging to an avatar instead of calling a person (as in Call Cutta). However, the ambiguity involved with the role-playing of the call-center worker is much more immersive and creates a larger amount of uncertainty than the exchange of information with an avatar people have become almost familiar with today. The walkers have to fulfill several tasks (i.e. taking pictures) although the route and directions they choose are up to them. After the walk, players are asked to choose a picture from their ultimate virtual sight that they perceived during the walk and upload it into an online gallery of simultaneous walks.

Design principles

This chapter suggests design principles for Games Atelier based upon the insights gained from theatre and performance art practice and theory to make the students' experience even more engaging. The goal is to understand the different kinds of possibilities Games Atelier can offer and the experience for the students to play – and make it slightly more immersive.

To begin with, while it is crucial to keep players engaged, the recent chapters have demonstrated that it may be as important in that sense to make their experience pleasantly frustrating, to make the immersion disruptive. "Disrupting can contribute to a unique game style". (Ewan Kirkland)[60] This means that if the players' immersion is broken at least once, this can heighten their engaging experience. This corresponds with the notion of rule-breaking in location-based games as well as with the recent developments in performance art: Disrupting can occur by means of other players as it is the case in Day of the Figurines where some text messages may be disturbing, by means of a non-linear structure that reacts to the players' choices as in Call Cutta – A Mobile Phone Theatre, by misleading hints (that create a feeling of uncertainty) and a self-reporting positioning (that creates a feeling of control) that are part of the narration as in Uncle Roy all around you, by means of interacting with strangers and passers-by as in Super Night Shot, or/and by giving the players alternating views of space as in SL Walkie Talkie Walks. Consequently, disrupting can occur in a complex manner. Based on the already gained insights, the sub areas for Games Atelier to be enriched with new design principles can be outlined. (see Fig. 12)
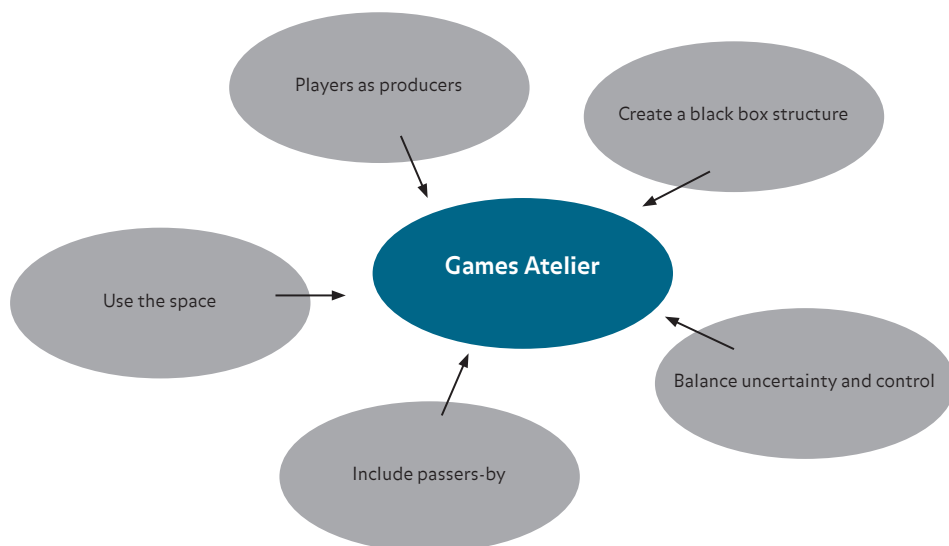

Fig. 16: Sub areas for design principles

Based on the previous analysis, general suggestions for design principles will be made that may apply to the three game templates of Games Atelier: Adventure, Collect & Trade, and Secret Trail. After that, more specific suggestions will be outlined according to the different kinds of immersion these templates ask for.

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60 Kirkland, Ewan: Restless dreams in Silent Hill: Approaches to video game analysis. Journal of Media Practice, 2005.

