Restaging the epic

Brechtian epic elements in computer games and their use for computer game literacy education

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Abstract

This thesis is an account for more attention to computer games as a cultural phenomenon that can be taught *about*. Due to the overemphasis on computer games as either causes of aggression and addiction, or the new means to educate our curriculum content, an elaborated concept of computer game literacy education, i.e. teaching about computer games, has not been developed yet. Media education, to which the idea of the 'constructedness' of all media is central, can serve as a framework for teaching about computer games. Its two pillars of critical reflection and personal media production can apply to computer game literacy education. However, since computer games are, next to media - with their own medium specificities - also ludic configurations, the theory needs to be adjusted. From the infant theory on computer game literacy education it becomes clear that the twofold nature of computer games as both representational media and rule-based systems is at the core of computer game literacy education. Furthermore, attention to the increased responsibility of players, as a result of the interactive nature of computer games, plays an important part.

Both the small field of computer game literacy education and the broader field of new media literacies mostly stress the production part, while critical reflection receives less attention. For that reason, I argue for a particular kind of computer game that could teach critical reflection by commenting on its own built-in assumptions. I therefore look into the so-called epic theater of German theater practitioner and theorist Bertolt Brecht. He tried to accomplish a critical attitude to his audience by emphasizing the artificiality of his plays, rather than to present the depicted world as natural and unalterable. In order to bring about a critical distance, he employed so-called alienation effects, which were to accomplish a feeling of estrangement. Since both theater and computer games are representations of actions, and thereby have the ability to simulate, a translation from one domain to the other proves fruitful. Two of Brecht's alienation effects, the *break of the fourth wall* and the *separation of the elements*, are particularly suitable for a translation to computer games. I provide several examples of how these elements manifest themselves in computer games, elaborating on the effects these epic elements can bring about and how they can serve computer game literacy education.

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Contents

Introduction

Solid Snake has come a long way trying to stop terrorists from launching the latest nuclear bomb. He has sneaked past many watchmen, seen two people die whom he was supposed to rescue, and received unexpected help from a lady in disguise. All this time he was just Solid Snake, the former hero from Fox Hound, adept at not being seen by his enemies and, in case they see him anyway, firing a gun at them. Then, however, he faces Psycho Mantis, a 'boss' that cannot be defeated by simple shooting, since his psychic powers make him capable of reading Snake's mind and predicting his actions. Within this fight Snake finds out that he in fact has an alter ego, someone who likes Nintendo videogames and who is kind of reckless because she has not saved the game very frequently. Apparently there is someone else…

As the *Metal Gear Solid* player behind the controls, you suddenly do not feel identified to Snake anymore, as you are addressed directly by this odd in-game character: "so you like adventure games, huh?" This brings about an awkward feeling: for a moment you would think he can actually read people's minds. Who exactly is in control in this game, the character Solid Snake, or the person behind the controller? When do they blend together, and when are they clearly distinct? For one moment the illusion of the game is broken, and the player is faced with the reality of the world outside the game world.

Breaking the illusion

This is an example from a moment one might encounter when playing *Metal Gear Solid* (Konami, 1998) on the Playstation console. Yet, in most current blockbuster computer games, moments like the abovementioned do not seem to occur frequently. Mostly the inner world of the videogame stays perfectly intact, referring only to itself, as if there were no world outside that of the game. This thesis will try to show that these kinds of moments, which break the illusion of the game, can be deployed to teach computer game literacy education, in particular to enhance critical game perception. Computer game literacy education, a concept deriving from media literacy education, is education *about* computer games, which means that children – but it could easily be taught to adults as well – learn how to deal more critically with the computer games they play. Teaching computer game literacy implies that pupils will both learn to become producers of games and that they know how to be critical

consumers, where the latter involves not merely playing educational games or commercial games that are said to have educational potential, but also reflecting on them as constructed artifacts. I will argue that this can be improved by playing games with elements that break the games' illusion.

This breach of the illusion of a represented world is certainly not something new and exclusively possible within computer games. In the beginning of the twentieth century, theater director and playwright Bertolt Brecht used his plays to make his audience more aware of their social situation, by making them realize they could actually change it. To this end he used particular techniques to show the - normally hidden - manufacture of the play to its spectators. If they were conscious of the play's 'constructedness', so he reasoned, spectators would see the possibility of intervention in the play as well as in their real lives. Brecht named this kind of theater 'epic theater' and opposed it to the traditional Aristotelian form of representation. He employed so-called alienation effects to accomplish a feeling of estrangement to his audience. As I will argue more elaborately later on in this thesis, Brecht's means and media literacy's objectives show overlap, since both are concerned with creating a critical distance to the depicted world, by laying bare its construction as a cultural artifact.

When regarding epic as a traveling concept, i.e. a concept that can make a journey from one discipline to another, its usefulness to games can be explored. The epic then becomes a more abstract notion, signifying a certain way of presenting a mediated world, as opposed to dramatic and lyric representations.[1] In addition, computer games and theater plays, though at first glance very distinct phenomena, share a number of characteristics that make it valuable to translate a related concept from one to the other. As such, Brecht's concept of epic theater can be employed to further our study of games. When games contain elements that can be considered epic, these games can raise awareness to their players and thereby serve computer game literacy education.

Structure

The main aim of this thesis will be to explore how computer games containing epic elements can be valuable to computer game literacy education, in particular critical perception. In order to answer this question a number of sub-questions need to be

[1] In chapter four I will explain in a more detailed way what the triad of epic, lyric and dramatic entails.

posed. First of all: what is computer game literacy and why is it necessary? Why is an addition to the model required, i.e. in what ways has it been under-theorized so far? Then: What does epic theater look like and how could epic elements be of any help to computer game literacy education? How can epic elements be translated to and deployed in games?

Following these questions, the thesis will be structured as follows. In chapter one I will go into why computer game literacy education has not been theorized extensively yet, sketching an overview of the various tendencies in the arena of children, computer games and education. Then, in chapter two, I will discuss what media literacy and computer game literacy education in particular entail. I argue that critical reception of computer games is a subject that has received too little attention, both in the small debate on computer game literacy education and in the general fields of new media studies and game studies. In chapter three I take a look at epic theater. Both Brecht's purposes and the means by which he wanted to accomplish them, are addressed. In chapter four I discuss the possibilities of transferring these findings to computer games, firstly by arguing that epic can be detached from the specificity of the theater, and secondly by showing that theories of theater have successfully been conveyed to computers and computer games. In chapter five the actual translation from epic theater to games is analyzed and, referring to games' medium specificity, examples of epic elements in computer games are provided. I will conclude by analyzing two particular games, which contain many epic elements, and elaborate on how these would be able to teach computer game literacy education.

1. Teaching about computer games

This thesis is an account for more attention to computer games as a cultural phenomenon that can be taught *about*, as I argue that critical perception of computer games is a subject that is shed insufficient light on. In this chapter I want to show what forces are at work in the domain of computer games, children and education, and how these have slowed down the development of an elaborated concept of education about computer games, i.e. computer game literacy education. I refer to several tendencies that play a part in the field, and how they are acted upon by different interested parties. These tendencies all contribute to the under-theorization of computer game literacy education. In addition I argue that, although sometimes claimed otherwise, literacy education is equally necessary for computer games as it is for other media.

1.1 'The' effects of games: moral panic and counter movements

One of the main reasons for the lack of attention to education about computer games is the fact that the debate on society and games is preoccupied with the effects of computer games in general. Both the debate around the fear of computer games as a new medium entering society, having supposedly bad effects like aggressive behavior and addiction, and the attempts to change this negative reputation, have been held rather shallowly and generalized games as a uniform phenomenon.

First of all, there is the suggestion that games make their players more aggressive. Around a decade ago it was claimed, especially in the media, that violent computer games were causing aggressive behavior to the children who played them. Incidents like the 1999 massacre on the Columbine High School in Colorado, where the perpetrators were two fans of violent first-person shooters, further stirred up this debate. Researchers, especially from the field of psychology, investigated how violent games would make children more aggressive.[2] Secondly, worries are focused on the addiction computer games would cause, as there is increasing media

[2] See e.g. Newitz (2002), who mentions several examples of media coverage of the games-causing-aggressive-behavior thought, although she herself does not agree with them. An example of empirical research conducted to prove that games cause violence is the article 'Video Games and Aggressive Thoughts, Feelings, and Behavior in the Laboratory and in Life.' by Craig Anderson and Karen Dill (2000). A more recent overview of the debate around computer games and violence is presented in the book Grand Theft Childhood, by Lawrence Kutner and Cheryl K. Olsen (2008).

coverage regarding the extreme usage of computer games (Griffiths and Davies, 2005, p. 359).[3] This manifests itself, amongst others, by the growing attention for institutions that help addicted gamers to kick the habit. For instance, in the Netherlands a clinic specialized in game addiction is frequently featured in broadcasts and magazines.[4]

This fear of games as a relatively new medium seems to be part of the general tendency of the fear of moral decay, which occurs whenever a new medium enters society. Opponents of the medium predict that it will cause damage, overthrow values, and annul respected institutions (Lauwaert et al., 2005, p. 37). One can even speak of moral panic, when there is a 'discrepancy between the threat posed to society and the level of attention given to it' (Southern, 2001). For instance, with the arrival of Penny Theater (nineteenth century), horror comic books (1940s and 1950s), and television (especially concerning violence in the 1980s), there were concerns about the deterioration of morals and the dumbing of youth (Springhall, 1998). According to Springhall, a stereotype of media, or certain genres of media, is 'activated in times of crisis or panic because secondary targets are needed to deflect attention away from some of society's most pressing or insoluble problems' (ibid., p. 147). In other words, the medium in question serves as a scapegoat. The extensive media coverage of suggested aggressive and addictive effects of computer games, especially after shootings like the one in Colorado, certainly fits in that models.

As opposed to the media showing games in a bad light, game scholars and the gaming industry likewise have tried to compensate for this negative attention. There are roughly two ways in which this was done. Firstly, the research into the negative effects of games is addressed directly. For instance, within the field of computer game studies some have attempted to refute negative assertions, e.g. Jeffrey Goldstein in his article 'Does Playing Violent Video Games Cause Aggressive Behavior?' (2001). Here several studies that claim to prove that games increase violent behavior are critically investigated, and their methods and reasoning questioned, so as to assert that these studies cannot be considered valid. Similarly, Kurt Squire criticizes research done into violent games and their effects, and calls for more rigorous research, which takes a much more disciplined look at the impact of gaming on people's lives (Squire, 2002).

[3] See e.g. the website People against Video Game Addiction (http://www.freewebs.com/pavga/) and the extensive list of recent publications on video game addiction on Wikipedia (http://en.wikipedia.org/wiki/Game_addiction)
[4] This is Keith Bakker's clinic Smtih & Jones in Amsterdam.

Secondly, the negative attention was refuted by emphasizing that games instead can have positive influences, especially with respect to education. The gaming industry has tried to counterbalance the fear for the products they are selling. For example, the website gamenisgoed.nl (gaming is good), an initiative by Dutch sector association NVPI, draws attention to the positive effects playing games can have, and even called into existence a new 'vitamin': Vitamin G. Also academia emphasizes games' positive capacities. Game scholars like Marc Prensky (2001), James Paul Gee (2003), and David Schaffer (2006) assert that computer games can improve all kinds of skills like problem solving and strategic thinking. For instance, Schaffer claims in his book *How Computer Games Help Children Learn* that games can help teach kids to build successful futures. The enthusiasm with which children play games and acquire necessary skills to master the game, would be useful for education as well (Schaffer, 2006).

When considering both sides of the medal, a contradiction occurs: it seems illogical that while claiming that 'good games' can have a positive influence, we deny that 'bad games' might also have a negative influence, and vice versa. Although I would not support the moral panic surrounding games in the media, a somewhat more critical stance seems desirable. Many academics within game studies are enthusiastic gamers themselves, and might therefore be biased when it comes to critically considering the effects of games. Current game scholars mostly belong to the first generation that grew up with computer games, which is, according to Erkki Huhtamo, both a strength and a weakness. It is a strength, in that they are familiar with their field of research, yet the weakness lies in their lack of a critical distance and inability to relate games to wider cultural framework(s) (Huhtamo, 2005, p. 4).

In addition, for game scholars it has been - and still is - a struggle to receive enough funding for their research. For instance, as Zach Whalen argues, in the U.S.A. state budgets are scarce and money is often taken away form 'non-critical' areas like the humanities (Whalen, 2004). Focusing on the potential assets of computer games is likely to be more beneficial for obtaining governmental money than emphasizing their alleged bad side effects. Therefore, voicing games' potential educational value can – on a more or less conscious level - also be aimed at the establishment or preservation of the field. After all, this is how game scholars make their livings. Thus, investigating the educational possibilities of games is, to my mind, a valuable field of research, but it might be a danger for computer game scholars to overestimate the positive effects of games.

Buckley and Anderson also observe the abovementioned contradiction, as they argue that, just as educational games can be useful to teach children valuable content, violent computer games can teach aggression (Buckley and Anderson, 2006, p. 366). The kind of game, the gamer herself, and the context within which the game is played are all relevant to the effects a game will have on the person who plays it (Ibid.). With respect to other media, the debate of the early years eventually has becomes less polarized and more shaded. As the tendency shows, after the first phase of wild speculations, there is an evaluating phase, in which predictions are reconsidered and, if necessary, the pros and cons reformulated (Lauwaert et al., 2005, p. 38). A more balanced discussion would be advantageous for computer games as well, and with this thesis I hope to contribute to that. What has become clear is that the recent focus on all games as either reprehensible or merely favorable has not helped to foster an elaborated view on how we should teach *about* computer games, i.e. computer games being the object of education.

1.2 Computer games and education: different perspectives

So, the overemphasis on 'the effects' of games in general – both negative and positive – is the first reason for the lack of attention to education about computer games. The second reason – which is intertwined with this, for it also involves games and their educational potential – concerns the major accent on computer games as a means to education. In other words, education *through* games tends to overshadow a perspective of education *about* games, i.e. computer games as an object of study.

Computer gaming is a subject that can be positioned in several domains: not only can it be approached as a medium (e.g. in order to show that the fear of games is in fact part of a more general societal tendency) but gaming is also a form of play. The latter opens up a whole other sphere of influence, as the realm of play has from times immemorial been connected to learning. Just as young animals, children learn to a great extent from the activity of spontaneous play. Play theorist Brian Sutton-Smith argues that within this paradigm of play theory, 'play is an activity taken up voluntarily, usually by a solitary player, and often with objects which are under his control. As a result of his activity or fantasy with those objects, the subject makes individual gain either in cognitive or creative organization' (Sutton-Smith, 1979, p. 1). It is therefore not surprising that computer games, which after all are a form of play, are connected to education and explored for their educational potential. They

even got attention within educational sciences before computer game studies emerged as an academic discipline; the pedagogical potential of games was measured in several ways from the eighties on (Egenfeldt-Nielsen, 2006, p. 188).

However, only recently has it become more of a hot topic, which is, as argued above, also part of the attempt to improve computer games' reputation. Next to the abovementioned scholars Prensky, Gee, and Schaffer, also Yasmin Kafai (2006) and Kurt Squire (2002) have recently published about it. For example, the last mentioned asserts that 'entertainment games allow learners to interact with systems in increasingly complex ways' (Squire, 2002, p. 2). In addition, game environments would provide an example of how learning should take place, as they make use of learning principles such as situated meaning, i.e. learning in a context in which the learned skills directly make sense and can be applied immediately (Gee, 2003, p. 86). James Gee even states that the current school system is highly inefficient and that incorporating computer games in the classroom would be an ideal solution to that problem. Another argument for games as educational material is the possible improvement of children's motivation because when playing games, children seem to have no need for any extrinsic motivation (Egenfeldt-Nielsen, 2006).

So how is all of this a distinct reason from the first reason, i.e. the overemphasis on games' (here positive) effects? The answer lies in the fact that the rather obvious connection between education and computer games has defined the way of linking the two domains: computer games are regarded as educational tools, or in other words, the focus was on education *through* computer games. This has formed a barrier to the other way of thinking about computer games and education: teaching *about* them. It is clear that education through games is a rather popular topic within computer game studies, however, on education about games, less has been published. I argue that the latter is at least equally important, as computer games an increasingly popular pastime that can affect their players in myriads of ways.

But before continuing to this analysis, I will first, for the sake of clarity, provide a definition of what is understood when referring to computer games in this thesis. After that I will argue why computer games should be critically taught about, and that media education for games is at least equally important to education about other media, although some claim otherwise.

1.3 Defining games

Although I cannot guarantee that all authors to whom I refer and whom I quote apply exactly the same notion of computer games, I will nevertheless make clear what I mean by the term in this thesis.

First of all I choose to speak of computer games, although in many of the books and articles on games the term videogames is used. This is partly an arbitrary choice – one has to stick to one term – and partly it is because all platforms on which the games are played are to be included (e.g. personal computers, consoles or handhelds). However, in general videogames and computer games have the same meaning, so this is rather a matter of choice than a content related issue. Also the term digital games would be an interchangeable term.

When defining computer games it is obviously important to note what a game in general is, i.e. in the case of both digital and non-digitalized games. Jesper Juul proposes six features that qualify games: 1) rules, 2) variable, quantifiable outcome, 3) valorization of outcome 4) player effort, 5) player attached to outcome and 6) negotiable consequences (Juul 2005, p. 36). From these features the following definition derives:

> 'A game is a rule-based system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels emotionally attached to the outcome and the consequences of the activity are negotiable.' (Juul 2005, p. 36)

When all features, or the whole definition applies to an object this is clearly a game. Yet, Juul also acknowledges that there are borderline cases, in which some of the characteristics are not relevant but others are. For instance, pen and paper role playing games would be a borderline case because of their flexible rules and games of pure chance (e.g. gambling) because of their lack of player effort. This makes the definition very useful because it does not merely offer two possibilities (inclusion or exclusion) but puts forward a scale in which an object can be a game to a certain extent. Considering the fact that games are such a rich and diverse cultural phenomenon, this proves useful.

So what does the addition of 'computer' entail? First of all, the term computer game implies the use of a computer and, therefore, digital code. This entails the notion that computer games, 'unlike traditional games or sports, consist of non-ephemeral artistic content (stored words, sounds and images) which places the games much closer to […] the work of art' (Aarseth, 2003, p. 1). In other words, the code adds an extra dimension, something I will address more elaborately in the next chapter. So computer games can be defined by the abovementioned definition of Juul, added by the notion that these games consist of coded content, which, as an object of study at least, sets them apart from non-digital games.

1.4 The necessity of teaching about games (or computer game literacy education)

1.4.1 Computer games' alleged self-revelation

Often it is claimed that computer games are essentially different from other media due to their interactivity (e.g. Wolf, 2001, p. 14), or as Espen Aarseth names it, their ergodicity. The latter means that nontrivial effort is required to allow the reader to traverse the text, whereas in other media the text unfolds without the receiver doing any effort, apart from logical actions such as turning the pages of a book (Aarseth, 1997, p. 1). In addition, since playing a game requires these specific skills (i.e. nontrivial effort) it often takes several tries to master a game, and even then parts of the game can remain unexplored (Wolf, 2001, p. 13).