Players-as-producers-paradigm

Since the mobile phone still offers limited possibilities to enter content and to actually create a game, within Games Atelier students are producing their content online beforehand. Students actually create their desired character, objects, and missions on a web site and the game can be played on a mobile phone. As Fabien Girardin puts it: "It might be the time to demystify the complexity of creating mobile locative games. It is not a hacker's world anymore."[61]

While playing, students are able to upload content (audio, video and text). Because they are uploading content, they are able to reflect on their decisions. Students perform and reflect on their actions at the same time both during the game and afterwards, thus, they do remember they are playing a game.

This can heighten their experience of playing together since they are at the same time performing their belief that this is actually real. Jane McGonigal calls this phenomenon the "Pinocchio effect", which is the desire for a game to be transformed into everyday life or conversely.[62]

But there still is a gap. It is a similar gap as made visible by the "experts on everyday life" in performance art who present themselves on stage playing themselves yet knowing they have to be authentic. Performance theorist Richard Schechner pointed out that there are always at least two kinds of play: "make believe" and "make belief"[63]. While the former protects the boundaries between realness and pretending, the second form of play intentionally blurs them.

Transferring this to Games Atelier, it demonstrates that real belief is never an issue since the immersive experience of the game is always intended to be reflective. Games Atelier is a game, and students are never meant to believe that "this is not a game" (which is the case with some pervasive games[64]). It presents a protective frame (Michael J. Apter) that is allowing students to enjoy what would be frustrating or risky in everyday life, enabling them to pretend to believe just like the mentioned "experts" on stage pretend to believe they do not act.

Therefore, students should be given multiple options to perform this "make believe", and there should as well be more possibilities for them to demonstrate their mindset: What they perform is actually their desire to believe. Frequency 1550 once made students videotape themselves while they were acting out a certain scene from the Middle Ages on a bridge in Amsterdam. They chose to pretend to believe that this had really happened. Consequently, the desire to believe is confirmed step by step by means of decisions in the game.

This could be part of the Games Atelier design revealing more/more interesting opportunities for the students depending on how strong they indicate their desire to believe. Including additional tasks for the students showing them a video trailer or asking them questions about the game that do not necessarily have an influence on the learning effect (i.e. they would not earn any points or skills) but do get them more immersed could be an option. Students could eventually skip these tasks. Since they are able to create their own game, it should also be understood that they are always responsible for their own immersive experience as well.

61 Girardin, Fabien: Building a mobile, locative, and collaborative application. Swiss Federal Institute of Technology in Lausanne. 2005. p.3
62 McGonigal, Jane: A Real Little Game: The Performance of Belief in Pervasive Play. 2003
63 Schechner, Richard: Performance Studies. An Introduction. New York, 2002. p 35.
64 The „this is not a game" aesthetic dictates that pervasive games should not behave like a game.

Use a black box structure

A black box structure knows the input and the output, but does not know how exactly the input will be turned into the output. This corresponds to the theoretic notion of the rhizome (Deleuze/Guattari), representing the opportunity to connect any points at any given time. And taking a look back at Call Cutta – A Mobile Phone Theatre or Uncle Roy all around you, these artistic experiments largely depend on a black box structure as well. Although Indian call center agents are guiding theater-goers in Berlin, they can never be sure if those are reaching the desired location at all. Instead they would act as accomplices and might spontaneously switch to another story to tell or another task to fulfill according to the actions of their counterpart. Uncle Roy all around you reveals that the actual route as well as the time frame may vary depending on how experienced online players were in the game. Both scenarios are largely focusing on chance and coincidence.

Even more interesting in the sense of a black box structure in Games Atelier is Gob Squad's Super Night Shot: Four people are rushing out into the streets, each on their own mission. Watching them perform with strangers on the screen later on reveals the balance between connecting elements (a dance they would all perform at the same time) and the differing missions (highlighting each person interviewing strangers) that the focus of the camera captures respectively on the four screens.

Within Games Atelier, such a structure could be organized into tasks that are in a non-linear order and additionally designed levels that capture a connecting element in the end. Meanwhile, giving students many options may be unnerving at first, but is necessary to personalize the experience and own the outcome. According to Adam Greenfield, systems must always offer players the ability to opt out which is relevant in this context as well. There should be no undoable complications, neither should there be ordinary operations.[65]
Currently, simple multiple choice basic inputs present just three, all-or-nothing options. In an elaborated version of Games Atelier, players might have dozens of options, many with analogue aspects. This relates to Crawford's vision of enabling players to choose from similar yet different options.

Within the current Games Atelier templates, players are allowed to skip tasks. In a recommended black box structure, players would be able to choose between at least two tasks instead of only skipping one. Thus, the whole structure turns out to be not only non-linear (use of micro-narratives) but also adaptive.

Since players would enter a location due to the choices they made beforehand, the end of each level may include a significantly heightened challenge. More importantly (and perhaps ideally), they require the students to demonstrate a certain level of developed skills. It is not important if players skipped a task as long as the end of each level requires them to make the main learning progress.
Another important aspect of a black box structure is its first level. The first level has to be both easy as intuitive to use, but also has to deliver a slight payoff and foreshadowing of the experience to come. This could be set up through a brief intro video and in-game tips or directions.

A black box structure can also be enhanced by more than one platform for the players to access the game.[66] In Day of the Figurines, every player can watch his/her personal figurine's stories online while he/she is playing the game on a mobile phone. In Games Atelier, the content players have added to locations is also available online. But the online players can make no visible input into the game structure since they act as remote assistants who may use the Internet to acquire further details to a story. Including an online chat function would ensure that remote students have a visible impact on the game, can use their position of having a greater overview than street players more appropriately, and can interact with other remote players. This also enhances the competitive value between online players and their teams.

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65 www.placelab.org
66 These mixed-reality platforms have been used in Frequency 1550 where the mobile phone functions as the main platform while some other content is created on a web page. Also, in Can you see me now?, street players are taking pictures of real life objects while online players write stories around the content.

Balance uncertainty and control

"Every learning process must encounter a period of confusion."
(Darren O'Donnel)

Uncle Roy all around you plays on the tension between uncertainty and control when players are asked to leave all their personal belongings at the starting location in an exchange for a PDA. Players may feel humbled by this since it can remove their ordinary identity and obscure their status. But it does force players away from their daily routines and engages them into an adventure. It is a pleasantly frustrating experience. Therefore, it is recommended to perform a similar exchange with students that are about to play Games Atelier.

When it comes to the reliability of GPS technology, this can cause a rather unpleasant uncertainty, especially in the vicinity of high buildings or rough weather conditions. But regarding accuracy, it may not even be that important or can be arranged in other ways. It is questionable if sharp positioning accuracy really does improve the collaborative experience on a task/at a location. One trend in other location-based mobile games is to play with the tolerance and reliability of the technologies used. Positioning errors, maps approximations and network unreliability are more and more becoming part of the games.[67] These flaws of technology may also be presented to students in Games Atelier, so they can understand and explore them. Relating to the self-reporting positioning of Uncle Roy all around you, students can be encouraged to text message their remote player where exactly they are standing if they loose their GPS signal. They receive hints about where to go next from their respective online player. If this is communicated already in the intro, students experience this failure as part of the game play and do not feel cut off.

While students may sometimes feel uncertain about their location, they should, however, always be able to gain full control over which direction they are currently walking, which direction may appear next if they continue. A nice example of a game that is giving players more control in that area is CatchBob!, presenting an interface to players that even directly shows them where to go next.
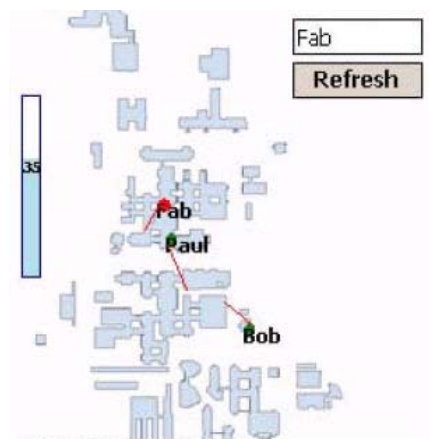

Fig.17: This is the interface players see on their PDA in Catch Bob! The red dots mark the players' locations; the red lines are the move recommendations.