Some scholars, like Ted Friedman, claim that the playable nature of computer games brings about critical reflection on the way the text of the game is constructed (a core element of media literacy education, to which I will return in the next chapter). This would be established automatically due to the more active effort a player has to perform, and the fact that she has to perform it over and over again. That is, the player interacts with a system that models behaviour, or a simulation,[5] and thereby she has to understand the simulation fully in order to interact with it in a meaningful way. If indeed games make the player automatically think about their underlying structures, then active education about games' 'constructedness' would not be necessary. Friedman particularly argues for this point of view in his article 'Making Sense of Software: Computer Games and Interactive Textuality' (1995). Although he acknowledges that games are, like all texts, ideological constructions, he asserts that the construction is automatically revealed because 'a computer game

[5] The notion that a simulation can be understood 'a system that models behavior' is extracted from Frasca 2003, p. 3.

is a process of demystification: one succeeds by discovering how the software is put together' (Friedman, 1995).

James Gee takes a comparable stance in his book *What Video Games Have to Teach us About Learning and Literacy* (2003), but unlike Friedman, Gee stays at the level of the fiction of the game. He argues that by playing certain games, players are forced to reflect on their own views on the world. This would especially be the case when the game provides the possibility of playing several characters on opposing sides. He takes an example of a six-year-old, playing *Sonic Adventure 2 Battle* (Sega, 2001) both as the 'good, blue sonic' and the 'evil, black sonic'. By doing so, the child is confronted with different cultural models and is forced to think about what the models imply (Gee, 2003, p. 143). Gee also argues that the child, when playing the game as the evil character, not necessarily approves of the ideological values behind it. So, whereas Friedman addresses the game itself as the object that demystifies itself, Gee focuses on the content of the game, asserting that this would be critically approached by the player due to the nature of the game.

Yet, Gee also addresses the game itself as the object of reflection. All through his book, he uses the phrase 'good computer games' and claims that you need to play those games in order to establish the positive effects. But Gee rarely goes further into what exactly makes these games particularly good. In addition, he does not mention what a *bad* game would look like and in what sense those games might, if at all according to him, affect their players. It might be the case that he approves more of games that foster critical thinking by encouraging the questioning of their hidden biases, however, he never mentions that explicitly, and tends to stay on the surface when talking about what characteristics turn games into good games.

For example, in order to refute the assumption that playing videogames would be a waste of time, Gee provides a list of effects that will occur when a child plays a game. The first three points stay at the level of the fiction of the game, i.e. they regard the learning that takes place with respect to the content of the game. However, the fourth (and last) point on this list reads:

> '4. Learning how to think about semiotic domains as design spaces that engage and manipulate people in certain ways and, in turn, help create certain relationships in society among people and groups of people, some of which have important implications for social justice.' (Gee, 2003, p. 46)

So, according to Gee, players need to learn to look at the game from a higher level, taking a critical distance and regard them as media products. Preceding this list, Gee states the condition: 'If children (or adults) are playing video games in such a way as to learn actively and critically then they are: [...]' (Gee 2003, p. 45), to which the four points follow. But Gee does not specify *when* exactly the requirements for this active and critical attitude are met. In other words, Gee acknowledges that passively or superficially playing the game would *not* produce the desired results, yet he fails to pinpoint the circumstances that determine the attitude with which a game is being played.

Whereas Friedman asserts that all games have revealing properties, Gee argues that only good games would teach about their own underlying structures, though he does not specify when a game can be designated 'good'. Furthermore, he asserts that a certain critical stance is needed to accomplish the positive effects, but he omits to address how and when this stance occurs. Thus, both Friedman and Gee have the assumption that (some) games encourage questioning them as constructed objects, generated by the mere activity of play. But how likely is this to happen?

1.4.2 Games as opaque constructions

Although the viewpoint of the demystifying properties of games may sound logical, in my opinion most major entertainment games are as opaque as other media. Admittedly, one can only win a game when understanding the formal system to a certain extent, but this does not necessarily mean that the system reveals itself or that it is reflected upon or questioned in any way.

Sherry Turkle, for instance, argues that it is specifically in recent years that computers are not transparent anymore. In contrast, in the 1970s, so she argues, personal computers' technology, 'in the spirit of traditional modernist ways of knowing, encouraged users to think of understanding as reaching beyond the magic to the mechanism'. However, nowadays we 'have become accustomed to opaque technology; we have learned to take things at interface value' (Turkle, 2006, p. 266). Turkle supports this view by referring to observations she made when watching young children playing games. She states that children can learn how to play a game successfully by only playing it: after having played several times, they know how the system works. Although children might meaningfully interact with the system, they do not necessarily 'know how to measure, criticize, or judge what they are learning' (Turkle, 2006, p. 269). Turkle therefore suggests that children should

interact with simulations that teach them about the nature of simulation itself. She distinguishes three ways in which one might respond to simulations, which roughly correspond to the three ways of reading developed within the field of cultural studies by Stuart Hall. Firstly, there is simulation resignation, which implies the acceptance of the simulation in its own terms. This corresponds to Hall's dominant or preferred reading: one takes the in-built assumptions for granted and does not question them. Secondly, Turkle identifies simulation denial, in which 'one rejects simulations to whatever degree is possible' and considers them a destructive force (Turkle, 1995, p. 71). In the cultural studies discourse, this would be the oppositional reading. Thirdly, there is the response Turkle regards the most desirable, that

> '... would take the cultural pervasiveness of simulation as a challenge to develop a more sophisticated social criticism. This new criticism would not lump all simulations together, but would discriminate among them. It would take as its goal the development of simulations that actually help players challenge the model's built-in assumptions' (Ibid.).

The potential games I will discuss later on in this thesis would exactly be the latter kind of simulations: games that show their own 'constructedness' and therefore encourage the player to question this construction.

In the chapter 'Computer Games as Participatory Media Culture', Joost Raessens makes a similar point. He asserts that games are able to make demystification possible, but that 'in everyday practice, […] such deconstruction will regularly be overshadowed by the different forms of enjoyment that users may experience while playing computer games. Not only film viewers, but also computer game players seem to me […] as staying at the surface of the fiction, the story and the game, as opposed to the previous in-depth deconstruction' (Raessens, 2005, p. 378).

Kurt Squire also claims that questioning the system is not something to be taken for granted when playing games. He is generally highly positive about games as educational means, and his article 'Cultural Framing of Computer/Video Games' is no exception to that tendency. He argues that games have the ability to make players 'relive historical eras, […] investigate complex systems, […] manage complex industrial empires, […] or, indeed run an entire civilization' (Squire, 2002, p. 3). Yet, he also touches upon the issue of critical reflection on the game-play. He thinks for

instance of 'creating instructional resources around a game like S*imCity* or *Civilization* that pushes students to think about their game-playing more deeply. […] Students might be required to critique the game and explicitly address built-in simulation biases.' (Squire, 2002, p. 6)

Also from a game design perspective it is argued that games do not aim at showing their own 'constructedness'. Miguel Sicart, researcher at the IT University of Copenhagen and amateur game designer, claims that 'what designers intend to do is to manipulate the free will without showing that manipulation, presenting the choices they offer as the only possible solutions for the player to take into consideration' (Sicart, 2006, p. 81). He continues arguing that 'games are systems in which we are voluntarily immersed with the clear goal of being manipulated – we believe the freedom the game designers give us in order to achieve a successful ludic experience' (Ibid.).

In addition, computer games bear another concealment that lies the very attempt that games make to simulate parts of this world in the first place. For instance, Frasca argues about *The Sims* (Electronis Arts, 2000), which simulates life in the American suburbs: 'What makes *The Sims* a vanguard work is not how it simulates human life, but the fact that by attempting to simulate it is affirming that human life *can* be simulated, that we can be modelled as a less complex system' (Frasca, 2001, p. 52, emphasis mine). Also games like *SimCity* (Maxis, 1989) or *Civilization* (Micropose, 1991) suggest that a highly complex entity such as respectively a city or an entire civilization can be reduced to a number of rules that can be coded in a computer. This is a highly important ideological presupposition apparent in many games. Making players aware of this in itself strongly argues for education about computer games.

In sum , all of this shows that – unlike what Gee and Friedman claim - the construction of a game in general stays unrevealed. This pleads for an active encouragement of a critical attitude, rather than assuming that it is accomplished by merely playing the game. However, there seems to be no such practice as education that encourages a critical attitude towards computer games, nor digital media in general. In his essay 'Media Literacy – Who Needs It?' Henry Jenkins outlines the implications of the changing media landscape to the media literacy movement. According to Jenkins, in the new media landscape

> '... children are participants – not spectators, not even consumers in the traditional sense of the term. They are actively shaping the media – a process which offers them new opportunities for emotional growth and intellectual development but also poses new kinds of ethical responsibilities.' (Jenkins, 2007, p. 1)

Thus, in Jenkins' view participatory culture brings new responsibilities and challenges to children. However, current media education is, in regard to digital media, primarily concerned with providing access to the internet and other digital media in schools. According to Jenkins, 'little effort was made to give kids a context for thinking about the new responsibilities and challenges they faced as participants in the digital culture' (Jenkins, 2007, p. 2). Sleurink and Van den Berg observe a similar tendency in the Netherlands: wiring classrooms and teaching basic usability skills are the main concerns of new media literacy practices, and critical reflection is not (yet) part of that (Sleurink and Van den Berg, 2000).

With regard to computer games in particular, Jenkins observes a tendency comparable to the one Turkle addresses: children do learn how to master a game's simulation, and can learn much from playing, but they do not 'ask about the motives or accuracy of the ways games depict the world' (Jenkins, 2007, p. 15). Jenkins continues:

> 'Judgment requires both an awareness of the traditional concerns of media literacy educators (about who is creating what images for what purposes) but also newer questions about ethics, focused on the choices that kids are making as game players and game creators.' (Ibid.)

As becomes clear from these different perspectives, the fact that a player actively participates in a game and the participatory possibilities of digital media in general, do not necessarily generate a critical stance towards the underlying assumptions of a simulation. A player can completely understand how a simulation works and how to manipulate it to achieve the best possible outcome. Yet, this does not make the simulation less opaque or make it reveal its biases. In current education, this is not acknowledged, as education about digital media remains at the level of providing access without encouraging a critical stance towards them.

Considering the necessity for education about games next to education through games, ideally, the two would be combined, i.e. both turning to account the educational possibilities of games and afterwards reflecting on the game play to stimulate a critical approach. In that way, it could cut both ways.

1.5 Conclusion

In this chapter I have discussed the different forces at work in the societal field of children, games and education. Both the fear for games as a medium that would cause aggressive behavior or addiction - being part of the moral panic that often surrounds the occurrence of new media – and the sometimes overly positive view of game researchers with their personal and political motives, have stood in the way for a development of an elaborate theory on how to educate about computer games. Moreover, education and computer games are often associated in terms of games as educational means, i.e. the way games can or even should replace the current school system, not taking into account that games might be an *object* of education as well. As I have shown, attention to the latter is at least equally important for computer games as for other media desirable. Games are, just like other media, constructions, that convey meanings, and most of them do not automatically reveal their 'constructedness' or bring about a critical stance to the people who play them. Education to raise awareness and stimulate a critical approach towards games is necessary, as games nowadays are, at least in terms of time spent on them, equally important in children's lives as e.g. television.[6]

This viewpoint, i.e. that there should be education about computer games, can be placed in the broader framework of media education (or media literacy), which concerns education about the media. Media education's core idea is that all media are constructions, and that this construction should be laid bare in order to critically analyze the media utterance. In the next chapter I will go further into the notion of media literacy, and how games can be related to it.

[6] See for instance the investigation 'Jongeren 2007' done by research bureau Qrius. They conclude that amongst youngsters between 6-19, 63% play games at least weekly. It is also concluded that TV is still very important, but newspapers and radio are less consumed than before. Similar research results are found in the VS, where the Kaiser Family Foundation investigates youngsters' media use.

2. Computer Game Literacy Education

In the former chapter it has become clear that there are many related debates that confuse the issue of education about computer games. In this chapter I place computer games in the broader framework of media education. Therefore, I will first take a look at what media literacy education entails, by analyzing the concept and looking at its fundamentals, and the way these are put into practice. After that, I explore the way the notion of media literacy has been applied to games thus far, i.e. how games can fit into this framework. Since games, like all media, have distinct medium characteristics, the framework might need to be adjusted or extended. I do this with reference to the few publications that theorize computer game literacy and the way it should be taught within media education. Furthermore, I enter upon two issues, not explicitly mentioned in earlier publications, that play a part when thinking about teaching computer game literacy: the difference between games and simulations and how fantasy games fit in. It is shown that the still infant field of computer game literacy education needs more consideration especially in regard of the critical perception of computer games, as opposed to the production part. This in turn can be seen in the broader light of the new media literacies movement, which also highly emphasizes production over reception.

As already touched upon above, I refer to media education (or media literacy) in the case of computer games, as *computer game literacy education*, designating both a possibility of a status of being 'computer game literate', and the process of teaching to become literate in that sense.

2.1 Media literacy education: teaching about the media

2.1.1 Origins of media literacy education

The aforementioned moral panic around the rise of television in the 1950s, was one of the factors that led to the development of theories on media literacy education.[7] Initially, media education's primary concern was to protect young people from the harmful effects of the media. In those days media education was not yet implemented in schools; it stayed on the level of theories and ideas. From the sixties on, possible positive effects of the media were acknowledged as well. Media literacy

[7] This might seem contradictory, as in chapter one I argued that the moral panic surrounding games has slowed down the development of computer game literacy education. However, after the debate on the bad influence television had been held, eventually this yielded theories on media education, which as a result were in the beginning very protective.

ideas shifted from protection and exclusion to critical analysis, aimed at enabling children to make informed judgements on media texts.[8]

From the seventies more practical initiatives of educating media literacy were established. Progressive ideas about education, such as Constructionism, influenced the implementation of media literacy in education. Key elements were active participation of students and learning by taking their own interests and experiences as a starting point. Later on, media literacy focused more on the analysis of young people's media use. As media are assumed to enable the forming of groups and subcultures in society, students should be educated to be full-grown, emancipated citizens in any well-functioning democracy (Sleurink and Van den Berg, 2000, p. 17).

However, media literacy did not merely arise from the fear for emerging media entering society. It is also part of a larger movement in extending the traditional notion of literacy, i.e. being able to read and write, to other sets of skills, in which media literacy is one of the most developed literacies. Other examples include 'information literacy', 'network literacy' and 'computer literacy', which are literacies as sets of skills shaped by today's tools and technologies (Tyner, 1998, p. 94). In these literacies, as in media literacy, not only cognitive skills are included, but also social skills as well as the knowledge of what is appropriate in certain social situations.

Although theories about media literacy education are well developed, media literacy has worldwide not been widely incorporated in schools' curricula. Strikingly, it is mainly English speaking countries that have included media literacy as part of primary and secondary education, namely the U.K., Canada and Australia. In other countries, e.g. the Netherlands, the importance of media literacy is acknowledged both by academics and educators, but it has no fixed place in curricula.[9]

2.1.2 Key concepts of media literacy education

There is an extensive body of literature on media literacy and/or media education. Despite the large scale of the subject, the ideas on media literacy are rather unified and clear-cut. In sum, the following notions form the basic ideas of media literacy education theory:

[8] Media text here is meant not necessarily as a textual utterance, but is understood in the broader sense of all kinds of media products, e.g. visual, aural, verbal etcetera.

[9] This section on media literacy's origins is extracted from my earlier thesis 'Nieuwe Media: Nieuwe Educatie?' Sources that I have used for this overview – which are also key publications in the field of media literacy – include: *The Media Studies Book: a Guide for Teachers* (Lusted, 1991), *Media Literacy Resource Guide* (Ministry of Education Canada, 1989), and *Media Literacy* (Potter, 1989).

- *All media are constructions.* Media education is focused on showing that media are not objective channels, but actively construct realities and stories. This concept is the core of media literacy education, and is based on the encoding/decoding model developed by Stuart Hall.[10]
- *Critical attitude*. Children should not only learn to understand the media's language, but also to critically reflect on it. This means they are able to look beyond face value, and analyze how the language of the medium works to convey a certain meaning.
- *Twofold nature.* Being literate in the traditional, textual sense means to be able to read *and* write. In the case of media literacy it also means both having the abilities to critically receive media texts and to produce them. Production of media would not necessarily have the purpose of training future media producers, but rather of supporting the critical attitude. As seen above, when making their own media products, children can better understand how media are constructed. (In the case of computer games and other digital media, the production side of media literacy seems to dominate the reception, an issue I will address later on in this chapter.)
- *Mass media.* Media literacy education only involves mass media. In the case of traditional, non-digital media, this distinction is easier to make than in the current media landscape. Originally, media education was focused primarily on television (Emerson, 1993, p. 30), and secondly on other mass media such as film, radio, and the news paper. One-to-one communication media such as the telephone were excluded (Van Roessel, 2005).
- *Basic skills.* It is assumed that basic media perception skills, i.e. the ability to perceive media texts in a meaningful way, is naturally achieved by children in the first eleven years of their lives, provided that they have average access to the media (Potter, 1998, p. 71). These basic skills involve, for instance, the recognition of symbols and patterns, and the connection between symbols and their meanings. It is therefore not necessary to (actively) teach children these skills, but they are nonetheless necessary as a starting point, in order to move towards critical perception and production.

[10] The encoding/decoding model is based on assumption that before a media utterance can be made, the producers have to translate the message they want to communicate into the codes of the medium in question. The receiver of the utterance has to translate this code again into the message, which is the process of decoding. Within this process, different responses are possible, something I have already referred to in chapter one.

2.2 What is Computer Game Literacy Education?

However useful and meaningful, these media literacy education theories were developed in a period that digital media were of less or no significance compared to today's situation. In current society, digital media like the internet and mobile phones are becoming more and more important in children's lives, next to the older media like television and magazines.[11] Earlier I have argued that although digital media differ from non-digital media in many respects, media literacy theories can still be valuable to digital media education, albeit with some adjustments (Van Roessel, 2005). Yet, while computer games are obviously a digital medium, there are still major differences with regard to medium specificity between games and other digital media. So the question is whether the fundamentals and practices of media literacy education could still be of use for computer games.

Next to the motive of incorporating games as a new medium for trying to extend theories of media literacy education to computer games, another rationale to theorize computer game literacy is the concern about the overemphasis of games as educational means – an issue I have extensively described above. In other words, emphasis on computer game literacy education could balance the idea that a creative and critical use would happen automatically (Pelletier, 2005b, p. 2). Important to mention is that, as far as I can trace, computer game literacy education is nowhere taught today, leaving aside some small experimental initiatives.[12] The following analysis is therefore an overview of the (mostly theoretical) articles written on it, at some points complemented with my own arguments.

Before going into computer game literacy let me clarify what, in this thesis, is not meant by it, since other ways exist of connecting computer games to literacy. For instance, we can consider such titles as James Gee's book *What Videogames Have to Teach us About Learning and Literacy* (2003), and Constance Steinkuehler's article 'Massively Multiplayer Online Gaming as a Constellation of Literacy Practices' (2007). In the former, literacy is understood not merely as skills that are related to computer games, but rather as sets of skills that differ per semiotic domain, presumably where each (genre of) computer game would occasion its own set of literacy skills. The latter regards literacy in computer games as the ability to

[11] See the investigation 'Jongeren 2007' done by research bureau Qrius.
[12] For example, Yasmin Kafai's research into children producing their own games (which was done as part mathematics education) in 2006, and Caroline Pelletier's study on children's representations of first person shooters and gender differences (2005). Also Buckingham and Burn refer to a suchlike case study they conducted.

meaningfully play the game, which especially involves communicating within multiplayer games. As I will argue below, this is just a prerequisite of what computer game literacy entails in this thesis.