67 Girardin, Fabien: Building a mobile, locative, and collaborative application. Swiss Federal Institute of Technology in Lausanne. 2005.

This relates to the arrows in Day of the Figurines, which displayed the figurines' direction on the game board players chose themselves. A similar tool can be helpful for students in Games Atelier as well – visualizing either the direction they intend to be walking themselves, or they should be walking. Because whenever students rely on technology while walking, not knowing where to go next is not perceived as a disturbance but as a failure of the game. Students are loosing connectivity to the system and perceive this as a break in the game. Likewise Reid suggests to

> *"Use physical markers to provide orientation information. In some environments it might be possible to use physical markers to help make a link between the physical and digital world easier. The physical markers should act as cues to help people know where to stand (...) The benefit of a physical marker is that it can provide a tangible and consistent presentation of the physical and the virtual content. "[68]*

It is important that students trust the system. Giving them an overview of their actions is crucial to keep them engaged and enhance their trust. Another possible tool to achieve that is including a backpack principle (like an inbox) in which they can save information. According to people of the Institute for the Future, Palo Alto, who lead a workshop on Why people will geo-annotate physical space?[69], simple and convenient interfaces are most important for making people trust in the system. And when there are several locations on the map filled with numerous annotations, it may also be helpful for students to have their own personal profile by means of an inbox.

Another feature of this inbox function is its ability to re-use content. Having a protective frame to save information around the perceived challenges, students could be told at certain locations that they need to remember this specific information and use it later on in the game. This means that they can always check on the things they learned.

Include passers-by

Uncle Roy all around you mixed online and street participation. But all the more, the artistic experiment focused on making contact with people players did not know beforehand: Street players interacted with instructed actors as well as with complete strangers. Also, in Super Night Shot, actors were looking for a person, who would help them fulfilling their mission. Total strangers emerged from the city crowds and took part in the street performance (a dance or even acting out a Hollywood kissing scene). Passers-by called others to join the performance. This invoked a bizarre but powerful feeling of 'being in it together' and relates to the form of Schechner's ritualistic performances.

These passers-by knew that something was going on, without knowing any details of the artistic experiment, or who are playing. So it should at least be noted that also Games Atelier offers roles for such "dark players" while these may stay unaware of the ongoing game and its context. On the other hand, offering roles for "dark players" when they actually become aware of the game will enrich the collaborative experience. In Call Cutta, some of the usual bystanders even invented such roles for themselves. For example, one of the car park keepers who got used to the theater-goers passing him, started to talk to them about the experiment.

To borrow another term from Schechner, the critical function to get passers-by engaged is to entertain these "dark players" or to provide them with an artistic experience. Thus, Games Atelier should be considered and designed also from the perspective of a "dark player". However, the challenge with this tool is to respect "dark players". They do not like to be used or threatened. It will be crucial for Games Atelier to bring strangers into the game since wanting to be in the game is the game.

68 Forster, Patricia A./Dawson, Vaille M./Reid, Doug: Measuring preparedness to teach with ICT. Australasian Journal of Educational Technology. 2005.
69 http://www.future.iftf.org

So within Games Atelier the following elements could be included to achieve that: One entertaining option is the one where "dark players" assign sanctions to the players. The students in the streets would have to ask passers-by if they might possibly carry information that will be helpful for solving a task or gaining a skill. The goal is to have players continuously suspect that people around them are other players in the game. Or students could receive a text message that is randomly sent from the system telling them that they are being watched which would also fit in the concept of a black box structure. Consequently, they could have to follow passers-by for a certain amount of time to get to a hiding spot (similar to the scenario of Uncle Roy all around you).

Another tool to get students more engaged with passers-by could be including certain elements of proximity gaming[70] in the design of location-based games. Students would get more accustomed to interact with nearby people in a connected manner. Proximity gaming is not tied to a specific technology but can be implemented in different styles and on different devices. There is already a Bluetooth application included in one of the Games Atelier templates when players are challenged by the system to have a confrontation whenever they get close to each other. Taking this into account, other people can additionally act as "props" in the game: RFID could be used to integrate passive players in a confrontation who could be tagged beforehand. And to stretch the idea of including passers-by a little, students could also find props in the streets that are tagged either with information or a reward. Such a proximity application would be event-driven and supports events for when a new device is found. This tool also supports the idea of a black box structure.

Use the space

> "From the isolation of our digital gaming and virtual worlds we try to interact with our surrounding real-world environment with the same efficacy, solidarity and engagement, but the two worlds have little in common." (Jane McGonigal)

Having street players in the urban space and remote online players, the question is not how to bring these two worlds together for students should not mirror the virtual/fictional world in the real world. It is rather about where the interface is situated between these spaces. Space is different from place, it is always hybrid. And "…being somewhere and moving around in this hybrid space becomes immersive." (De Souza e Silva)[71]

In SL Walkie Talkie Tours and in Call Cutta – A Mobile Phone Theatre, players had to deal with two different versions or ideas of maps aiming for quite different but connected worlds rather than an augmented style of an alternate reality as in Day of the Figurines. "An alternate reality is another – equally valid but not always attainable – way of experiencing existence."[72]
To create an immersive hybrid space instead of an augmented style within Games Atelier, one could include a joker skill in the game that suddenly appears to remote online players exclusively when street players are getting close to it. Online players can see the location while street players have to be guided via text messages. This would relate to Schechner's notion of performing maps:

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70 *Proximity gaming can be understood as close-range wireless network gaming and is further explained here: http://www. differentgame.org/detail.asp?item=672*
71 *De Souza e Silva, Adriana/Delacruz, Girlie C.: Hybrid Reality Games Reframed: Potential Uses in Educational Contexts. Games and Culture 2006 1: 231-251.*
72 *Elrick, G.S.: Science Fiction Handbook. 1978. p. 30.*

"...any map can be treated as a "performance": a playing out of the relationship between desire and data, between what is wanted and what is found. It is a kind of rehearsal, working with given materials, toward a specific
end. In a rehearsal, actors, directors, designers meet to work on a play. They know part of what they want to accomplish, the words that the playscript gives them, a kind of social world inherent in the script. But much of what will happen is open at the start of rehearsals. How the script will be interpreted, how the actors as characters will relate to each other; perhaps even the precise shape of the set, the movements of the actors, the lighting and music. A map of the world is the outcome of a process that is very much like a rehearsal." [73]

A dynamic map in Games Atelier is, however, an ongoing process rather than an outcome. These maps dynamically create quick confrontations and instant reactions, allow data to be uploaded on the spot, and would enable jokers to appear.
And to make this experience even more challenging, one could let street and online players have different maps[74] on their screen. So players' activity crosses back and forth, forcing them to exchange i.e. about where the joker is located.

73 Schechner, Richard: Performance Studies: An Introduction. 1977. p. 23-24.
74 Also, in Frequency 1550, street and online players received different maps of Amsterdam: a medieval map and a current issue.

Suggestions for Games Atelier game templates

There are three different templates in Games Atelier: the Adventure, Collect & Trade, and Secret Trail template. Additionally to the already mentioned design principles that apply for all templates, this paper now presents concrete design suggestions according to these game templates. Yet, it will be taken into account that every template demands a different kind of immersion (tactic, strategic, or narrative) and, thus, not all design principles may apply to every template to the full extent.