Accordingly, literacy with respect to games is sometimes used to refer to the familiarity of game players with the conventions of a certain game genre, i.e. how well a player knows the conventions and how this helps the player to achieve a good outcome in the game. Game designer Chris Bateman uses the term game literacy in this way: he distinguishes hardcore from casual players in the extent to which they are game literate (Bateman, 2007). These associations of computer games with the term literacy are to be distinguished from what is here meant by computer game literacy education.

2.2.1 Games as media

When the notion of media literacy is applied to games – or an attempt is made to do so – first of all *two assumptions* should be made. Firstly, games have to be considered a medium, which can also mean games are a medium next to other things. That is, to extend media literacy to computer games one has to acknowledge that games are a cultural medium in their own right, that can be studied and taught just as film, television, or literature (Buckingham and Burn, 2007, p. 1). Mark Wolf remarks that, like in the case of film and television, it might take some time for the computer game to be generally considered as an artistic medium (Wolf, 2001, p. 13). However, according to him, the computer game medium has 'matured and continues to develop' (ibid., p. 32).[13] Secondly, and based upon that assumption, one has to recognize that games set themselves apart from other media, and thereby that games have their own kind of language, otherwise we would not have to adjust traditional media literacy to suit computer games.

The latter might be problematic, in the sense that games are said to embrace and absorb several different media such as print, film, and music. For instance, when playing a game, you need to be able to read written text and make sense of the cut-

[13] The concept of 'medium' can be approached in several ways. For instance, one can have a more technical conception of the term, which would mean the actual technical device on which the game is played is regarded the medium. In that sense, a console, a CR ROM, or an online environment to play a game in/on could be three distinct media. However, here I regard these technical devices as platforms rather than media, and consider the computer game a medium with its own medium specificities. For instance, there are games that are published for several platforms, like *Myst* (Midway, 1993) and *Metal Gear Solid*, which remain the same although the device changes. Also in the case of film, this can be watched using different techniques, e.g. the television or on a computer. This is not to say that different platforms can never lead to differences, which is also illustrated by the variety of genres within the medium of computer games. For instance, it is inherent to the genre of MMORPGs that they are played in an online environment.

scenes, which are skills that are learned with respect to other media. This might entail that games do not make use of their own language, but rather are a combination of several existing languages. Yet, the combination of all these elements does create a distinct language for games, for the alteration that is brought about by the fact that these cut-scenes and written texts represent themselves *inside* the game, adds to the nature of these elements. As Wolf argues, while games 'borrow or imitate forms from other media such as film and television, the video game as a medium includes new elements such as interactivity, collaboration and competition between players, and labyrinthine narrative structures, as well as new ways of structuring space, time and narrative' (ibid.).

In addition, the manifestations of cross media aspects such as genre, narrative or mode of address are presented specifically in various media, for instance, a game-based character is constructed differently from a television character (Pelletier, 2005b, p. 6). The interactions between the elements are unique within computer games, i.e. game literacy is not only the aggregate of different other media literacy skills, but exists as a unique set of skills in its own right (Ibid.). It is thus useful to speak of a specific language, which legitimates a form of literacy with respect to this medium.

Still, this does not mean that games should be taught out of their context. Part of game literacy, which is particularly emphasized by Caroline Pelletier, concerns computer games as part of today's large cross-media franchises. For example, the 'brand' Harry Potter is constructed by various media, e.g. books, toys, movies, games and associated merchandise as stickers and toys. She claims therefore that 'if media education is to retain its focus on young people's contemporary media cultures, digital games should […] be studied alongside other media' (Ibid., p. 9).

2.2.2 Games as games

Yet, there is another highly important characteristic that sets games apart from other media: their incorporation of a ludic system. Both publications so far on computer game literacy – i.e. Pelletier (2005b) and Buckingham and Burn (2007) - designate this feature as vital for what makes games different. They argue that, next to media, games are also ludic configurations, or rule-based systems. With these two major components, the interplay between games as representational media and mathematical systems is at the core of game literacy (Pelletier, 2005b, p. 8).

This twofold nature of computer games is not something primarily recognized in regard to computer game literacy education; it has been discussed extensively throughout the formative period of computer game studies, in the so-called narratology/ludology debate. The narratologists were accused of regarding games as a subset of stories and solely paying attention to games' representational and narrative abilities, whereas the ludologists focused on the systems behind the games, claiming that representation was nothing but the wrapping of a game.[14] Eventually the hatchet was buried, as it was concluded that games[15] can bear similarities to traditional narrative media, but also have their own game-specific features that make them innately different. As Janet Murray argues, the ludologists have done important work because they have drawn attention to computer games as objects of study in their own right rather than as examples of film or narrative (Murray, 2005). However, the specific ideology of the ludologists – which Murray calls game essentialism – has not proved useful, since it only disavows other approaches to games. She concludes her account about the debate claiming that 'Game Studies, like any organized pursuit of knowledge, is not a zero-sum team contest, but a multi-dimensional, open-ended puzzle that we all are engaged in cooperatively solving' (Murray, 2005, p. 3). In line with this plea, when conceptualizing computer game literacy education, one needs to both address games' representational features and their ludic (or playable) dimensions (Buckingham and Burn, 2007, p 3).

Consequently, a scope beyond the boundaries of media literacy is necessary, and topics such as mathematics, English, design and technology, art, and computer science cannot be excluded. As such, game literacy education takes place 'at the interstices of different disciplinary areas' (Pelletier, 2005b, p 8). Here it is important to stress that the semiotics of a computer game and the system of rules behind this game can by no means be fully divided, let alone can they be taught separately: only in the interplay between the rule-based system and the semiotics occurs meaningful play.[16]

[14] The narratology/ludology debate took place in the early years of computer game studies and was concerned with how to study games: as narrative (representations) or as games (simulations). A lot of rhetoric was involved to establish game studies as an acknowledged area of academic research. Articles written within/about this debate include Juul, (2001), Aarseth (2001), Eskelinen (2001), Frasca (2003), and Murray (2005).

[15] Many but not all, that is. By the ludologists, Tetris was often mentioned as an example of a game in which the representational component is insignificant (e.g. Eskelinen, 2001).

[16] Caroline Pelletier refers to this concept of meaningful play, which was coined by Salen and Zimmerman in their book *Rules of Play* (2004).

Having concluded that computer games indeed have their own kind of language, both in terms of the unique combination of audiovisual elements and in the sense that the ludic dimension of games separates them from other media in a fundamental way, the question arises of what is writing and reading in the case of computer games. After all, being literate means being able to read *and* write. Traditional media literacy education, as mentioned above, involves a twofold aim of being able to produce media and critically receive them by analyzing media texts. The latter would correspond to critical reading skills, whereas the former can be considered writing. However, in the case of computer games, the difference between reading and writing is less clear-cut, for the player actively makes choices when playing the game and thereby, in a sense, creates her own text. In addition, many games offer possibilities to modify, for instance, certain levels or environments, or the character's experience or skills. Regardless of the question as to what exactly corresponds to writing in regard to games (I will return to this issue in chapter four), it is evident that within computer game literacy education, producing games is as much part of it as playing them (Pelletier, 2005b; Buckingham and Burn, 2007). Making games develops understanding of how games create meaningful experiences (Pelletier, 2005b, p 3). Thus, when teaching game literacy, children should produce their own games, however difficult this may be. Below I will go further into this matter.

2.2.3 A critical and social gamer

A key term within computer game literacy, as in media literacy, is a critical attitude. Just as with media literacy, a mere understanding of the medium's language on the level of genre conventions or a meaningful use of the medium (in the case of games: playing them in a meaningful way) is not sufficient. Although these skills are part of computer game literacy – in the sense that they are prerequisites - a critical awareness is at the core of computer game literacy. For instance, Pelletier pleads for setting up social situations that encourage more systematic and critical understanding of games. Similarly, Buckingham and Burn argue that, only from playing games, children get

> '…a good informal grasp of the more obvious components of games which are visible to the player: missions, end-of-level bosses, obstacles, rewards, challenges, and combat. But the notion of games as rule-based systems […]

was not something they had learned from their experience of play.'
(Buckingham and Burn, 2007, p. 7)

In the case of games there is therefore the difference between functional literacy – which corresponds to the basic skills as acquired when making use of the medium on a regular basis – and critical literacy, which is acquired when encouraged. As also argued in the former chapter, the basic game play skills – involving how to meaningfully play the game and eventually win it - are usually obtained automatically, while the more critical skills need to be actively taught.

Central to computer game literacy, as also to media literacy, is that it not only entails 'disembodied cognitive skills' but also 'a set of social practices' (Buckingham and Burn, 2007, p. 4). Therefore, also with respect to games, literacy 'needs to take account of the social dimensions of gaming and not merely the textual or formal aspects of games per se' (Ibid.). Compared to media literacy, the social aspect seems to be not only equally important for computer game literacy, but in some genres even more important. Currently massively multiplayer online games (MMOGs) like *World of Warcraft* (Blizzard Entertainment, 2004) attract large numbers of players that are interacting with each other in online virtual environments. These games could simply not be played without other players being present, as collaboration is in many cases necessary. The social aspect of playing games, especially in the MMOG genre, thus has to be taken into consideration. In the case of traditional media, consuming media is often a social practice, e.g. watching television or listening to music with peers, which can play a part in defining social groups. However, playing an MMOG cannot occur without others being present in the virtual world, and knowing how to properly communicate with the other players is an important part of the experience.

This dimension of game literacy is also recognized by Jenkins et al. in their white paper on new media literacies, where they describe general skills that are needed in today's media landscape. They consider the social dimension as an additional skill set, which was not as evident in the traditional media landscape. They argue: 'The social production of meaning is more than individual interpretation multiplied; it represents a qualitative difference in the ways we make sense of cultural experience, and in that sense, it represents a profound change in how we understand literacy' (Jenkins et al., 2006, p. 20). Although they are speaking about

all new media rather than computer games in particular, in my opinion this holds good for games as well, especially in the genre of MMOGs.

In the case of social skills, players will also learn them just from playing the game. They will acquire the communicational skills they need, e.g. using chat channels, knowing what certain abbreviations stand for, or knowing how to interpret avatar gestures (Steinkuehler, 2007). Reflecting critically on this is, again, where computer game literacy education comes in. It is an interesting question here where the game rules - coded into the design of the game - end, and where the social rules begin. In games with large populations many social conventions can apply. For instance, it might be unacceptable in a certain community that goods are stolen from other players, even though it is technically possible to do so. Since the interactive nature of computer games requires more responsibilities for their users than in the case of non-interactive media, recognizing and concreting the difference should be part of computer game literacy education.

2.3 Simulations versus games

An important issue for computer game literacy education with regard to games as rule-based systems concerns the meaning of the term simulation. Within the narratology/ludology debate it was often stated that games are kinds of simulations rather than narratives or representations (e.g. Frasca, 2003; Eskelinen, 2001). Also in this chapter the term simulation has been used as quoted from Turkle (1995) and Squire (2002). It is clear that games are indeed forms of simulations and that this is one of the major characteristics that delineate them from other media. For instance, in Jenkins et al. (2006) the interpretation of simulations is seen as one of the skills of the new media literacies. By that, they seem to mean simulations as they manifest themselves through games: simulations and games are lumped together as being one phenomenon.

However, it is significant to note that *not all simulations are games*. As early as 1982, Chris Crawford described the difference between the two: 'A simulation is a serious attempt to accurately represent a real phenomenon in another, more malleable form', whereas a game is 'an artistically simplified representation of a phenomenon' (Crawford, 1982, p. 8). Thus, games do represent a certain model by means of another model (the notion Frasca uses for simulation) but the element of playfulness is added to that. The fundamental difference lies in their purposes:

whereas simulations try to model some phenomenon with the objective to be useful for e.g. calculations, a game tries to model a phenomenon with the aim to be entertaining. Both simulations and games will always be simplifications as reality is just too complex to be fully simulated (something I also mentioned above), yet in games the simplification of the phenomenon is not regarded a problem. Moreover, playful elements are added, like winning and loosing conditions, a score, or ranking. As Crawford puts it: 'the game designer simplifies deliberately in order to focus the player's attention on those factors the designer judges to be important' (Ibid.). This distinction makes computer game literacy even more important. In other words, although games are a form of simulation, they do not try to represent reality as precisely as possible, and therefore become even more opaque than simulations in general. What choices did the developer of the simulation make to make it more 'fun'? What elements are deliberately left out in order to increase playability, or, maybe, decrease the chance to be controversial?[17] These are important questions to a game literate person.

Games with educational purposes situate themselves in a middle ground: they claim to be a game, and therefore 'fun' to play, but at the same time the content should be regarded serious (especially the so-called Commercial-Off-The-Shelf games, which I will discuss in the next paragraph). Jenkins et al. also mention this hybrid nature of games with educational purposes, referring to research by Shrier that showed how children took all the information in a game presented as an educational game as authentic information (Jenkins et al. 2006, p 15). A critical attitude towards where a simulation ends and a game starts, is therefore at the core of game literacy education.

2.3 Education about dwarves?

What also has not yet become clear from the abovementioned is if any computer game will be excluded from computer game literacy education. This may not sound like a logical question, but in the literature on games as educational means, games that in any way refer to real life situations seem to be emphasized over games that have a pure fantastic theme. For instance, games like *The Sims* (American suburban life), *SimCity* (the functioning of a city) and *Civilization* (colonization) are mentioned frequently (e.g. by Squire 2002 and Frasca 2001), whereas popular games that do

[17] An example of this is the lack of any race-related subjects in *SimCity*.

not refer to real-life theme like *Half-Life 2* (Vivendi Universal Games, 2004) or *Tomb Raider* (Eidos Interactive, 1996) get far less attention in that respect. This subject is related to the abovementioned, however here the focus is more on the representational level, or the theme of the game.

A popular term nowadays that is used to name these kinds of games is COTS games: commercial-off-the-shelf games. The term refers to games originally meant to be purely entertaining, but educators and scholars have marked them as having educational potential. The themes of these games are always serious, for instance health (e.g. *Theme Hospital*, *Life and Death* series, *Microcosm*), job simulation (e.g. *Vet emergency*, *Emergency EMT*), or history (*Medieval Total War*, *The New World, Stronghold Crusader*).[18]

When it comes to teaching game literacy, it would also not be surprising if these kinds of games are emphasized: we probably want our children to be critical towards games that simulate how cities function or land can be colonized, whereas we might care less about what children pick up from worlds inhabited by trolls or dragons. After all, they would not transfer that content to real life, because they would more clearly be aware of the difference between the world depicted in the game and their everyday world. Jenkins et al. also implicitly endorse this viewpoint, when defining the skill 'simulation' as 'the ability to interpret and construct dynamic models of *real-world* processes' (Jenkins et al. 2006, p 4, emphasis mine).

However, Pelletier as well as Buckingham and Burn do not specifically mention that games that profess to simulate a real system deserve more attention within media literacy education. Here the comparison with traditional media education is not easily made. In media literacy education no explicit distinction is made between texts that refer to real worlds (like a sitcom set in New York) and imaginary worlds (like the books and movies of *Lord of the Rings*). Also, there is no exclusion of fictional media utterances, i.e. non-fictional texts do play a large part within media education, but fictional texts are definitely not excluded (Moore, 1991, p. 175). Next to newscasts and documentaries, media education is about soap operas, Hollywood movies and magazine advertisements. And even if non-fictional texts would be highly emphasized over fictional ones, it is still hard to define what it means for a computer game to be fictional or non-fictional: Do non-fictional computer games exist at all?

[18] For a more extensive list see the website Social Impact Games (www.socialimpactgames.com), run by Marc Prensky, author of the book *Digital Game-Based Learning* (McGraw-Hill, 2001).

So, although games that claim to simulate real life situations are mentioned more often by the advocates of games as educational means, literature on game literacy education does not make a distinction between these different kinds of games. In addition, a game world can never be fully detached from any reference to the real world. A games' representation as well as its rule-based model always refer to the real world in some way, otherwise a player would be unable to make sense of the system. Although the system might be simplified and abstracted, and perhaps heavily twisted (if none of this applies it would not be a game, as I argued above), the fiction of games has its roots in a model of the real world that is present in the ergodic core of the game (Sicart, 2006, p. 75).

Thus, in media literacy education, children should not only learn to be critical towards newscasts or documentaries, but also towards e.g. (stereotypical) representations depicted in movies, advertisements and soap operas. With respect to computer games, a critical attitude towards representations should also be taught. For instance, the representation of the female dwarf in *World of Wracraft* might be less obviously relevant, but tells us at least as much about gender structures in society as the representation of a woman in *The Sims* does. Or the fact that *Counter-Strike* (Vivendi Universal, 2000) - a first person shooter about terrorists that does not make out to be educative by any means - is set in a Middle East-like setting implies prejudice about this region. In addition, the way these representations interrelate in a modeled system comes on top of elements of relevance to traditional media literacy education.

In sum, no games should be excluded from game education beforehand. What is however highly important in both the debate on the educational potential of games and that on computer game literacy, is that all games should not be lumped together. That is, not all games are suitable for education, and as argued, some violent games might even be harmful. Accordingly, it is not equally necessary to teach about all games. Games with no or hardly any representational layer on top of the ludic system, such as *Tetris* or online blackjack, would not need to get a place in class next to games with a rich virtual world, in which both the simulation and representation contain many biases. Similarly, writing on COTS games, Richard Stanford argues that 'discussing "games" and learning runs the risk of preventing a full understanding of the different possibilities inherent with particular titles, and perhaps encourages the kind of generalization that encourages discussion to focus on the barriers rather than the benefits of using games in schools' (Stanford, 2006, p.

3). Since computer games are such a rich and heterogeneous cultural phenomenon talking about games in general always requires cautiousness.

2.5 Production versus Reception

Above I have concentrated on the few authors who have focused specifically on computer games approached from media literacy education theories, complemented with my own considerations. Although I think what has been said is very useful, this particular body of literature is still small, and not every single aspect has been elucidated extensively. The very fact that the issues I raised, i.e. the relationship between simulations and games and fiction versus non-fiction, have not been touched upon yet, shows how much is to be explored.

Another significant matter is that the debate thus far tends to emphasize production, while it offers fewer solutions in how to adjust the ideas of critical perception to computer games. While Pelletier and Buckingham and Burn acknowledge that perception is one of the pillars of media education, and thus also important to computer games, they provide fewer practical and concrete examples of how to teach this. They mainly emphasize that when analyzing games, the ludic aspects should be taken into account. They refer to experiments that have been done with children producing their own games, but do not give suchlike examples with respect to critical reflection.

This emphasis on production also appears to be a tendency when looking at media literacy in a broader perspective. The field of computer game literacy education might be small, but on the level of new media literacy much more has been (and is being) written. Here the new media are approached as one phenomenon, having mainly their digital nature in common. In the next section I argue that also in the movement of the new media literacies, focusing on the research initiative with the same name, production is highlighted. Within this movement, games are considered too much a part of participatory culture in which personal production reigns supreme.

2.5.1 New Media Literacies

The New Media Literacies (NML) research project is led by MIT professor Henry Jenkins and bore by the Mac Arthur Foundation, a fund which emphasizes 'understanding how technology is affecting children and society' as part of their

mission statement.[19] The project's central goal is to engage educators and learners in today's participatory culture, which stems from the belief 'that young people need to both make and reflect upon media and in the process, acquire important skills in team work, leadership, problem solving, collaboration, brainstorming, communications, and creating projects'.[20] Their conviction is based on figures showing that a significant percentage of nowadays' teenagers are creating content and sharing this with others.