Adventure

The Adventure template is offering students 4 different roles to create. Each role has their own mission to fulfill and owns different skills. The skills determine how strong a character is. At several locations players are able to gain either points or skills by fulfilling tasks. Players can gain a maximum of 4 skills at a location. More than one task can be linked to one location dependent on the differing roles. To open a specific task, however, players have to have the right skill. Whenever players get close to each other a confrontation takes place. They win the confrontation if they are stronger, which is based on the skills they have gained. They are able to win passively without doing anything since players can see other players' roles but not their skills. The player who gains most points by the end wins the Adventure game. In the Adventure template, both street and online players collaborate.

This template goes with a story that has a high complexity and can, for example, consist of many small fragments (micro-narratives), which can be put together in several ways. Players could be offered to choose from at least two tasks at a location to ensure a true interactive narrative leaving a lot of control with the players. This may mean that players may collect pieces of history and information that do not necessarily form part of a final story but are interesting pieces on their own. The Adventure template can very well be structured as a black box.

The immersive experience is a tactic one meaning there is a focus on the element of chance that can still be broadened:

• Within a confrontation, players are able to not only gain but also loose their skills. This enhances the balance between uncertainty and control by including a gambling approach. Until now, the latter is not possible within the template.
• Players can also be enabled to randomly set up battles (via text messages) on their own to gain points and defend their mission. They could battle up because they would need to gather at least two different roles to open an assignment.
• A messaging tool would be needed to communicate with the remote player as well.
• Players could have to find RFID tagged objects in the streets, which flash on their screen as soon as they get close to them, earn them additional points, and are only visible to street players.
• A joker skill can be added that allows players who grab it to win all confrontations for a specific amount of time. The search for this joker enhances the interaction between street and online players since only remote players can see its location (aiming for hybrid spaces rather than an augmented view).
• A bomb tool can be implemented in the game that appears at different locations and can lead to the loss of a skill.
• Defending a mission can only be a fruitful and engaging experience, if there is an audience. To height the sense of being watched, players could receive randomly sent text messages asking them i.e. if they are sure this is the right direction.
• An online chat function could be added to the template that enables remote players to interact with each other and enhance their engagement. It allows online players to visually personalize their experience.
• There could be additional tasks for street players, which do not earn them any points or skills, but a special reward. This is communicated in these tasks and they can be skipped. But if players do want to get immersed in the story, they learn more about its characters here.

Collect & Trade

Within the Collect & Trade game, players have to collect a combination of 8 objects from different locations. Each team gets a different task in the beginning. To get the right combination of objects, players are able to trade objects with other teams. But since they are unable to see other teams' mission, they do not know if they help a team when they trade a certain object. However, they can see what kind of objects the other team owns. There are a total of 4 different objects that can be linked to either locations or tasks. Also, there is a possibility to include online players in the Collect & Trade template.

Players have to work out how to obtain the pieces that fit together in order to win the game. The immersion is a strategic one. When trading objects, other teams may influence the process to branch in different directions. However, too much chance destroys the strategic immersion. Instead, the structure should allow more freedom for the players to collaborate and to build networks:

• A messaging tool may accompany the trading with personal notes.
• Based on the interaction via text messages, after the trade other players can rate the transaction with the other team by means of social points on a scale of 1-10 (1 for least satisfying, 10 for best trading experience).
• There can be objects that are encoded and would have to be decoded by the online players who have access to the related website that shows all the codes.
• There can also be a joker within this template. But it would be attached to a certain location and object. Players do not have to search for it. If players obtain it, it counts for any desired object.
• There can also be a bad joker, that forces them to trade their objects as soon as possible since they get a new mission with the bad joker.

Secret Trail

Secret Trail is a route through the city on which players have to solve a secret by a sequence of different tasks. In the beginning, they receive information about their starting location where they get their first task. Only after completing it, they get to see the next location. The goal is to gain as many points as possible in the shortest time possible. There are only street players involved in the game.