The NML movement is far broader than the specialized notion of computer game literacy I employ in this thesis. NML also takes into account all applications of the World Wide Web, including weblogs (blogging), online communities such as Facebook or MySpace, and collaborative projects like Wikipedia. In this sense computer games – and for NML mainly those being played online – are just a small part of the new digital media.

It is not my aim here to criticize NML or to question the value of the work the researchers are doing, as I think it is favorable that attention is called to the changing concept of literacy with respect to digital media in general. Also the reflection part they stress – as mentioned afore - fits into the media education framework very well. Yet, in my opinion computer games are too much lumped together with other digital media, taking for granted that personal production in the case of games is equally important to production of other media, like weblogs or wikis. In other words, creating content is indeed very common when it comes to writing blogs or having accounts in online communities, but creating (interesting) game content is something different. Considering computer games as part of this participatory culture is, however plausible this might sound, not necessarily justified. For instance, Gonzalo Frasca criticizes the tendency of giving the game player too many credits, arguing that 'to claim that it [to play computer games] allows users to become authors is, in general, far-fetched' (Frasca, 2001, p. 53). He regards this notion part of 'the myth of a democratic medium where consumers can become producers' (Ibid., p. 52), and continues his argument by acknowledging that he cannot prove it by statistics, but that in comparison to the millions of people that play computer games the number of modifications ('mods') is strikingly low (a couple of hundreds, according to Frasca).

[19] See website of the MacArthur Foundation: www.macfound.org. This quote is from the Overview (http://www.macfound.org/site/c.lkLXJ8MQKrH/b.860781/k.D616/Overview.htm, 17-10-2008)
[20] www.newmedialiteracies.org

I agree with the NML movement to the extent that new digital media are indeed creating possibilities previously unavailable to 'the public', yet to my mind this does not necessarily hold for the specific medium of computer games. This is due to the fact that, in the case of games, it requires very specific skills to create them. Jenkins et al. provide a list of characteristics that, according to them, are defining any kind of participatory culture. While some might apply to computer games, e.g. the trait that participatory culture is a culture 'with some type of informal mentorship whereby what is known by the most experienced is passed along to others' (Jenkins et al., 2006, p. 7),[21] other features do not go for most games. For instance, the feature that participatory culture is a culture 'with relatively low barriers to artistic expression and civic engagement', does not hold for many games. When normally playing, say, *World of Warcraft*, *Counter-Strike*, or *The Sims*, artistic expression and civic engagement are not of the order of the day. So it seems that games are too much considered part of this participatory culture because they are an interactive medium. Regarding games as participatory culture, like the NML does, entails that personal production is highly emphasized, which in the case of games does not seem equally important.

Also, part of this problem is due to the fact that computer games as such sometimes are mixed up with the culture that *surrounds* them. Indeed, there might be a culture surrounding games that is participatory, as a variety of online forums and websites about games can encourage gamers to learn from each other or express their own experiences of the games. However, the game itself still is a cultural object deliberately made by some to provide an experience for many. As Sicart argues, 'computer games are objects designed with the intention of providing a certain experience for the players, by presenting them with obstacles and challenges within a previously stated and agreed set of rules and environment' (Sicart, 2006, p. 76). Taking together these different practices, i.e. the game-play itself and the culture surrounding it, is not a problem in itself, as long as it is clear that indeed the culture that encompasses the game is meant instead of the game as such. In the case of computer game literacy education, it is thus about the latter: the game as a constructed artifact.

[21] This for instance happens in MMOGs, when more experienced players help out the 'newbies'.

2.5.2 Emphasizing critical reception

Thus, regarding the way games are addressed in the broader field of new media literacies, as well as within the more specific domain of computer game literacy, production is overly stressed. In order to draw more attention to the *reception part* of computer game literacy education, in this thesis I elaborate on how to teach a critical response and reflection on computer games as constructed artifacts. Since there is currently much interest in games as educational means, I want to investigate how a computer game could be able to foster a critical stance towards itself. This means a suchlike game would fit into the idea of education through games, while at the same time it would promote a critical attitude. As Turkle argues, (see chapter one) there could be simulations that encourage the player to challenge the built-in assumptions. Precisely that kind of simulation – or, rather, game - I would like to explore further. It is striking that, while Turkle does not refer explicitly to the notion of media literacy, she appears to be a supporter of computer game literacy education. That is, even though her 1995 book *Life on the Screen* does not deal specifically with computer games but rather with computers and simulations in general, she provides many examples regarding games. She clearly pleads for a more critical stance when playing computer games, and recognizes that this does not occur automatically in most cases. Although neither mentioned by Pelletier and Buckingham and Burn, Turkle's ideas and argumentations fit into the media literacy framework very well.

2.6 Conclusion

In this chapter I have discussed the issue of education *about* computer games by positioning them in the broader framework of media literacy or media education. Within *computer game literacy education* the key concepts of media literacy education have proved useful, although there are some shifts of emphasis. Attention to both production and critical reflection, the notion that all media are constructions, and the critical attitude, are ideas that can be extended from media education to computer games. Yet, the twofold nature of computer games as representational media and rule-based systems is not apparent in media literacy, and thus specifically applies to computer game literacy education. Moreover, the concept of simulation as well as the player responsibility that is involved in computer games - especially in the case of multiplayer games - are to be included. The incorporation of fantasy

games - despite all the attention for educational games with more serious content - is also a factor to take into account. To conclude, I have identified an emphasis on production, both in computer game literacy education's niche and in the broader field of new media literacies. Here I want to counter balance this tendency by exploring ways in which games could foster a critical reception towards themselves as constructed artifacts.

Bringing about a critical attitude towards itself is not something that only a computer game could aim at. That is, Bertolt Brecht's epic theater also aspired to make its audience more critical towards what was depicted on the stage. In the next chapters, I will investigate the extent to which Brecht's ideas might prove useful for computer game literacy education, starting by discussing Brecht's objectives as well as his methods and techniques.

3. Brecht and his epic theater

In order to examine how epic theater might be helpful to computer game literacy education, here I will take a more detailed look at what epic theater entails. Firstly I go into the more theoretical considerations Brecht made about the concept. What ends did epic theater serve? On what world view(s) was it based? Secondly, the way epic theater was put into practice is examined, discussing the various techniques Brecht used, assembled by the well-known term of alienation effects, or A-effects.

Let me first make a remark. It surpasses the span of this thesis to make an exhaustive investigation of all Brecht has written on epic theater himself, not to mention all that has been written by his interpreters. Since I had to make a selection from the myriads of publications by and/or about Brecht and epic theater, I confine myself to a limited number of sources. Firstly I will use the articles that are published in the book *Brecht on Theatre*, in particular 'The Modern Theater is the Epic Theater', 'The Literarization of the Theater' and 'A Short Organum for the Theater' (all translated by John Willett). In addition, I refer to Walter Benjamin's piece 'What is Epic Theatre?' and to the clarifying *Dictionary of the Theatre* by Patrice Pavis.[22] Finally, I will use J.L. Styan's chapter 'Epic Theater in Germany: later Brecht' (in *Modern Drama in Theory and Practice*) because here Styan gives a clear analysis of some of Brecht's best known epic plays. From this, examples are provided of how epic theater was put into practice.

In addition, Brecht was not the only practitioner of epic theater in his time. In his early years he extensively collaborated with Marxist director Erwin Piscator, and together they came up with the name 'epic theater' (Styan, 1981, p. 128). For the abovementioned reasons I will here focus primarily on Brecht, on the understanding that Piscator's form of theater was very much alike. As Styan points out, Brecht made use of much of the mechanical apparatus Piscator deployed (Ibid., p. 140).

3.1 The theory of epic theater

3.1.1 The diversity of Brecht's work

Bertolt Brecht (1898-1956) was one of the most influential theater practitioners of the twentieth century. Next to the many plays he wrote and directed, he also wrote a

[22] This is on the advice of Chiel Kattenbelt, who works at Utrecht University and is specialized in theater history and media comparison.

vast number of accounts, consisting of both specific comments to his work and more abstract theories. The immense size of his written work is well illustrated by the 1964 published selection of 55 of Brecht's writings titled *Brecht on Theatre: The Development of an Aesthetic* (translated by John Willett), which covers a period from 1918 to 1956. According to Styan, the most important account of Brecht's theories is 'A Short Organum for the Theatre' (Kleines Organon für das Theater), written in 1948, complemented by a number of appendices to this work he left after his death (Styan, 1981, p. 150).

The many works Brecht has written make his theories very rich, however, they are neither systematic nor always consistent (Brown, 1991, p. 68). Not only did some of his ideas change over time, Brecht also tended to leave arguments underdeveloped, leaving room for various interpretations (Ibid.). For instance, whereas Brecht in his earlier writings argued against the notion of theater as entertainment, later on - though still setting his face against the popular contemporary drama as part of the 'narcotics business' - he considered his kind of theater nevertheless entertaining: the pleasure would lie in the critical attitude and solution of problems. In addition, while Brecht firstly presented epic and dramatic theater as each other's opposites, the writings that were published after his death state that 'the term epic theater was set too rigidly in contract to the dramatic, the presuppositions were often excessively naïve' (Brown, 1991, p. 68). In general, in the last twenty years of his life, Brecht's theories became more tentative and open-ended (Styan, 1981, p. 151).

The concept of epic theater has thus been drawn up in several ways and with some differences over time. Therefore, when writing on 'epic theater' in this thesis, I refer to a form of theater that contains many epic elements, as there is no such clear-cut phenomenon as 'pure' epic theater being the opposite of Aristotelian theater (Pavis, 1998, p. 128). Although Brecht did envision this pure form in contrast to Aristotelian theater in his earlier works, later it appeared to be a hypothetical form. It will become clear that for the aim of this thesis it is not necessary to have a highly specific notion of the epic play, since the investigation takes place at a more conceptual level. That is, a somewhat artificial translation has to be made to the digital medium of computer games anyhow.

3.1.2 Theater as a social instrument

One of the most comprehensible ideas about theater that Brecht kept in mind all through his career was that theater is an inherent social activity. Consequently, and in accordance with his Marxist beliefs, Brecht regarded theater as a societal instrument that is controlled by one of the different social classes. The most popular form of drama in Brecht's time, what he called the Aristotelian theater, was controlled by the middle class, and thereby would serve the needs of this class. The epic, non-Aristotelian theater that Brecht proposed, on the contrary, would fight for the oppressed proletarian class. Brecht asserted that the Aristotelian theater creates an illusion and pictures a fake reality, an effect he regularly compared to the effect of drugs. According to Brecht this could only change:

> '… once the illusion is sacrificed to free discussion, and once the spectator, instead of being enabled to have an experience, is forced as it were to cast his vote, then a change has been launched which goes far beyond formal matters and begins for the first time to affect the theater's social function' (Brecht, 1964, p. 39)

In retrospective, there were many more forms of theater before Brechtian theater that contained epic elements, for instance in medieval mystery plays, classical Asian theater, and even some plays within classical European theater (Pavis, 1998, p. 113). Yet, Brecht was in his transition from dramatic to epic not motivated by a matter of style, but rather by 'a new analysis of society' in which, according to Brecht, 'the individual is no longer opposed to another individual but to an economic system' and where 'fate is no longer a coherent power' (Ibid.). In other words, epic theater aimed at a political examination of society and its working elements (Styan, 1981, p. 141). Epic theater is thus not only characterized by the epic elements in it, but also by the rationale behind it: the aspiration to bring about a change in contemporary (bourgeois) society.

In order to achieve these effects, rather than to carry away its audience, epic theater was showing or telling a situation to the audience, maintaining a distance between the spectator and that what was being showed. As Brecht himself puts it: 'to transform himself [the spectator] from general passive acceptance to a corresponding state of suspicious inquiry he would need to develop that detached eye with which the great Galileo observed a swinging chandelier' (Brecht, 1964, p.

192). Whereas Aristotelian theater appeals to emotions, epic theater appeals more to the ratio. Central to epic theater was that a situation was presented to the spectators as an alterable situation, in which the people involved can take action to turn it into a more desirable situation.

3.1.3 Detached entertainment

It might appear logical to suspect that this rational notion of theater would take away the pleasures that derive from watching a play. For instance, in film, emotional attachment and identification are sometimes considered prerequisites for the experience of pleasure (e.g. Linton, 1978). As mentioned above, Brecht initially indeed saw no great entertaining value for his plays, as he wanted them to be primarily socially changing. But later on he ceased excluding entertainment and realized that the two, i.e. appealing the ratio and providing entertainment, could actually go hand in hand. In addition, Brecht later acknowledged that some degree of emotional attachment was nevertheless necessary, as it would help the audience to get engaged with the subject matter.

Being entertaining for Brecht however did not mean being compelling. As Walter Benjamin points out in 'What is Epic Theatre?', epic theater's purpose was to 'deprive the stage of its sensation derived from subject matter' (Benjamin, 1999, p. 145). To avoid the public from being swept away by the events happening on the stage, ideally the spectators would already know what was going to happen, i.e. telling an old story is a benefit rather than a drawback. The sensational was not something desirable, and Brecht's drama eliminated the Aristotelian catharsis, i.e. 'the purging of the emotions through empathy with the stirring fate of the hero' (Ibid., p. 147).

So how then would these plays be entertaining? As Benjamin continues:

> 'Instead, the art of the epic theater consists in producing astonishment rather than empathy. To put it succinctly: instead of identifying with the characters, the audience should be educated to be astonished at the circumstances under which they function.' (Benjamin, 1999, p. 147).

Thus, the play would indeed bring about a reaction to the audience, being astonishment. As such, according to Benjamin, the pleasure lies in the discovering of

the conditions of life, as the task of epic theater is the representation of conditions (Ibid.).[23]

3.1.3 A critical and literalized audience

The purpose of epic theater was thus to make the audience aware of their own social situation, and make them realize that change was possible. The aim was to make clear that, just as a play itself is constructed and open for alteration, reality is as well. Therefore a stance of 'suspicious inquiry' was needed. Although Brecht does not seem to have explicitly theorized whether such a critical stance was automatically acquired when watching enough epic plays, or if additional education was necessary, it can be concluded that he assumed the former.[24] After all, he considered his plays educational devices and saw theater *itself* as the instrument with which to educate the people. Therefore it would be highly implausible if some kind of supplementary teaching material had to be coupled with it.

However, it is not to say that drama was the only means Brecht deployed; several additional techniques can be used on the stage to go next to the acting. For instance, films could show a montage of events from all over the world, projections could add statistical material, or a chorus could be employed to enlighten the spectator about facts unknown to her. As such, the background would come to the front of the stage, so people's activity was subjected to criticism (Brecht, 1964, p. 72). Yet these means were, according to Brecht, as much part of theater as acting itself. I will return to this below when discussing the separation of the elements.

From Brecht's accounts it becomes clear that the audience will adopt the critical attitude when seeing epic plays, but that this will most likely not happen equally to a first-time spectator as to a more experienced spectator. Brecht acknowledged that this critical approach of the spectators was something to strive for and not something being naturally present. He considered as part of the critical awareness that the spectator would turn into an expert rather than a mere consumer of theater. For example, in his notes to *The Threepenny Opera* he speaks of the 'literarization of the theater', claiming that in order to watch his epic theater 'some exercise in complex seeing is needed'[25] and assuming that epic theater could establish 'a theater full of experts, just as one has sporting arenas full of experts'

[23] In chapter five I will go further into this interesting notion of epic theater's aim of discovering conditions.
[24] That is, from the sources that I have consulted for this thesis, which, as argued above, do certainly not cover all that has been written by and/or about Brecht and epic theater.
[25] I thus assume that, since this exercise is not specified, the exercise lies in attending more epic plays, and happens somewhere along the process.

(Brecht, 1964, p. 44). Within the realm of sports, so Brecht argued, everybody makes an attempt to analyze what is going on, e.g. who is winning or what is the best strategy. He envisioned a similar attitude to the audience of a theater play, requiring an active effort in analyzing what is happening on the stage.

Since the active and critical view was, unlike in sports, not something naturally present in theater, the spectators needed to be helped by the play to develop this attitude. If they were to be entertained in a detached manner, and thereby learn something from it, the play in some way had to foster that kind of reaction. There were several means Brecht deployed to bring about the desired effect, which I will thematically discuss in the following section.

3.2 The practice of epic theater: alienation effects

In his comments and theories Brecht regularly mentions certain theatrical techniques known as the alienation effects, which are among the best known of his legacy. These techniques are used to accomplish the desired distance between the spectators and the represented world, i.e. they had to estrange the audience from that what they were seeing, and avoid a surrender to the illusion. A pithy description is given in Pavis' *Dictionary of the Theatre*: 'an alienation effect in theater has to do with "Disillusioning" techniques that negate the impression of a stage reality and reveal the artifice of the dramatic construction or of the character' (Pavis, 1998, p. 18). In other words, to accomplish detachment from the enacted, the artificiality of what is shown should not be hidden, but rather emphasized. In Brecht's own words (translated by Willett) alienation (verfremdung) implies the following: 'A representation that alienates is one which allows us to recognize its subject, but at the same time makes it seem unfamiliar' (Brecht, 1964, p.192).

Brecht himself, naturally writing in German, used the term 'Verfremdungseffekt' or 'V-effekt' to designate this group of techniques. In English this term has been translated in different ways: alienation effect, distancing effect, or sometimes estrangement. In this thesis I use the term alienation effect, as the various sources I employ also employ that word. Brecht distinguished these alienation effects from the old alienation effects in medieval or Asiatic theater. Whereas the latter would 'remove the object represented from the spectator's grasp, turning it into something that cannot be altered', Brecht's epic alienation effects 'are designed to free socially-conditioned phenomena from that stamp of familiarity which

protects them against our grasp today' (Ibid.). So the alienation effects do not try to fully alienate the spectator from the representation, but rather to tweak it and thereby make it strange. They are a device that enables one to describe the process represented as bizarre (Pavis, 1998, p. 19).

Although Brecht's alienation effects clearly were an ideological instrument - this was also what set them apart from older alienation effects in e.g. Asian theater - they nevertheless remained an aesthetic act as well. Their function was to make a transition from aesthetic device to ideological responsibility in the work of art (Ibid.). Alienation effects manifest themselves in many ways, forming an umbrella term for many diverse techniques and practices, all having in common that in some way they make the represented unfamiliar. According to Pavis, alienation effects can take place at no less than six different levels: 1) fabula, or plot, 2) scenery, 3) gestures, concerning the individual and his social status in relationship to the world, 4) diction, 5) acting, and 6) addresses to the audience.

3.2.1 Epic acting

Brecht pictured for epic theater a very particular kind of acting, which would function as an A-effect. In this kind of acting, the actor was not supposed to fully disappear behind the character that he performed, but rather enact it with a certain distance. As Styan phrases it:

> 'The actor's movement, gesture and speech must be "matter-of-fact" so that he would not wholly assume the character that he was playing, and so that the audience would not empathize with him. The action would be performed as if it were an experiment, a demonstration, and on stage the difference between the actor and the character he was playing would be readily apparent.' (Styan, 1981, p. 151)

There would thus always be a clear distinction between the actor as a person and the character he was depicting, that is, the actor had to play the character without incarnating him. Brecht envisioned that 'the actor must show his subject, and he must show himself. […] Although the two coincide, they must not coincide in such a way that the difference between the two tasks disappears' (Benjamin, 1999, p. 150).

A specific instance of this kind of performing is when the actor in person depicts two characters, especially if the actor changes costumes on the stage.[26] As such, the actor is clearly detached from the characters, and the alterability of the theatrical reality is highlighted.

3.2.2 Radical separation of the elements

Next to this peculiar way of acting, Brecht's notion of the radical separation of the elements (Trennung der Elemente) was a vital means to estrange the audience. This was opposed to the in that time popular concept of the *Gesamtkunstwerk*, developed by Richard Wagner. In the Gesamtkunstwerk, all different arts, e.g. music, poetry, or acting, would integrate and blend together into one piece of art. Brecht set his face to that, and pleaded for a radical separation of the elements, in which the distinction between the different components of a play would be visible (Brecht, 1964, p. 37).

Brecht argued that words, music and setting must become more independent of each other, since the 'process of fusion extends to the spectator, who gets thrown into the melting pot too and becomes a passive (suffering) part of the total work of art' (Ibid., p. 38). Moreover, with the separation of elements there is no need to answer the question of what serves what – e.g. whether the words serve the music or vice versa. According to Brecht, having to ask this question causes that all elements are 'equally degraded', whereas in epic theater all elements stand on their own and communicate their own message. This radical separation of elements can also be connected to Brecht's opposition to the Naturalistic theater, which strived to depict reality as naturally as possible and therefore presented all means as supporting each other, creating a unity. In contrast, instead of being in harmony, in an epic production the different elements commented on each other.

A particular manifestation of this separation of elements was the use of placards and suchlike means, accompanying the performance and criticizing on what was enacted on the stage. The additional use of other sources than mere drama was rejected by the dominant ideas of Brecht's time, which dictated that 'everything had to be said in the action, that the text must express everything within its own confines' (Brecht, 1964, p. 44). Brecht, however, argues:

> 'But this way of subordinating everything to a single idea, this passion for propelling the spectator along a single track where he can look neither right

[26] This occurred in the play Mother Courage and Her Children, produced by Joop van den Ende Productions, which I visited on the 27th of April in the Stadsschouwburg of Utrecht.

nor left, up nor down, is something that the new school of play-writing must reject. Footnotes, and the habit of turning back in order to check a point need to be introduced into play-writing too.' (Ibid.)

Therefore, the play was complemented by other communicational means next to drama, which had to create the desired distance. For instance, in the play *Mother Courage and her Children* placards were dropped from the flies, which indicated the location of the action, and captions were projected on to the screens. The musicians sat in a box beside the stage, visible to the spectators,[27] and in the Berlin production the songs were introduced by a painted musical symbol like a drum or a trumpet lowered from the flies, to indicate that the songs were innately different from the action (Styan, 1981, p. 157). *The Caucasian Chalk Circle* is another example of a production full of epic elements. For example, a ballad singer provided the narrative link between the many scenes of the play, and furthermore distanced the action by singing of it in the past tense (Ibid. p 162).

Also with regard to the music that accompanied the play, there had to be distinct division with the action on the stage. The composer was asked to express his idea of the play's theme independently, so as to provide a distinct comment on the action. Moreover, often the music would not only be separated from the activity of the characters, but even be in conflict with it. Brecht especially opposed this kind of music against that in the traditional opera. Unlike opera, were the music was meant to reinforce the text, an epic play would have music and songs that were contradicting the action on the stage (Styan, 1981, p. 143). By the same token, singing to the music should not follow the melody blindly, since, according to Brecht, there is a kind of 'speaking-against-the-music which can have strong effects, the results of a stubborn incorruptible sobriety which is independent of music and rhythm' (Brecht, 1964, p. 45). Moreover, the singing must always be very distinct from speech, for 'nothing is more revolting than when the actor pretends not to notice that he has left the level of plain speech and started to sing', since singing as an excess of feeling should never stand in the way of words (Ibid., p. 44). In sum, all components, e.g. music, singing, speaking, acting, should be clearly divided and not reinforce each other but all voice their own attitude.

In line with the separation of the elements, also the epic stage had to communicate its own attitude towards the incidents shown. Often the stage was not

[27] The musicians being visible was also deployed in the abovementioned performance of Mother Courage produced by Joop van den Ende Productions.

supposed to represent any real locality, and was usually minimalist: it would be bare, with a sparse indication of props that had a part in the play, being typically an open space on which the story could be told (Styan, 1981, p. 143). Therefore, the set designer had to dispose of illusion and symbolism, and build in accordance with the actors' needs. Moreover, there was no need to hide the lights; the apparatus would be perfectly visible so that the spectator was conscious she was in a theater. The stage would be lit with a plain white light, which gave the impression that the actor was in the same world as the audience (Ibid.). As the stage was not to express a particular instance of time and space, it was often abstract. For example, in the first production of *Die Mutter* vertical iron pipes were constructed on the stage, with horizontal moveable pipes carrying canvases that could be slotted into them, allowing for quick changes (Brecht, 1964, p. 57).

Overall, this separation of elements brought about a fragmentary play, which had to prevent its audience from experiencing a natural unity - as this would make it too inviting to empathize with the characters and plot. When referring to the projections in *Die Mutter* Brecht phrased it as follows:

> 'The projections are in no way pure mechanical aids in the sense of being extras, they are no *pons asinorum*; they do not set out to help the spectator but to block him; they prevent his complete empathy, interrupt his being automatically carried away.' (Brecht, 1964, p. 58)

3.2.4 Breaking the fourth wall

The principle of the fourth wall refers to the fact that in traditional Aristotelian theater the spectators are watching a play as if watching a peep-show, i.e. the actors act like they are unaware of the fact that they are being looked at. It assumes that next to the three walls around the stage, there is also a fourth wall between the depicted world and the spectators. In other words, there is a very clear line between the audience and the actions on the stage, which cannot be crossed at any time. In epic theater, however, this fourth wall principle can be broken, which means there is no need to deny the presence of the audience. This involves the possibility for an actor to directly address the audience, reminding them of the fact that they are sitting in a theater rather than being immersed in the fictional world of the play. Breaking the fourth wall is, again, an alienation effect, as it estranges the experience of the audience and takes away the magic and isolation of the play's world.

In a dialogue between a worker and a philosopher in the play *Der Messingkauf* Brecht indirectly voices his standpoint about the fourth wall:

> 'WORKER: I'm for realistic acting.
> PHILOSOPHER: But it's also a reality that you are sitting in a theatre, and not with your eye glued to a keyhole. How can it be realistic to try and gloss that over? We want to demolish the fourth wall: I herewith announce our joint operation. In future don't be bashful; just show us that you've arranged everything in the way best calculated to help us understand.' ('Brecht, 1964, pp. 172-73)

Thus, to Brecht this breach of the fourth wall was not in conflict with the realism of the play. Quite the reverse: by making the spectator aware of the fact that the play is actually a depiction of reality, the depicted – that is, reality - is brought to the fore. Because the theater provides an insight into its own functioning, according to Brecht, it portrays, reality even better.

The spectator was often addressed by a narrator. This narrator was not part of the action, but commented on the events, speaking directly to the audience with a critical distance. However, also the actors were able to speak to the audience in a direct manner.

3.3 Conclusion

As we have seen, alienation effects break through the illusion of the play, or the represented world, and lay bare its 'constructedness'. Thereby they create a certain distance to the depiction, which fosters a critical attitude and a 'suspicious inquiry'. Whereas in classical theater it would be natural for the depicted world – inhabited by the characters – to represent itself as an independent unity, in epic theater there is no need to conceal the fact that the play is an artificial construction, which is being watched by a live audience.

When analyzing this way of working, it becomes clear that three levels of objectives can be discerned, each serving each other as means. Brecht's major aim was to make clear to his audience that they could alter the world they were living in. Especially the lower classes were to gain more faith in their ability to make their social situation better. In order to bring about this awareness, Brecht wanted to

distance them from the performance, creating a space for reflection. This distancing was to be accomplished by the alienation effects, which broke through the illusion of the performance. Thus, the A-effects served as a means to the distancing, which in turn was a means for accomplishing the awareness of the alterability of society. Later on, when discussing the use of his work to computer game literacy, the importance of this notion of three levels will become clear. Firstly, in the next chapter I will continue by providing handles in respect of how to translate Brecht's epic theater to the realm of computer games.

4. From epic theater to computer games

In the former chapter I have discussed the way Brecht envisioned his epic theater and how it would educate its audience, illustrated by specific examples of how epic plays were put into practice. In this chapter I will examine how this particular form of theater can be translated to computer games. This is done in two steps. Firstly by focusing on the 'epic' in epic theater: in what ways can this be detached and converted to another domain? I argue that epic can be abstracted from its particular manifestation in theater, and considered as one of the three ideal-typical auctorial instances: dramatic, lyric and epic. However, when abstracted in that sense, the concept will not remain as it is. Secondly I will address the overall connection of theater to computer games, and the ways the two fields have been associated before. It becomes clear that these domains have several common characteristics, in particular when it comes to computer games and non-Aristotelian theater.

4.1 Translating the epic

4.1.1 Epic as an auctorial instance

In the former chapter, by 'epic' I explicitly referred to the meaning Bertolt Brecht connected to the word, and the way he conceptualized it. Remarkably, when looking the term up in the dictionary, over ten meanings are provided for epic as both a noun and an adjective, but Brecht's denotation is not mentioned. Rather, epic is related to ancient epic poems and stories that contain comparable content matters, i.e. concerning heroes, greatness, and impressive achievements. In other words, no similarities seem to exist between Brecht's notion and the everyday language connotation provided by the dictionary.

Yet, when taking a closer look, a link can nevertheless be made: epic refers to the kind of representing an utterance – be it linguistically or by means of theatrical performance - as to explicitly show it, with some agency outside the depicted world rather than directly showing it as an independent world. For instance, the first denotation of the word (as an adjective) says: 'noting or pertaining to a long poetic composition, usually centered upon a hero, in which a series of great achievements or events is *narrated* in elevated style'.[28] It is specifically the use of the word

[28] www.dictionary.com [09-09-2008]. This internet dictionary refers also to the outcomes of several other (kinds of) dictionaries and encyclopedias such as Encyclopædia Britannica and the American Heritage Dictionary.

'narrated' that forms the association to Brecht's understanding of epic, i.e. instead of hiding behind the construction, the narrator shows itself explicitly. In this connection between the everyday word and the (Brechtian) concept of 'epic' lies the way in which it can be abstracted from the specific deployment in theater to other media (among which computer games): the epic can be considered one of three auctorial positions, or ideal types of representation. In this approach, the *auctorial instance*[29] is understood as the agency that is responsible for the construction of the so-called possible world, which is the depicted world as presented to the audience, in which the events take place. The auctorial instance can take up different positions, one of which is the epic position that can be distinguished from the two other types of representation: the dramatic and the lyric (Kattenbelt, 2006, p.24).

Before explaining what these three instances entail, it is important to note that they are not necessarily tied to particular media; any medium, e.g. film, literature, or theater, can be represented by any of the three positions. This is not to say that there are no dominant forms of representation; on the contrary, in most media one of the three will be the conventional position that is only occasionally broken. Moreover, when the dominant form of representation is broken, this does not go unnoticed and is mostly deliberately done to bring about a certain effect. Also highly important is that these auctorial positions are strictly systematical, and can only be distinguished on an ideal-typical level. That is, in practice a media production will never be merely dramatic, epic, or lyric, but always a mixture of the three. The distinction is thus conceptual, however, certain elements can be dominant to a great extent.[30]

As seen in the former chapter, Brecht was mainly opposed to the form of theater that was dominant in his days: the Aristotelian theater. This kind of theater is an example of a representation through the *dramatic position*. In this position, the possible world does not refer to anything outside itself: the existence of an audience or any agency that is responsible for the possible world's construction is negated. This means, the auctorial instance so to speak hides behind the possible world, making itself invisible (Kattenbelt, 2006, p. 25). In a dramatic play, time and space form their own closed continuum, and the spectator is not able to intervene in any way (Ibid.). But, as mentioned above, this dramatic position can also manifest in

[29] This term has been translated from the Dutch term 'auctoriale instantie'. Although in English a somewhat artificial term, it describes best what is meant. Auctorial is derived from the Latin word *auctor* meaning responsible person (Kattenbelt, 2006, p. 24).
[30] The same I have pointed out above with regard to the epic theater: it is not as such a pure form, but a production can contain many epic elements, which brings it close to the pure type.

other media. For instance, in film the dramatic is the dominant way of presenting the auctorial instance, since in most blockbuster Hollywood movies the world in which the characters live stands on its own, which means no reference is made to who or what is responsible for the construction of this world.[31]

Within the *epic position*, this is entirely different, as instead of hiding itself, the auctorial instance is emphasized. In epic plays, directly addressing the audience or showing the lights that illuminate the stage, stress the reality of the theater rather than neglect it. Similarly to the dramatic, the epic way of presenting the possible world can be approached on a more conceptual level and therefore be translated to other media. According to Kattenbelt, 'from the epic position, the auctorial instance presents itself to the spectator as a contemplative subject, from outside the possible world. On the one hand the possible world is the object of its construction; on the other hand it is the object of its reflection' (Kattenbelt, 2006, p. 27, translation mine). This means that the auctorial instance is not able to act in the possible world, nor can it express itself inside the world. However, freed from the '"compulsion to act" and the "pressure of experience" the auctorial creates a space for a consideration from a critical distance' (Ibid.). Since it has an unlimited access to the possible world – including the inner worlds of the characters - it is omniscient and ubiquitous.

With regard to other media, epic elements can manifest themselves in very diverse ways. For instance, in a movie, a voiceover can serve as an epic element, especially in cases where this voiceover comments on the action (e.g. in American Beauty, by Sam Mendes, 1999). Also, an epic component can appear in a movie where the montage is highly visible, and the fragmentation of the images emphasizes the construction. Similarly, in digital media hyperlinks can draw attention to the website's construction (Hildebrand, 2002). However, in the latter example a contradiction occurs when comparing it to epic theater: since hyperlinks are such an accepted phenomenon in websites, it hardly estranges the internet user. So the technique in itself might be epic, i.e. placing itself outside the possible world, the effect is not an effect of estrangement. Here it becomes clear that when epic is abstracted, and then applied to new media, it changes meaning. In the next chapter I will go further into this issue.

[31] In 2007 I wrote a paper on this phenomenon and its effects in the film Dogville (Von Trier, 2003), where epic elements are chosen instead of the dramatic representation, which is dominant in film. Also the Dutch film Ober (Alex van Warmerdam, 2006) is an example of breaking through dramatic conventions, where the main character addresses the writer of the film and asks for a better plot.

As mentioned above, epic and dramatic are not each other's opposites, but stand in a triadic relation to the lyric. From the *lyric position*, the auctorial instance places itself inside the possible world it constructs, as a subject with its own needs and demands. As such, the auctorial instance is the centre of the possible world, involving that the spectator can only gain access to the possible world from the perspective of the instance's experience (Kattenbelt, 2006, p. 27). Consequently, a reflective stance to its own subjectivity and an expressive attitude towards the external world are central to the lyric position (Ibid.). Poems and songs are often examples of a lyric auctorial instance, as they are usually expressions of feelings, while no story is told or time goes by.

4.1.2 Epic as a traveling concept

As one of the three auctorial positions, epic is thus detached from a medium, and thereby freed from its appearance the theater. When abstracted, it is better applicable to other media, and thus also to computer games. Yet, as seen with the abovementioned example of hyperlinks, in its abstraction certain specific features of Brecht's particular epic theater are lost. After all, Brecht's notion of the epic was affected by his Marxist thoughts: he wanted his plays to bring about change in the society he lived in (which can be roughly summed up as western society from the nineteen twenties to the nineteen fifties). As a result, removing the concept from its context has to be done with caution. Since the way I will use epic in this thesis is removed from the original Brechtian sense in both time and medium, it is certainly not a matter of straightforward application. Stripped from its context it might become a mere set of techniques, like the Asiatic theater also deploys a kind of alienation effects, though for a different purpose. In addition, theater is a domain with specific roots and traditions. For example, the dominance of the Aristotelian theater, aimed at bringing about a feeling of natural unity and enhancing the illusion, was an important motivation for Brecht to develop something entirely different.

Therefore, when epic is converted into an abstract notion in order to deploy it in other domains, it will not remain as it is. This phenomenon is described by Mieke Bal as a traveling concept, i.e. a concept that travels from one discipline to another, and during this journey does not stay unaltered. According to Bal, traveling concepts are highly important to the humanities nowadays, as studies within the humanities are increasingly interdisciplinary. Concepts, in contrast to words, involve many things, and are never merely descriptive but always normative and programmatic as

well (Bal, 2002, p. 28). The tradition they were developed in has, in a more or less evident way, influenced their connotation, something which undoubtedly applies to Brecht's epic theater. Consequently, when epic travels from one discipline to another – here from theater studies to computer game studies – one has to take into account how this will affect its meaning. In this case the question is to what extent the principles of Brecht can be preserved, and to what extent this is desirable when translated to computer games for the sake of computer game literacy education. This will become clear in the next chapter, where the actual translation is made.

4.2 Theater and computers: the representation of action

Computer programs and theater plays are obviously very different phenomena. Besides the fact that theater has been around for roughly two thousand more years, it (mostly) implies people performing roles, whereas computers and software have their base in disembodied binary code. However, the two realms do show some similarities.

Writing on computer programs in general rather than on games, Brenda Laurel was one of the first academics who considered the computer not merely as a tool; she suggested to regard the computer as a medium and made an extensive comparison between computers and theater, in particular the notion Aristotle had of drama in his famous *Poetics*. She even carries it through to the extent that she presents a 'poetics of human-computer activity' (Laurel 1993, p. *xix*), claiming that there are two reasons to consider theater as a promising foundation for thinking about and designing human-computer experiences:

> 'First, there is significant overlap in the fundamental objective of the two domains – that is, representing action with multiple agents. Second, theatre suggests the basis for a model of human-computer activity that is familiar, comprehensible, and evocative' (Ibid, p. 21).

Especially the notion of performance is a crucial correspondence between computer programs and theater, since they both deal with the representation of action (Ibid, p. 14). Accordingly, the computer interface can be compared to a stage, and the role of the graphic designer of software programs bears similarities to that of the theatrical scene designer. There are however some difficulties comparing the

users to a theater audience, because software users are regarded to have a more active role than merely tweaking the performance (as the spectator does). Therefore Laurel argues that within the computer program, everything takes place on the stage, and there is no clear distinction between audience and actors: the users become actors, or rather, agents. Although I do not necessarily agree with this viewpoint – an issue to be addressed subsequently in this chapter when discussing Frasca - Laurel had an original view to consider computers as a representational medium.

Interestingly, Laurel exactly uses the characteristic of Aristotelian theater that Brecht has reacted against: the fact that the spectator – and thereby software user - only sees what happens on the stage, and not what is behind the representation:

> 'Part of the technological "magic" that supports the performance is embodied in the scenery (windows that open and close; teacups that break); the rest happens in the backstage and "wing" areas (where scenery is supported, curtains are opened and closed, and sound effects are produced). […] The magic is created by both people and machines, but who, what and where they are *do not matter* to the audience. It's not that the technical underpinnings are unimportant to audience members; when a play is "working", audience members are simply not aware of the technical aspects at all.' (Ibid, p. 15, original emphasis)

She continues drawing an analogy with computers, asserting that

> '… in the theatrical view of human-computer activity, the stage is a virtual world. It is populated by agents, both human and computer-generated, and other elements in the representational context. […] The technical magic that supports the representation, as in the theater, is behind the scenes. […] In other words, *the representation is all there is*.' (Ibid, p. 17, original emphasis)

Thus, Laurel claims that how a theater performance is technically being created is not shown to the spectator, and that this is also the case with computer programs 'working', i.e. being used. This analogy is striking, considering the fact that Brecht thought of this feature of theater as something not desirable. As seen in

chapter one, although some authors have claimed that games reveal their own construction by the mere activity of playing them, I argue most games are as opaque as other media. Laurel has a similar point of view - that is, at least with regard to computer programs in general - by saying that the representation is all there is. The construction of the program will stay unrevealed, or, as Turkle puts it, at interface value. Yet, unlike Brecht, Laurel does not consider this characteristic of Aristotelian theater problematic. This might be due to the fact that Brecht envisioned an educative role for theater, whereas Laurel does not mention any educative potential for theater nor computer programs.