Secret Trail is a treasure hunt where players need to follow pre-scripted clues to get to a specific end point, with clues attached to specific locations.

The template relies on narrative immersion. The following design principles can thus be added to the template:

• There is a need for good storytelling in Secret Trail. Players want to know how the story will end. But final solutions may sometimes be dissatisfying for the players. The ending could be an outro trailer that points to the fact that there is actually more game to what meets the eye. Students are encouraged to extend the game online and make their own ending on a website (via text, audio, or video).
• Also, players could have to find RFID tagged objects in the streets, which flash on their screen as soon as they get close to them, earn them additional points, and are only visible to street players.
• Since there is no interaction with online players, students could have to find people, who have been tagged with RFID beforehand, in the streets. Players need to ask strangers if they are their accomplice. If they meet the right person, they receive a helpful clue to solve the next task.
• Until now, there is only a linear way to approach the Secret Trail. A black box structure would allow players to choose between at least two tasks, so they could truly interact with the narrative.
• While students are walking, they could receive text messages from the system that are not linked to specific locations but give them more information about the story to get them more engaged with it.

Conclusion

The main goal of this study was to determine additional design principles that are most suitable for Games Atelier and its three game templates. In conclusion of this research project, it can be stated that the most important design principles for Games Atelier are the following: allowing more choice for the players/producers, using a black box structure, balancing uncertainty and control, including passers-by in the game and using the hybrid spaces rather than an augmented style. These principles have been explained in detail in the last chapters. It has also been stated that slightly disrupting the players' experience and creating pleasantly frustrating moments in the game can enhance the players' learning process while it is equally important for the players to gain control over their positions and their choices by enriching the decision-making process within Games Atelier.
The mentioned design principles were elaborated from a theoretic background that covered theatre and performance art as well as game theory.

Games Atelier as a location-based game offers a unique experience compared to other mediums such as video or virtual games. Players have a stronger connection with physical environments and locations while they reflect on their connection with the virtual space. This experience of a hybrid space can be affected by the technical devices players carry and can alter the meaning or affiliations players have had about a location previously.
Allowing players to interact with a location-based narrative creates problems in defining the balance between a producer's vision of and the player's impact on the story. The producer still has to maintain control over the information but the players interact with it and add to it, and have to feel that their contributions are really valuable. Interactivity cannot just be thrown into a story but can instead be developed by means of a suggested black box structure.
Also, the examples of design principles in the last chapter illustrate that it is crucial to personalize the player's collaborative experience (by means of an inbox function or a rating system). This will enrich players' engagement in the game and approaches the educational goals playfully without being too pedagogic.
The main obstacle that stands in the way of physically getting aware of all the possibilities Games Atelier offers is the current state of positioning technology. However, this paper suggested ways to deal with the flaws of GPS by presenting them to the players for them to understand and challenge them.

Having explored these ideas, other areas of research can now be pointed out that can further help to contribute to a challenging collaborative experience in Games Atelier. For example, it would be interesting to understand how different locations or environments affect people emotionally, in which circumstances they would feel rather uncomfortable with performing tasks and where they do not, so that a game developer has some theory when designing the game. Also, it could be helpful to have further insight into the tools of self-positioning so players can fully grasp both the current and newly suggested features of Games Atelier in a more comfortable way.

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List of illustrations

Fig. 1   www.waag.org
Fig. 2   www.dezwijger.nl
Fig. 3   http://realtime.waag.org
Fig. 4   http://www.n8spel.nl
Fig. 5   http://freq1550.waag.org/preview.html
Fig. 8   www.blasttheory.co.uk
Fig. 9   www.blasttheory.co.uk
Fig.10   www.hebbel-am-ufer.de
Fig.11   www.blasttheory.co.uk
Fig.12   www.blasttheory.co.uk
Fig.13   www.gobsquad.com
Fig.14   www.gobsquad.com
Fig.15   www.slwalkietalkie.com
Fig.17   www.interactive.usc.edu