What however becomes clear is that theater and computers can be connected, and that insights obtained from an ancient cultural genre like theater could be of help to a more recently developed phenomenon like computer software. What links the two domains is the characteristic that both are concerned with a representation of action. In contrast to other media, this action takes place at the very moment of the 'consumption' of the medium, whereas in e.g. a film, at the moment of watching, the movie just unfolds without any alteration possible.

4.3 From theater to computer games

Like Laurel, in this thesis I will also try to deploy a theory developed for theater to computer programs, tailoring it for computer games. This might seem like a step further and perhaps harder to make, as computer games have only relatively recently become such a major software application. After all, when Laurel was writing on theater and computers in 1993, games were not nearly as large an economic and cultural force as they are nowadays, so it is not surprising that her focus was on functional software rather than on games.

Yet, to associate theater with computer games is, in my opinion, even more logical than to connect it to software in general, for computer games are representations of action pur sang. By contrast, in functional software like word processors or spreadsheets, Laurel's 'representation of action' is only one (albeit significant) feature that helps them function in the right way. In the case of games, the representation of action is the goal in itself. The ability of a computer to 'represent action with multiple agents' is exactly what makes the computer such a suitable device for playing games, since games are representing action for its own sake. The comparison to theater is rather obvious: the play as such is not meant to produce anything functional either. As one can produce written documents with a

word processor and make mathematical calculations with a spreadsheet, a computer game in itself does not produce anything else but the experience of playing the game,[32] just as the play is acted out for the experience of watching it.[33] Theater and computer games thus seem to share even more characteristics than theater and computer programs in general.

Moreover, the realms of computer games and theater also converge regarding a specific genre of games, role-playing games, in which the overlap is even in the name. In these games, the players are supposed to perform a role in a way that fits their own personal character. The extent to which role-playing actually occurs in today's popular Massively Multiplayer Online Role-Playing Games (MMORPGs) highly depends on the game itself and the kind of server the game is played on. For instance, in the MMORPG *World of Warcraft* there is a specific role-play server in which players are expected to act according to the traits of their character, whereas on the Person versus Environment and the Person versus Person servers players are more engaged in instrumental play, i.e. leveling up the characters by means of fulfilling quests or combating each other. It is questionable whether the kind of play acted out on the role-play server still fits in Juul's definition of games, as the way a character performs her role becomes more important than attaining a high level character, and thereby the quantifiable outcome and valorization of outcome no longer apply (or to a lesser extent). This kind of play would therefore be one of the borderline cases, but nevertheless shows that theater and computer games share a common ground.

There are also parallels to theater in the domain of analogue learning simulations. The use of theatrical elements to simulate real-world situations is not uncommon in the training of, for instance, employees (e.g. Kantor and Waddington, 2000). The connection between analogue simulations and games is not hard to make, as I have argued above that computer games are digital simulations with game-play elements added to them.

[32] Here I mean games in general do not produce documents as most functional software does. With today's MMORPGs the situation is sometimes different, because the players might e.g. manufacture goods and sell these to other players. In Callois's definition (1961), play is a non-productive activity, but this has been challenged by academics who claim that games are an inherent part of everyday life, and not as such distinct from it (e.g. Marinka Copier, 2007). Here the point I want to make is that computer games set themselves apart from other software in the fact that they are not primarily developed with the purpose to serve as a tool that produces something, apart from the experience of play. That actual goods might be produced within some genres of games is in my opinion mostly a by-product.

[33] Or the play can have the function, as Brecht was trying to establish, of teaching its audience or make them more aware of their situation. These are however changes of attitude and nothing palpable is produced.

4.3.1 Non-Aristotelian theater and games

Uruguayan game scholar Gonzalo Frasca has linked a very particular form of theater to computer games. In order to analyze how games could be used to stimulate critical thinking, in his thesis 'Videogames of the Oppressed' he has tried to apply the principles of the so-called *theater of the oppressed*, developed by Augusto Boal, to computer games. Frasca's account provides some valuable insights into the ways theater can be useful to computer games studies.

Frasca clearly sees a consciousness-raising potential for computer games. Just like in Augusto Boal's theater of the oppressed, the aim of the suggested 'videogames of the oppressed' is to make its participants aware of their reality, and encourage personal and social change. The motive to extend a theory developed for theater to digital media is seemingly different from Laurel's: Frasca regards games' most important potential to represent reality as a dynamic system that can evolve and change, because computer games are, next to representations, also simulations. To Frasca, this means games can reproduce the behavior of a source system by means of a set of rules (Frasca, 2001, p. ix). As such, the theater of the oppressed also has the ability to simulate. Although Frasca and Laurel make use of different terminologies, their views overlap when it comes to the characteristics of the computer that make it comparable to theater. They both address the dynamics and action based nature of the computer, i.e. the possibility of action being performed by different agents at the moment of 'consumption'.

Still, there is a major difference between the forms of theater Frasca and Laurel address. While Laurel speaks of the traditional form of Aristotelian theater, Frasca takes Augusto Boal's less conventional form of theater as his departure point. Boal was highly influenced by Bertolt Brecht when he developed the ideas around the theater of the oppressed (Ibid., p. 60). Like Brecht, he wanted to deploy theater to foster critical thinking and stimulate social change. Whereas Brecht with his epic theater proposed techniques to make the audience think more actively about what they were seeing, Boal went further and literally involved the audience in the play. His theater of the oppressed allowed the audience to become actively involved in the play, blurring performance and audience by creating the new category of '*spect-actor*' (Ibid., p. 61). So, here the audience is not merely tweaking the performance as is the case in the theater Laurel deals with, but they are also meaningfully interfering with it.

In *forum theater*, one of the most popular forms of theater of the oppressed, a short play typically renders an oppressive situation. When a 'spect-actor' thinks she has an idea of how the oppression can be broken, she takes a turn and enacts the protagonist herself. Since the problems presented are often very complex, in most cases no definitive solution is provided. Therefore the process is repeated, offering several perspectives on the topic (Frasca, 2001, pp. 63-65). Frasca regards this forum theater as a form of simulation: 'It is not the representation of something, but the simulation of how some situation would happen, depending on many factors' (ibid., p 67). To elaborate on how to apply this theater form to computer games, he provides two examples of what 'videogames of the oppressed' could look like. In both, an active participation of the players is a necessary ingredient. Here, by active I mean more than normally playing a game, but rather creating parts of the game, just as the spect-actors in the forum theater create parts of the play.

One of the games Frasca envisions,[34] called *The Sims of the Oppressed*, is an 'extreme modification' of the popular simulator of American suburban life: *The Sims*. Its basic game-play would be similar to that of *The Sims*, however it would allow players to modify, add and discuss the simulation's model core rules, particularly the ones that affect character behaviors. The players would be able to program their own characters, make them available to others to play with, and potentially modify these new built characters. The functioning of these characters can be discussed on an online forum. In that sense it is not merely a computer game, but rather a concept with a computer game element in it - which endorses the statement made in chapter two, where I argued that games are sometimes confused with the culture that surrounds them. In fact, since the game Frasca proposes demands programming skills, he acknowledges that it would be naïve to think everybody would participate on the same level. However, to play with characters made by other players - with their distinct behavior rules - would also raise the awareness with which the game is played. Here I will focus on the mere game that Frasca suggests, since that is the emphasis all through this thesis.

Frasca's 'videogames of the oppressed' bear similarities to the kind of games I will explore in this thesis: in these games also, principles of non-Aristotelian theater are extended to computer games in order to raise critical awareness to players. Moreover, the developer of the theater of the oppressed, Augusto Boal, was directly inspired by Brecht. But there is a significant difference between the aim of the

[34] Frasca has not actually made the games he proposes, but he has written design documents.

'videogames of the oppressed' and this thesis: I want to investigate how a particular kind of games can be used in computer game literacy education, whereas in Frasca's account it is not completely evident what the aim of the 'videogames of the oppressed' is.

It seems that the games' purpose is mainly to make players more aware of their social situation, since that is also the aim of the theater of the oppressed. However, at some points Frasca hints at another possible function – one that is closer to the function of the kind of games I address: the revealing of the construction of the game and its hidden biases. Although Frasca asserts that he examines 'the potential of videogames as a medium for fostering critical thinking and discussion about social and personal problems' (Farsca, 2001, p. ix), he also suggests ways for players 'to deconstruct the simulation's ideological assumptions' (Ibid.). Later on he states about the *The Sims of the Oppressed*: 'The fact that several design strategies coexist in the game – and that the player knows that other players designed most of the behaviors – enhances the perception of the simulation as a constructed artifact' (Ibid., p. 86). As seen in the second chapter, teaching that computer games are constructions is core of computer game literacy education. Even though Frasca never mentions media education – not to mention computer game literacy education - it is not unthinkable that the 'videogames of the oppressed' would have both these functions: on the one hand raising awareness with respect to the social situation and on the other hand making its players critical towards the game itself. The issue, however, that these are two different goals is not addressed: Frasca does not explicitly acknowledge that the aim is twofold. The kind of games discussed in this thesis will only try to establish the critical awareness towards the game itself, in correspondence with the aims of computer game literacy education.

A still more important difference between the 'videogames of the oppressed' and the games with epic elements suggested in this thesis, is exactly the difference between Brecht's and Boal's ways of accomplishing their goals. As argued in the second chapter, production of games has hitherto been somewhat dominant over their critical reception. Hence, in this thesis a kind of game is suggested that can make its players critical by playing them in the 'ordinary' way, which means remaining, in a sense, less active than the players of the 'videogames of the oppressed'. Since literacy means to be able to both read and write, computer game literacy would also include being able to read and write a game. Caroline Pelletier refers to the question what writing and reading means in the case of computer

games. She acknowledges a more active attitude when playing a game than when reading a book (comparable with the non-trivial effort as Aarseth defines it), but argues that playing is not necessarily the equivalent of writing in the case of a game. Production of games could, according to her, be considered writing just as well (Pelletier, 2005, p. 3). In correspondence with her point of view I argue that the 'videogames of the oppressed' can be able to teach game *writing* skills whereas a game bearing epic features would stimulate the player's *reading* skills. These two are not each other's opposites, but rather overlap: being an adept reader will definitely help one to be an adept writer, and vice versa.

In 'Videogames of the Oppressed' Frasca also addresses the issue of what reading and writing means in the case of a game, by arguing against the idea that contemporary digital media would turn consumers into producers. Although his aim is not to discuss this subject extensively, he considers the notion of computers allowing all users to become authors as unrealistic. As seen above, he claims that mods only give the illusion of allowing players to become designers, since they are 'hard to create and mostly require a high degree of proficiency in programming and/or design' (Frasca, 2001, p. 53). Thus, becoming a producer of games according to him is certainly not at every player's disposal. Teaching children to design their own games to a certain extent would therefore be a necessary but time consuming part of computer game literacy education. It is not to say that education should never strive to reach this goal, but in this thesis an alternative is suggested.

4.3.2 A Brechtian computer game

Frasca has made a valuable investigation of how a non-Aristotelian form of theater, highly inspired by Brecht, can be of use to look at the possible deployments of computer games. Another, however less elaborate, case in which Brechtian theories have been addressed with respect to games, exists as well. Interestingly, it is only one computer game that thus far has been explicitly tagged 'Brechtian', [35] which is a game developed by Gonzalo Frasca himself, but only after he wrote 'Videogames of the Oppressed'. In his dissertation 'Computer Games, Players, Ethics' Miguel Sicart briefly touches upon this game, *September 12th*, which is a so-called newsgame that was co-designed by Frasca as a response to the war on terror.[36] Sicart names *September 12th* a Brechtian game because it plays with the conventions of games,

[35] As far as I can tell after extensive searching, that is.
[36] On www.newsgaming.com this game can be played

i.e. with the normally voluntary immersion into the game and the temporary oblivion of being manipulated (Sicart, 2006, p. 81).

In the game, the player has to shoot at terrorists in a Middle Eastern looking town, seen from above, in which terrorists and civilians are walking every which way. After one has started playing, it becomes obvious that the interface misleads the player: a sight with a cross in the middle implies to represent a sniper rifle, yet at the moment of shooting it turns out to shoot a missile, which in most cases not only kills the terrorists, but some of the nearby civilians as well.[37] In addition, it is not possible to kill the civilians without people walking by and mourning over them and eventually turning into terrorists themselves. So, instead of annihilating the terrorists, more terrorists appear when trying to shoot them. In the end, this game is thus unconquerable, and, rationally, not playing is the lesser of two evils. Sicart argues that the game makes a powerful ethical statement by 'removing the winning condition and manipulating the ergodics of the simulation' (Ibid.). He considers the playing with conventions and thereby the focus on the construction of the game as part of what makes it Brechtian, rather than the content of the game. This is in correspondence with Frasca's aim of the 'videogames of the oppressed', though in not being winnable even more focuses on the construction of the game.

A game like *September 12th* would indeed fit into the framework of computer literacy education, in that it makes its player conscious of the 'constructedness' of the game and the rule-set. However, in its aim it is very narrow and focuses only on one issue. Moreover, in the strict sense of the term, it is not a game,[38] since the outcome is defined before the game has even started. Rather, it is a political statement, which is put in a form so that it looks like a computer game. Therefore, I will not take it into account in the next chapter, where I discuss computer games with epic elements.

4.3 Conclusion

In this chapter I have elaborated on how epic theater can be connected and translated to computer games, subdivided into the translation of the epic in particular, and the link between computer games and theater in general. It was shown that epic can be detached from the specific instance of epic theater as one of

[37] This breaking of conventions can, however, only be noticed by someone who is game literate at a basic level. Only when one is aware of the conventions of the representations of a sniper rifle as opposed to a missile would consider this a break with conventions.
[38] The fact that it is not a game is also stated by the website itself before you enter the game.

the three auctorial instances, but that in doing so the concept will not stay unchanged. Subsequently, I have drawn a parallel between theater and both software programs in general and computer games in particular. It has become clear that the representation of action displayed in theater, specifically the simulation properties of some forms of non-Aristotelian theater, overlap with game characteristics. Finally, I have discussed a specific case in which a computer game is designated Brechtian.

In the next chapter, I will make the actual translation from epic theater to computer games, discussing the possibilities and limitations that go with a suchlike translation. Examples of epic elements that can be found in existing computer games are provided in order to explain how these elements could be helpful to computer game literacy education.

5. Epic elements in computer games

As shown in the former chapter, exploring the usefulness of epic elements in computer games can prove fruitful. In this chapter, I will show specific instances of how Brecht's notion of the epic can take shape in computer games. I firstly go into common epic elements in games, and argue that these might be epic elements when approaching epic as one of the three auctorial instances, but not necessarily in the way it was meant by Brecht. Then I will provide examples of Brechtian epic elements from different games, focusing on the alienation effects of breaking the fourth wall and the radical separation of elements. After that, two specific games, *Postal 2* (Whiptail Interactive, 2003), and *Super Paper Mario* (Nintendo, 2007), are discussed more elaborately, since these are games that contain many epic elements.

The emphasis, like all through this thesis, will be on games as objects rather than as the actual playing activities. Games are regarded designed experiences, which implies that the experience the player has can be guided to a certain extent. When speaking of epic elements in games it is, for instance, possible that a player who takes a different route would never encounter the element in question. Epic is therefore understood as something intrinsic to the game, although I am aware that individual choices might differ highly.

Next to the possibility that an element is not encountered by a player, individual reactions to the element will not be identical either, which also applies to epic theater: the spectators might not all respond in the same manner, which can also depend on the extent to which the audience has had 'practice' in watching epic plays. Similarly, the amount of practice would play a part in computer games with epic elements. This is not merely practice in playing games with epic elements, but also with playing computer games in general. As argued in chapter two, a basic level for knowing genre conventions is necessary in order to become computer game literate on a critical level. We have seen that the newsgame *September 12th* breaks with the shooter game conventions by depicting a missile launcher with a sign that normally represents a sniper rifle. If the player cannot tell this difference, the effect is lost. Here it thus becomes clear that the basic level of literacy can be a prerequisite for the understanding of a statement. By the same token, inexperienced players might not grasp some of the less evident epic elements. Therefore, when I in this chapter mention the effect of estrangement that a certain element in a game

brings about, it will be a reference to my own experiences, though on the understanding that the objective theorization of this thesis underlies the matter.

5.1 Common epic elements in games

In Brecht's epic theater, a certain illusion had to be created before it could be broken. After all, when there is no illusion or attachment from the beginning, there can be no break or distancing from it. As mentioned in the former chapter, when epic is approached from a medium-independent angle, a phenomenon like the hyperlink can be regarded an epic element in a website, as it emphasizes the construction. However, since hyperlinks are so common on the internet, it is highly implausible if this brings about a break or, thereby, estrangement. The question is thus whether the mere technique, i.e. laying bare the construction, suffices to designate something an epic element, or if the effects also have to be taken into account. In this thesis I derived from Brecht's epic theater, where a critical stance of the audience is to be accomplished by distancing them from the depicted, and thereby making the depicted strange. This critical attitude is also vital to computer game literacy education. Therefore, the desired effect, i.e. to accomplish a critical attitude, is equally important as the technique. Although, with regard to the showing of the construction, the hyperlink could be considered epic, here something additional is necessary: it has to effect a distance as well.

This is also connected to the three levels of epic theater's objectives that I mentioned at the end of the third chapter. Brecht's overall aim, driven by his Marxist ideas, was to make the lower classes realize their world was alterable. In this case it is rather irrelevant to translate this aim to computer games, since computer game literacy education's goal is far narrower. However, the second objective, serving as a means for the first one, was to distance the audience from the possible world and to create space for reflection. This indeed is important to computer game literacy education, since critical reflection is needed to question the games in-built ideological assumptions. The alienation effects that were employed to encourage the distancing are thereupon also significant. However, what counts as a Brechtian alienation effect, or an epic element, is inherently aimed at distancing the audience, whereas suchlike techniques in e.g. Asiatic theater did not bring about that effect. In other words, an epic element in the mere technical sense does not in all cases suffice to reach the second level, since a break of conventions has to go with it. Thus, it is mainly on the

second level that the translation is most fruitful, i.e. in the fact that a distance is created in order to bring about a critical attitude.

Like on the internet, in computer games it is quite common that the construction is shown to a certain extent for the sake of a smooth navigation. For instance, next to access to the possible world via the avatar and her position in that world, menus are often displayed, e.g. to get access to the inventory of items, or to provide information about the strength of a character. In addition, many games use two-dimensional maps in the corner of the screen to help the player orienting herself in a three-dimensional game world. These components show the underlying structure of the game and the possible world. It is thus no exception as such that the agency that is responsible for the construction of the world shows itself in some way. But the fact that these elements are not breaking the illusion - for they are part of the medium conventions so inherently - makes them no epic elements per se. Due to the overall adoption of these elements, they will not foster a critical attitude.

As I have argued in chapter one, being critical towards computer games does not occur automatically just because the player has to master the system to win: a player can win the game and still take it at face value. In addition, Brecht attempted to produce a kind of theater that was distinct from the dominant conventions at his time. Therefore, a successful epic element in a game will break the conventions and thereby, so to say, alert the player.

5.2 Alienation effects in games

When discussing computer games with epic elements a question occurs: where are these games with epic elements to be found? As said in chapter one, most games do not have many (Brechtian) epic elements.[39] Moments in games where the illusion is broken, like the one in *Metal Gear Solid* I describe in the introduction, form an exception to the rule. As I am no game designer myself I am confined to examples at hand, instead of making or suggesting a new game that contains many epic elements. Yet, I have found some interesting examples of games that bear elements that emphasize their 'constructedness' in several ways, some more evidently than others. It is not to say that all possible ways of epic elements in computer games are covered here. In that respect, there is still much to be explored for both game

[39] Although some games are designated as epic games, something that has another meaning than reference to epic theater, but rather refers to heroic or sweeping themes. This is in accordance with the meaning that the dictionary provides.

scholars and game designers. In the following section I will refer to the examples at hand, at some points complemented by theorizing what other epic elements – that cannot be exemplified - would look like.

5.2.1 Breaking the fourth wall

When examining what a breach of the fourth wall looks like in computer games, we first need to take a look at how the notion of the fourth wall applies to games. After all, the fourth wall implies that there is a strict separation between audience and the depicted world, and that intervention by the audience is impossible – hence the peep-show parallel. At first glance, this thus seems to be inapplicable to games in any way, for it is inherent to computer games that the player *can* intervene with the possible world, otherwise there would be no interaction. However, it is interesting to see how this notion can meaningfully be adjusted to computer games: the fourth wall in games is situated *between the player and the character*. So although intervention is possible, this is only possible in one's capacity as the character and not as the player. The player is only able to operate the character by means of the technical controls provided by the game, and direct communication is – in most cases - impossible. Since the character is part of the possible world, the fourth wall remains intact.

In epic plays a narrator could accompany the drama, directly addressing the spectators. Within computer games a narrator can also play a part. This could be a separate character that is situated outside the possible world, commenting on the events happening inside that world and speaking directly to the player as sitting behind her computer. Although I have not run across the specific example of a narrator in a game, there are cases, usually where a player needs aid, that there is an entity situating itself between the possible world and the player. For instance, in the tutorial of *Tomb Raider* a voiceover tells the player what to do, telling what buttons need to be pressed for certain actions.

In the example mentioned in the introduction, where Psycho Mantis reads the player's mind in *Metal Gear Solid* (*MGS*), the player is not addressed by a narrator but directly by one of Snake's opponents. Suddenly main character Snake is left out and the player is confronted with her taste of computer games.[40] This is clearly a break with the rest of the game, as all former communication to the player was through the character of Snake. Also, his personality is a rather important

[40] In fact, the game reads the memory-card of the player's PlayStation and therefore sees what previous games have been played on it.

component of the game, as in the conversations via the codex, Snake's helpers often make comments on his character. For instance, one of his female allies is pleased to finally meet the 'legend', however subsequently calls him names for being rude. These conversations are not controlled by the player, but rendered automatically. So, the construction of Snake as a character, with his own traits and history, is done with care, and forms a significant part of the game. Therefore it is a true break when Psycho Mantis acknowledges that there is someone behind the controls as well. This break can bring about a feeling of estrangement: formerly being hidden behind the computer, the player all of a sudden cannot hide anymore.

Part of computer game literacy education is making players aware of their responsibility as a player, since games, in contrast to traditional media, are innately interactive. As seen in chapter one, Jenkins argues that interactive media pose new ethical responsibilities. In the case of games this is connected to the difference between coded rules and social rules, i.e. in the question whether the actions a game technically affords are indeed acceptable things to do. So, distancing the player from the illusion of the possible world by addressing her as an agent distinct from the character, raises consciousness of her independence. Thereby, instead of being concealed by the character in the game, the player's responsibility is brought to the fore.

In the Nintendo game *The Legend of Zelda: Link's Awakening* (Nintendo, 1998), there is a similar breach of the fourth wall to confront a player with her existence as an agent outside the game. The player can find out she can acquire an especially expensive item without paying for it; the only thing she has to do is make her avatar run around the store-owner. However, after doing so, the following lines appear: 'Guess what? You got it for free. Are you proud of yourself?' The one who is addressed here is not the avatar but the player. This is a very particular way of making explicit what normally remains behind the surface. Here the game developers have deliberately chosen to make it technically possible to get the item for free, yet, apparently, that does not imply they approve of it. In addition, from the moment that the player takes the item without paying, the non-playing characters (NPCs) start calling the avatar THIEF.[41] This epic element in *Zelda* opens space for reflection, forcing the player to think about the relationship between coded rules and social rules. In addition, it is a very clear instance of the kind of simulations that

[41] I found this particular example in the thesis 'Escaping Escapism' by HKU student Niels Keetels (2008).

Turkle envisions (see chapter one), that helps players challenge the model's built-in assumptions.

5.2.2 Separation of the ludic and representational elements

As we have seen in the former chapter, Frasca has argued that theater and computer games share the ability to simulate, since both can represent reality as a dynamic system that can evolve and change. In addition, it was pointed out that epic theater, according to Walter Benjamin, was aimed at discovering the conditions of life. This discovery of the conditions can, in the case of computer games, occur when so-called bugs are encountered by the player. Even though bugs are elements that were not put in the game deliberately – which makes them essentially different from the other epic elements discussed in this chapter - they can nevertheless result in the same effects: the estrangement of the player.

In game terminology the word 'bug' is used to designate a technical mistake or error in the game's program. Obviously, the developers of a game try to avoid having bugs in their game, but despite much play-testing it is not always possible to remove them all properly, as the actual usage of the game is never fully predictable. Although bugs are not intentional, they can in some cases be considered epic elements, for they can have the ability to lay bare the rule-based system behind the game. By making the ludic aspects contradict their 'wrapping', bugs can emphasize the fact that the world represented in the games is not natural but digitally constructed.

First, let me make clear that bugs are mistakes, and thus they are not put in the game deliberately. Thereby, they have to be distinguished from the acceptance of the fantasy of the game that Sicart mentions in 'Games, Players, Ethics'. The possible world of a game and the rules that apply in that world, can seem unrealistic at some points, but are nevertheless accepted by the player.[42] For instance, in *MGS* the player can get past the watchmen of the nuclear disposal facility by sneaking behind their backs, hoping not to catch their attention. The watchers only take into account the floor they are walking on, and will not see Snake when he walks on the balustrade, even though in 'real life' they would see, or at least hear him, at such a

[42] This can be compared to the willing suspension of disbelief, a term originally developed for literature. This concept refers to the fact that when one reads a novel, one willingly accepts the way the possible world is depicted, without casting doubt on it. It would be interesting to investigate to what extent the suspension of disbelief could be translated to computer games. However, that is beyond the scope of this thesis.

small distance. This however is part of the rule-set that the player conveniently accepts.

On the contrary, a bug immediately strikes the player, as it is an evident flaw in the game's system. For instance, in the role-playing game *Oblivion* (Bethesda Softworks, 2006), through a bug the player has the possibility to shoot from her bow myriads of watermelons instead of normal arrows. The player can do this by first bending the bow, thereupon choosing a watermelon from her inventory, and then shoot the watermelon into the air. Subsequently many watermelons will appear and one by one fall from the point at which the bow was directed (see figure 1). It is clear that this was not meant to be possible, as, even though the game has a fantasy theme, it does not make sense within the game world. Moreover, when an NPC happens to walk by, she does not take notice of the hundreds of melons falling from the sky.[43] In this case, the rule-based system behind the game manifests itself, and it becomes clear that the system determines what happens, even though the rendered events might not make sense in any way. When a player encounters a suchlike phenomenon, the representation and simulation components of a computer game, which normally blend together, are separated. In this sense, a bug is an element that can be considered as part of the separation of the elements that Brecht encouraged.

Figure 1: Melons falling from the sky in *Oblivion*

[43] See Youtube: http://www.youtube.com/watch?v=5nSkq8Mm7a4&feature=related

Central to the concept of computer game literacy education is the twofold nature of computer games. Indeed, this is what mainly sets computer game literacy apart from media literacy. In the case of games the separation of elements can therefore lie in the distinction between the representation and simulation of a computer game, i.e. in the detachment of the representative elements from the rule-based system. Bugs like the abovementioned are pre-eminently an example of how the two major components of computer games cease to work together, causing the game to fall apart and thereby estrange the player. Therefore, in spite of their unintended nature, suchlike bugs can be useful to computer game literacy education.

5.2.3 Separation of elements on a representational level

Next to the detachment of the ludic and the representational aspects of games, one can, in turn, think of ways to separate the representational part itself. This occurs in the first-person shooter *Postal 2*, where a distance is brought about by the separation of setting and events. As seen in the third chapter, a representation that alienates is one that enables us to recognize the subject, but at the same time makes it seem unfamiliar. Whereas most first-person shooters are set in an environment clearly unlike everyday life, such as a sci-fi theme or a fantasy universe, *Postal 2* takes place in a small American village, which makes it, according to one of its reviewers, 'disturbing because of its similarity'.[44] Here the combination of the setting (a small everyday town) and the actions taking place on that location (shooting and killing) breaks the conventions: the two elements are so different that thereby they comment on each other.[45] The main character, The Postal Dude, is no hero with a world saving mission, but an everyday man with mundane tasks such as returning a book to the library, buying milk at the grocery store, and cashing money at the bank. For no other purpose than not having to queue, the player can choose to shoot all the other people that stand in line (and who are annoyingly slow). Here two components are so evidently contradicting each other, that the odd combination can hardly go unnoticed. In other words, the environment is recognized as such, but since the events do not correspond to it, it is made unfamiliar.

Yet, on a more technical level it is harder to pinpoint examples of a separation of the elements that can be regarded alienation effects. When analyzing the concept of computer game literacy education, I have pointed out that games are multimedial,

[44] On the website Macologist.org, written by Santaduck, 2004. (http://forum.macologist.org/showthread.php?t=461)

[45] One can also think the other way around, in a game set in everyday life, such as *The Sims*, there is no such thing as shooting or killing, nor is there any gore.

since they can bear audio, (moving) images, and written texts, all captured in binary code. Theater also has the ability to contain several media; footage, music or pictures can accompany the drama. Brecht envisioned that the different elements of theater would not make an attempt to blend together, but rather clearly distinguish themselves and comment on each other. For instance, as seen in chapter three, in an epic play a placard with a musical note could be dropped to indicate that music would follow – which was then to be set apart from the rest of the play.

It is important to note that due to technical limitations, not all games have their different means of media fully integrated. For example, the transition from a cut-scene to a playable part of the game is usually very obvious, since the picture quality is often better in cut-scenes than in the interactive parts. Also, with regard to the rendering of sound, the components might not blend together properly. When, say, a shooting takes place in a huge space, it is still complicated to realistically reproduce the sounds of the bullets hitting the walls. Another example concerns the speech of the characters, which in many games is accompanied by subtitles, in order to make sure that people who play the game without sound can still understand it. These subtitles are not improving the naturalness of the possible world - as it appears redundant to both hear and read the same lines - but as they are so commonly used they are accepted. Therefore, the elements are in some cases distinctly separated not for the sake of estrangement, but rather because there is no better alternative. Consequently, a deliberate separation of the elements might go unnoticed; it will not break the illusion since a suchlike illusion was never created in the first place. In addition, as mentioned above, the elements might be separated for the sake of the navigation through the game. For example, the items a character holds in her inventory are only accessible via a distinct menu.

Still, one can think of cases where a deliberate separation of the elements on the level of different media channels would be successful. In the case of background music, the music mostly confirms the game world instead of commenting on it. E.g. in the war game *Red Orchestra: Ostfront 41-45* (Tripwire Interactive, 2006), there is suspenseful background music, which intensifies the feeling that you can be shot at any moment. When suddenly the music would have a character clearly different from the game's atmosphere, it would strike the player as unnatural. At such a moment the player would be estranged in a Brechtian sense. Although here there is no specific example at hand, I think music that clearly contradicts the atmosphere of

the graphics and game-play, is an imaginable A-effect by means of separating the elements.

It becomes clear that alienation effects by the radical separation of the elements in computer games are not clear-cut. As seen above, it depends on the elements that are separated and how they relate to the common conventions in games, which can also highly differ per genre. In addition, the level on which the separation takes place is important. In the *Postal 2* example, setting and events are separated, yet an example in which a game's multimedial means are separated is not easy to find. The 'single track' of Aristotelian theater that Brecht reacted against, in which the spectator could look right nor left, is not the standard in games, for there are usually additional means to help the player navigate through the game. In my opinion, it would be an interesting project for a game designer to see how the radical separation of elements as envisioned by Brecht might work out in a computer game.

5.3 Self-reference in *Postal 2*

Postal 2 not only separates the events and the setting in which they take place, it also accomplishes an effect of estrangement by explicitly referring to itself, in particular to the company that developed the game and to the societal reactions around violent computer games in general. When getting his paycheck, it turns out that The Dude works at the game company that has produced *Postal 2*: Running With Scissors (RWS).[46] The reference to the developing company, as a business existing inside the game world, breaks the illusion of the possible world, since this is no longer presented as a realm standing on its own. Here the game is epic when regarding it as one of the three auctorial instances, because the process that made possible the production of the game is brought to the fore. Thereby it emphasizes the 'constructedness' of the game, for the auctorial instance no longer hides behind the possible world. Here, quite literally, the instance that is responsible for constructing the depicted world manifests itself.

In addition, when walking to the entrance of RWS, The Dude passes a group of demonstrators who are against violence in computer games. They hold signs saying things like 'Kill Violent Video Games' and 'Make a Game With a Plot', constantly scanning 'Games are bad, they make you bad'. As I have described in the first chapter, computer games, and especially the genre of the first-person shooter,

[46] However, as soon as The Postal Dude gets his paycheck at the RWS office, he is fired.

have received much negative attention in media and politics, for they would cause aggressive behavior.[47] The demonstrators in front of the RWS building thus refer to that discussion. Addressing the alleged effects of (a certain genre of) computer games *within* a violent computer game estranges the player: is she playing a harmful first-person shooter at that very moment? Ironically it is the demonstrators who subsequently decide that mere demonstrating does not suffice, and take up their guns to attack the employees of RWS. Next to a statement upon the debate on computer games and violence, this reference is also an alienation effect, as it distances the player from the depicted world and makes her think about what she is doing at that moment.

Another break of the illusion within *Postal 2* involves the appearance of actor Gary Coleman on the second day,[48] when The Dude gets the errand to collect Coleman's autograph. This task can be accomplished by waiting in line and getting the signed book, but it can also be done by simply shooting him. When the player chooses the latter option, Coleman remarks: 'Shoot me, kill me, it's only a game'. Next to the fact that Coleman is a real actor[49] (and thus there is again a specific reference to the world outside the game world), his words explicitly emphasize that the player is engaged in something artificial, distinct from real life and without any consequences outside the game. The artificial reality of the theater, according to Brecht, was not something that was to be concealed, but rather it had to be acknowledged by the actors. Whereas in theater the representational construction of drama, e.g. the stage, the actors, or the plot, were stressed, in *Postal 2* the playfulness of the computer game is drawn to the attention. Here it particularly concerns the aforementioned fact that the actions of a game do not have 'real life' consequences: it confronts the player with the world outside the game world that, in contrast to the game world, *does* matter.

For the sake of clarity let me make a remark. Having provided several examples of epic elements in the game *Postal 2*, it might seem that I would recommend this game to be used for computer game literacy education. However, although I have pointed out that this particular game contains epic elements, this is not to say that the entire game would be suitable for children. *Postal 2* is full of

[47] This was also the case with the earlier release of Postal, to which Postal 2 is a sequence.
[48] The days can be considered levels of the game, as every time you solve the errands of a day, you move on to the next day, which also opens up a new part of the town. There are five days, starting on Monday.
[49] He himself also has recorded the voice of this character.

highly violent content,[50] and therefore also got the M-rating from the American Entertainment Software Rating Board (ESRB), which means the game is considered only suitable for players of age 17 and older. Thus, rather than to directly suggest the employment of this particular game in schools, it is my claim to show how suchlike elements would be able to foster computer game literacy. In the next section I will discuss a game that might be valuable for direct employment for the education of computer game literacy.

5.4 *Super Paper Mario*

Super Paper Mario for the Wii (Nintendo, 2007) is a game that bears many epic elements and might therefore come closest to what one would designate an epic game. In *SPM* there are many elements that refer to the 'constructedness' of the game. As the popular Mario series has been around for 26 years now, it is not surprising that the game cites from Mario's past, which is often done with humor. *SPM* is a mixture between a platform game and a role-playing game, as it contains the old-fashioned two-dimensional Mario world full of green pipes and building blocks, as well as dialogues between the characters in which the player is able to choose which answer Mario will give to certain questions. Moreover, the ability to choose different characters to play with, who are all able to increase their Heart Power during the game, indicates a role-playing element.

5.4.1 'Those beings'

First of all, in *SPM*, like in *MGS* and *Zelda*, there is a break of the fourth wall, though taking place on a more indirect level. When Mario is explained by Bestovius how to use the power to flip from a two-dimensional into a three-dimensional environment (an element I will discuss later on), Bestovius tells Mario to 'press A'. Mario - who cannot talk himself - makes an uncomprehending sound, to which Bestovius responds: 'What is this "A" I speak of? I assure you that if we are being watched from another dimension those beings will understand'. This is a highly subtle way of referring to the fourth wall, without truly breaking it. On the one hand, it can bring about an odd feeling to the player, like she is a kind of god, standing above this world and controlling it without ever being seen. On the other hand, at the same

[50] The level of violence depends on the player's choices; technically it is possible to complete the game without killing anybody. Yet, the violence is a likely possibility to finish the game. Moreover, it is depicted with a lot of gore and blood.

time it can cause a feeling of being insignificant, as the player is only known to the characters as some vague entity existing in a world far from theirs. This indirect breach of the fourth wall can therefore even result in a more distanced feeling than in a case where the player is addressed directly. For computer game literacy it creates a space for reflection, and makes the player think of how she is related to the possible world.

5.4.2 Artificial graphics

Another epic element in *SPM* is the style of the graphics. As referred to in its title, the game has a style as if its world were made out of paper. This brings about a non-realistic, rather cartoonish look and feel. The words spoken by the characters are written down in balloons (complete with sloppy boxing), in a font that reminds of comic books. So far, these elements are primarily a form of remediating comic books.[51] But next to that, many characters and objects are explicitly built out of separate blocks, referring to the pixilated nature of the computer. For instance, the dragon Fracktail that Mario has to defeat in the first chapter is made out of squares, as if in an old computer game. Moreover, the dragon appears in a very particular way: an arrow that looks like a mouse cursor turns up and draws five squares that turn into the scales of the dragon (see figure 2). The making of the dragon is thus shown, even explicitly with a cursor.

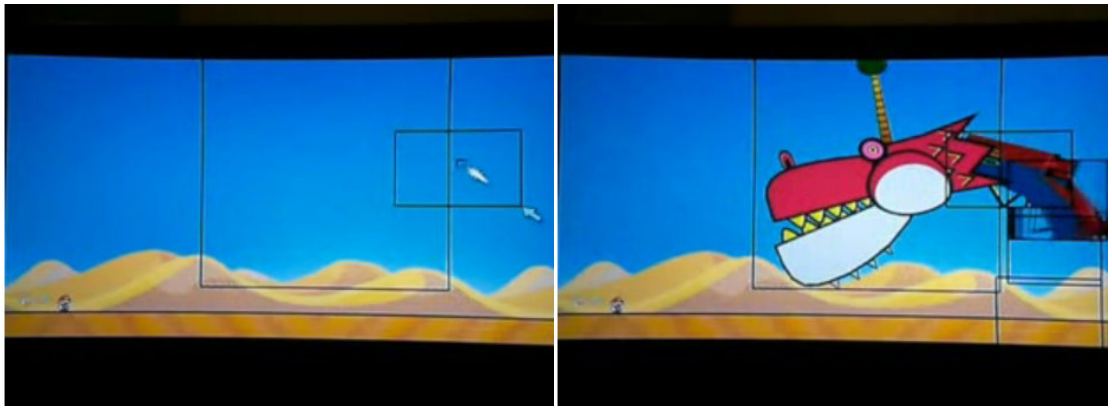

Figure 2: drawing Fracktail.

[51] The verb 'to remediate' refers to the 1999 book Remediation, by Bolter and Grusin. It means that a medium uses the conventions of another medium. This is something new media often do before they develop their own medium-specific conventions.

A similar thing happens with the appearance of the background at the beginning of the first chapter. First you see a white background, on which a black line starts drawing very angular parts of grass, flowers, and trees, and only after this the whole is colored in (see figure 3). Also here the construction of the world is shown: in the end the realm consists of no more than a bunch of lines with some colors. By the same token, some of the characters are shaped highly angularly, e.g. the mustache of Bestovius is made out of squares. Moreover, in some levels in *SPM* the background consists of blocks only, which reminds of pixels.

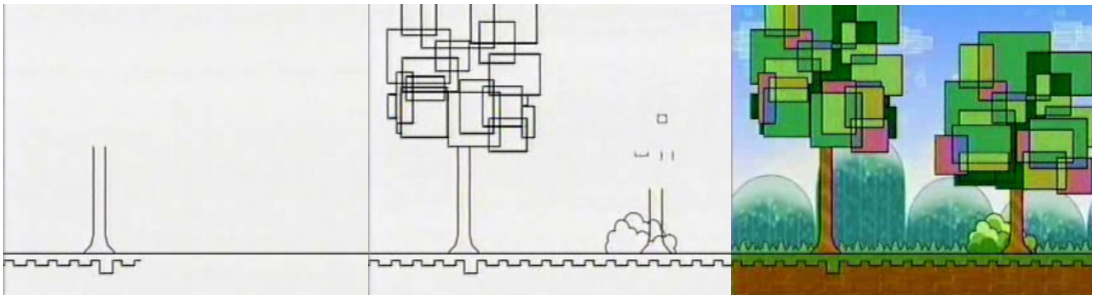

Figure 3: Drawing the background

Although these elements do not explicitly address the rule-based nature of computer games, they do refer to the digital binary code that is the source of all computer programs. Whereas many games make an attempt to hide their building blocks, i.e. the pixels, in *SPM* the digital, binary character of the game is emphasized. This also becomes apparent when Mario moves through a pipe: he disappears pixel by pixel, and appears in the same way on the other side of the pipe. Thus, the backgrounds and characters do not look smooth[52] but clearly consist of building blocks. This way of depicting a game encourages computer game literacy: rather than presenting the world as smooth and natural, it is shown that it is a world composed of separate digital elements, artificially constructed and coded.

5.4.3 Fracktail

A more specific reference to the fact that there is a program behind computer games is the way the dragon Fracktail talks, which, in line with the way he is drawn, is as if he is a computer program. When Mario first encounters him, he starts scanning

[52] The characters that can serve as the player's avatar (Mario, Peach, Bowser, and Luigi) are not as square, but they form an exception. The characters that the player encounters in the world are all very angular.

Mario's appearance systematically, using sentences like: 'Red cap detected. Blue overalls detected. Level 5 mustache detected.' He continues: 'Hold your position. Searching data banks'. The dragon seems to act like a computer program, doing only things that he was coded for. When Mario proves to be a match with the hero - for whom Fracktail was apparently waiting – the dragon wants to let him pass freely. But then an evil helper of the villain, Dimentio, intervenes and, so he asserts, resets Fracktail. The latter responds to that with: 'I am error. Press any key to restart. System not found. Insert install Disc'. He keeps displaying that kind of error messages, and eventually the following turns up in Fracktail's balloon:

'c:/ run query identification
c:/ run insult generator
c:/ results: go away, ye ti-lip!
CNTRL ALT DELETE'

After that, Fracktail starts attacking Mario, and is obviously not friendly anymore. The dragon Fracktail can thus simply be reset, resulting in totally opposite behavior. Presenting the dragon as a mere computer program, acting only according to the way he is programmed, again draws attention to the artificiality of computer games.

5.4.4 Mario's world as a discontinuous universe

As mentioned in the second chapter, games with fantasy themes are also to be included in computer game literacy education. Although the theme of, for example, *World of Warcraft* is obviously based on fantasy rather than on the real world, the game still makes an attempt to present this world as a coherent whole that stands on its own, only referring to itself. Different elements do not contradict each other, and the world makes sense within the conventions of the MMORPG genre. Thus, *World of Warcraft* has a dramatic auctorial instance. However, in *SPM* some factors withstand that this fantasy world can be understood as a unified, coherent world. This is exactly why it connects to Brecht's principles: the depicted world of the epic theater was not to convey the impression of a natural unity in which all the elements support each other. Rather, the elements could contradict each other and form a fragmentary collection.

The discontinuity in *SPM* most evidently lies in the possibility to switch from two-dimensional into three-dimensional mode and back again (see figure 4). In most

cases – including the beginning of the game – the game is two-dimensional, but early in the game Mario learns how to switch to a three-dimensional environment. Whenever the player gets in a situation that seems unconquerable, she can choose to go into 3D, which will often provide a solution.[53] Also when the situation is not hopeless, the 3D mode can be chosen to explore more possibilities, and search e.g. for extra coins. It is a funny and initially a somewhat odd experience that Mario apparently has two ways of being. The two modes do not necessarily form a unity; that is, in 2D you know that the elements you see will at least also appear in 3D, but whether they appear on the left or the right within the 3D mode is unpredictable. It can happen that in 2D you stand on a floating platform, while you fall of that platform as soon as you flip into 3D.

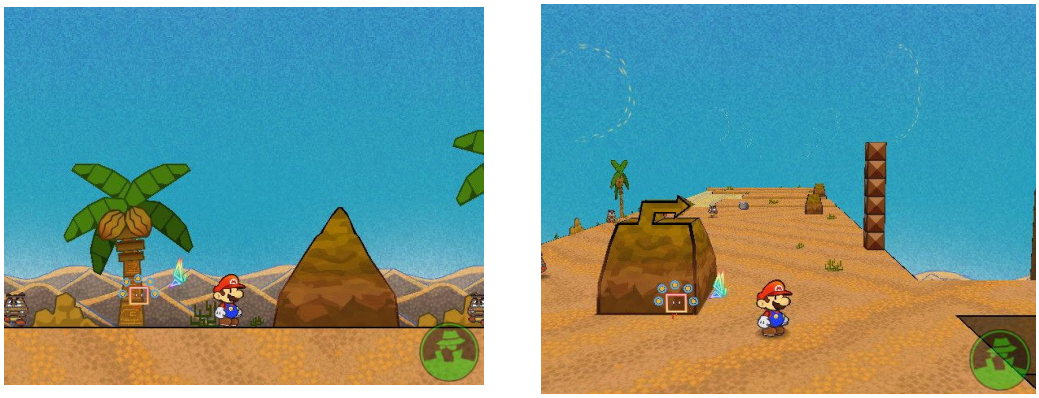

Figure 4: the same place in 2D and 3D, the latter revealing a hidden path.

The ability to switch mode plays with the conventions of former Mario games, in the sense that they were all either two-dimensional or three-dimensional: it makes you think whether there might have been a whole other world behind those games as well. Being so used to the conventions of a 2D platform game, it certainly estranged me when playing the game for the first time.

5.4.5 Epic elements or new conventions?

Considering the examples provided above, it might be argued that *SPM* has its own genre conventions, and that the cartoon-like style creates a world in which mouse cursors can draw dragons that can be reset, or in which a two-dimensional environment can flip into a three-dimensional one and back again. A question

[53] This however cannot be done all the time, because Mario can only be in 3D for a limited amount of time and then he runs out of energy. He then has to flip back into 2D and wait until he has regained his energy.

deriving from this, is whether it could be that all the elements are coherent in the fact that the depicted world is actually *not* a coherent world. That is, in the fact that it is a world made of paper and balloons and flipping dimensions. Then, in turn a more general question can be asked: at what point does a genre come into being, and thereby do these elements cease to be exceptions? I already touched upon this above, in respect of the menus shown on the sides of the screen: certain technical epic elements are not recognized as such, for they have become too naturalized. Thus, if there would be enough games like *SPM* it would not be estranging anymore.

At least to date, the abovementioned elements of *SPM* do break the illusion of the game. Yet, the matter with epic elements is that they will no longer be epic when they become too commonly used: the estrangement will disappear and they can no longer be considered alienation effects. In other words, the value of an epic element is always relative. So far, the abovementioned examples form exceptions to the current standards of computer games, but it is interesting to look at when and how epic elements will become naturalized, and what effects this will bring about. In turn, it would be fascinating to investigate what A-effects in that new situation would look like.

5.5 Conclusion

In this chapter I have connected Brecht's theories about epic theater to computer games, and shown that these elements indeed can be useful to computer game literacy education. The break of the fourth wall as well as the radical separation of the elements can be found in existing computer games, although a translation is not always clear-cut. It is mainly the moments at which the illusion of the game is broken that games can correspond to epic plays, and in which the player can be estranged from the illusion of the depicted game world. The break of the fourth wall is particularly suitable for drawing attention to the responsibility of the player, whereas a separation of the elements through a bug like the one in *Oblivion* can serve to emphasize the rule-based system behind a game.

Although *Postal 2* is a very interesting game to play - which at many moments is a satire on other first-person shooters and winks at the societal reaction to computer games – the game would not be suitable for computer game literacy education, as it is simply too violent. *Super Paper Mario* could be more fit, as it is also appropriate for young children. However, quantitative effects research would be

essential to really make a statement upon this subject. After all, the actual effects presented in this chapter are all theoretical ones, deriving from the combination of different assumptions. In the end, though unfortunately beyond the scope of this thesis, a reality check is certainly necessary.

6. Conclusion

In this thesis I have made an attempt to show how Brecht's theories could provide a helpful contribution to the teaching of computer game literacy, in particular to the part of the critical reception of games. In my opinion, computer game literacy education should be an important part of media education, since computer games are, similar to traditional broadcast media, constructions that convey meanings and bear ideological biases. Moreover, although some claim otherwise, games do not bring about a critical stance by merely being played. Since games are an increasingly popular pastime amongst children - and adults alike - encouraging a critical attitude is desirable. However, due to various forces in society, the emphasis, on one side, has been mainly on the alleged damage that (violent) computer games would cause and, on the other side, on the potential of games as educational means, i.e. to employ them to teach curriculum content. Therefore, an elaborated concept of computer game literacy education has not been developed yet.

When taking a look at the existing (small) body of literature on computer game literacy education, it becomes clear that computer games could be part of media education, but that some additional topics are to be included. First of all, computer games are, next to representations, also simulations, and therefore the rule-based system behind a game is a significant part when educating about games. Secondly, because players are not only consumers, but also make choices due to the interactive nature of games, the responsibility as a player should be brought to the fore. Furthermore, I have pointed out that a distinction between simulations and games is to be made, and that fantasy games are as much part of computer game literacy education as games with a more 'serious' content.

Although in the debate valuable analyses are made, the production part is somewhat dominant over the critical reception part, which means producing games is considered more important than critically reflecting on them. This tendency can be connected to the overall emphasis on personal production in the field of literacy and new media, e.g. in the movement of New Media Literacies. I have argued that computer games, despite their interactive nature, are not as much part of participatory culture as, say, weblogs or community websites. That is, on the internet, participation in the sense of the creation of content is far less complicated than it is in the case of games. For that reason, I have in this thesis focused on the

critical reception of computer games, arguing that there might in fact be a particular kind of game that does foster a critical attitude by being played.

In order to investigate what a suchlike game would look like, I have examined the theories and practices of epic theater, mainly developed by German playwright and theorist Bertolt Brecht. He aspired after a critical attitude to the spectators of his plays - especially the lower classes - so that they would realize their world was alterable. Evidently, there are some major differences between Brecht's goals and means, and those of computer game literacy education, for instance in the fact that Brecht was a Marxist who wanted to change society as a whole, whereas game education would only be focused on being critical towards the medium of computer games. In addition, the ancient domain of the theater seems very remote from the digital phenomenon of computer games. However, I have argued that the two share some vital characteristics, particularly the fact that both are able to simulate, i.e. to show the conditions of a situation rather than to show it as a fixed chain of events. Therefore, a meaningful connection can be made, translating Brecht's so-called alienation effects, which bring about a critical distance towards the depicted world, to computer games.

Although not abound, examples of alienation effects in games occur. A break of the fourth wall, which Brecht often employed in his epic theater, can be found in some games, where it indeed accomplishes a feeling of estrangement, and creates a distance between the player and the game world. Here the responsibility of the player is emphasized, and it can be argued that, whereas epic theater's objective was to discover the conditions of life, an epic game could aim at self-discovery in the sense that the player learns about her own motives and personality. Also, a separation of the elements occurs in some games, though it works out differently with regard to various layers of computer games.

I have ended this thesis with the analysis of one particular game, *Super Paper Mario*, that breaks with many conventions and bears many epic elements. This game indeed could be employed for the education of computer game literacy, however, this would have to be supported by a larger empirical research into the effects of this and other suchlike games. This thesis is above all a theoretical investigation, offering a conceptual exploration of the usefulness of Brecht's theories to computer game literacy education. Thereby, it could contribute to the debate of computer game literacy, and help to provide a theoretical framework that could serve as a base for more quantitative empirical research in this field.

7. Discussion

In this thesis, there is also much left to be desired. First of all, there is a fundamental question that has not been thoroughly addressed here: do the Brechtian epic elements in computer games actually bring about a more critical stance towards computer games, or does the player regard the moment of estrangement as part of the game? In other words: do the alienation effects as exemplified in chapter five accomplish the effect of a critical distance, or are they still interpreted within the context of the game? One could argue that, due to the fact that the epic moment takes place within the coded content of the game, no real distance is created, as the player does not actually step out of the game environment. The epic element could thereby be conceived at the level of the fiction, and the player might at best be disturbed for a moment, only to continue playing instantaneously. The question is thus whether the true learning can take place inside the game world, or that everything that happens within that world is interpreted in its context, and thus the game-play would need to be stopped to fully acquire the desired critical distance.

I have taken Brecht's theories as a starting point, and translated his ideas from theater to computer games. In this theory, as I pointed out in chapter three, the learning takes place by watching the play, and no additional teaching package is required. Although I have argued that there are indeed many similarities between theater and computer games - which makes a translation possible - there is also a major difference: computer games have digital code at their basis, whereas in theater no suchlike mediation is involved. In epic theater, stepping out of the play is therefore less complicated, as in the end it concerns people sitting together in one space. However, when stepping out of a computer game *within* the computer game, the digital code continues to be the way the game communicates to the player. It is therefore possible that the epic moment is still conceived as part of the game's rule-set and fiction, and thereby does not accomplish the preferred result. This also touches upon epic as a travelling concept, as Mieke Bal points out that a concept's meaning can change highly when it travels from one discipline to another. So, it is possible that during its travel from theater studies to game studies, the epic would transform in such a way that it would lose its distancing abilities.

Moreover, even in the domain of theater Brecht's ideas and methods are not clear-cut. As mentioned afore, Brecht is one of the most influential theater practitioners of the twentieth century, yet his plenty accounts do not form a unity.

His later works sometimes contradict his earlier works, and contemporary manifestations of epic theater show that theater producers still struggle with Brecht's legacy. The epic plays that have been produced after Brecht tend to feed the debate over the validity of various interpretations of Brecht's ideas, rather than demonstrating a consistent and authoritative Brechtian style (Kritzer, 1994, p. 525). In this thesis, however, I have started from Brecht's ideas and the way he applied them in his time, without actually questioning these theories. A more elaborate look into Brecht and epic theater productions nowadays could provide a better insight into the actual effects in this time.

An issue related to this concerns the possible entertaining value of computer games that contain many epic elements. If the game in fact would succeed to truly estrange the player, would the game then still be fun to play? Does the player want to be alienated from the game, or does she prefer staying involved in the game's fiction? A game with epic elements could wipe out all engagement, thereby stripping the game from a core element: the fun of playing it. As Benjamin argued, an epic play had entertainment value, in the fact that discovering of the conditions of life would provide a certain pleasure. But did the audience that Brecht aimed at wish for this kind of intellectual entertainment? Likewise, does a computer game player want to discover the conditions of an epic computer game, or does she prefer, so to say, to stay at interface value? In the case of computer games, this question also involves much debated notions like the 'magic circle' and the 'willing suspension of disbelief'. For the sake of conciseness, I choose not to elaborate on these concepts. However, the abovementioned questions are interesting and necessary when it comes to future research in this field.

Next to these fundamental matters, there are several other considerations that I could not take into account due to time and size limitations. Some of them are already mentioned above, in parts where I explain why I choose to include one issue, while I leave out another. But some have not been mentioned before. For instance, only in footnotes have I touched upon the notion of remediation, a concept coined by Bolter and Grusin (1999). This term concerns the employment of older media's conventions in a new medium. Within computer games, remediation of films plays a significant part: filmic conventions have defined computer games' conventions to a great extent. When regarding themes, settings, genres, music, 'camera' angles - to mention only a few - film has been highly influential. Therefore, when talking about

the break of conventions within computer games, I could have factored in film as a medium, as this would in many cases also mean a break of filmic conventions. In addition, film and theater are often connected to each other, for instance by André Bazin in his *What is Cinema?* (1967). Involving film could thus have proved helpful, and likely would have gained more insight in the workings of both theater and computer games and the translation that was made between the two domains. However, as mentioned above, time constraints have prevented me from going into that field.

Furthermore, there are several other areas that connect to computer games, education, and media education. For example, in the field of games and education I could have gone deeper into the matter. There is a discussion about whether educational games will ever be as fun as games without educational purposes: is the voluntary involvement in games not part of the fun? So if a child is forced to play the game in the classroom, do the advantages games offer, e.g. the improved motivation, still apply? This discussion connects to the one I mentioned above, i.e. about the fun of epic games in particular. It would have been interesting if I had explored the field of educational games further, though it would have opened up a whole new sphere of influence.

To conclude, I want to point out the fact that, in this thesis, games are regarded a rather homogeneous phenomenon. In some passages I have mentioned the richness of genres and platforms, and how this might affect computer game literacy education as well as the translation from theater to computer games. For example, the conventions of a role-playing game are distinctly different from those of an adventure game or a first-person shooter, which can have implications for the working of e.g. the fourth wall, and thus also for its break. Also, whether a game is multiplayer or single player can define how it should be taught within computer game literacy education. In multiplayer games, the social aspect will be far more significant, and also communicational means play a bigger part, but the examples I presented in chapter five are all about single player games. This is not surprising, as it is less complicated to guide the player in these games, and thereby more straightforward to bring about moments of estrangement. Finding examples of epic elements in multiplayer games like MMORPGs will be a highly fascinating but enormous challenge.

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