Literary Theory and Computer Games

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Abstract:

In this paper I discuss the possibilities and limitations of analyzing computer games from a literary perspective. Starting from a critique of the 'theoretical imperialism' of most ventures so far to use philological terminology in the study of computer games I attempt to assess the merits of this perspective and its contributions to a general theory of interactive fiction. While I am mostly concerned with narratological aspects of computer games, I also try to define areas of inquiry for which the terminology of literary theory is not appropriate.

Keywords: *Literary Theory, Computer Games, Narratology, Aesthetics.*

1 Introduction

In evolving toward an integrated science of cultural phenomena and the media, literary studies have turned toward new fields of analysis. These fields now include not only literature in all of its different forms and varieties, but also films, hypertexts, and art forms that explore the possibilities of computer and video technology. However, the analysis of these phenomena remains dominated by the paradigm of the printed text – and although the term 'text' has come to signify an increasing number of things, artifacts such as computer games are still being neglected by literary studies. In assuming that lingual and scriptural signs play only a marginal role in these phenomena, this perspective disregards that the processing of signs always recurs to language in some way – even understanding a picture, or a sculpture, requires some sort of literacy to decipher the object's references to cultural codes.

And, as Nicholas Montfort puts it, „even in a purely graphical interactive fiction the interactor must do some internal reading as he or she pieces together the narrative from the images displayed. This is akin to the non-verbal 'reading' done by someone looking at a picture book or a narrative series of photographs."[1]

2 Text and Code

Under these preconditions, I consider it legitimate to regard computer games as texts; yet it is impossible to predict if such a perspective will yield meaningful results. There are several points which make it seem worthwhile to approach the field of computer games from a literary perspective. For one, many computer games are based on a literary genre such as the spy novel. But even more important is the fact that there is a plot to many computer games; a narrative element that most traditional games lack. Furthermore, literary studies have embraced the metaphor of the game as a means to describe the constitution of a text from the complementary acts of writing and reading.

If there is an argument against regarding computer games from a literary perspective, it is of epistemological nature. Due to its interactivity, the object of analysis is prone to change according to the way it is approached. While this problem is certainly encountered when reading a printed text, within a computer game it becomes almost impossible to differentiate between manipulations of the objective text and its subjective actualization, i.e. between text and reading. This dilemma can only be resolved by shifting our attention to a more profound plane, that is by regarding the program code as the actual text of a computer game. We can then define the text as a set of rules that governs the fictional world of the game, whereas the game itself is merely an individual reading of this text. This model also explains why playing a computer game will never actually be the same experience for two different individuals. The confusion of these two planes of the computer game mainly results in regarding the individual game as a text whose signs must be deciphered. Peter Bøgh Andersen's semiotic approach to computer games [2], for example, is doomed to fail because he

interprets the signs on the interface at face value. Semiotics has not yet supplied us with a model that would enable us to classify the different ways in which the rules of the code become manifest on the screen; although it might be rewarding to modify Charles S. Peirce's model of the abductive calculus for this purpose.

Dalum and Sørensen's narratological analysis of the science-fiction game *Buried in Time*, is, on the other hand, an attempt to take individual readings into account by regarding them as different versions of the same story. While this is a promising approach, it still lacks the perspective needed to look beyond what is happening on the screen. Apparently, the authors themselves regard their terminology as inadequate, since they concede that "even though the 'newness' of the interactive media may, for the time being, warrant [a traditional approach] we still feel that Friedman is right in suggesting that a full description of the new media does in fact entail the development of new theoretical approaches to understanding the computer as a medium." [3]

This lack of perspective is typical of the literary scholar's approach to computer games. Transfixed by the signs on the screen, she tends to forget the code behind the interface. It is important to keep in mind, however, that this code can be manipulated, while the interpretation of a traditional printed text only changes it at a superficial level. And this manipulation goes beyond the possibilities for interaction offered by the interface. Computer 'gamers' are obviously more skilled at deducing the rules of the code from the signs on the screen, and at utilizing the possibilities of manipulation that they are offered: 'cheats', 'walkthrus', and editors to enhance the possibilities of their *avatars* are important instruments to improve the game. While Umberto Eco's concept of the open text is probably old news to gamers, literary scholars seem to forget the achievements of literary theory in overcoming the notion of an autonomous text when it comes to applying this concept to computer games.

Thus, an approach concerned only with the signs generated on the user interface fails to extract all possible meanings from the text. In my opinion, this approach misconstrues the *reading direction* in computer games: while traditional narratives tend to make the reader forget that he is reading a text through which the experience

of a fictional world is mediated, computer games constantly supply the player with references to the grammar that governs the seemingly unmediated experience of the make-believe world she is immersed in. Meta-fictional signals are also to be found in printed literary texts, of course, but there is one important difference: in traditional narratives these signals will not make the text appear as something that can be manipulated by the reader, while computer games challenge the player to a subversive reading strategy. When scholars of literary studies disregard these possibilities for manipulation, they retreat to the position of a 'naïve' reader who believes in the author's omnipotence in determining the narrative, and for whom only a typological exegesis makes sense. This 'paranoid' approach has long been transcended by the players of computer games, who acknowledge the arbitrary manifestations of the code as something that can be manipulated at will.

3 Game and Reading

Yet the approach of literary studies is not only in danger of confusing text and reading, but also in regarding text and narrative as equal. After all, it is nearly impossible to make the narratives of computer games fit the Aristotelian definition of something with a beginning, a middle, and an end. And although literary studies are concerned with non-narrative texts as well, it is a typical mistake to describe computer games in a fashion that allows them to fit this schema. While Jørgen Kirksæther must be credited with trying to differentiate between game and reading, he too becomes caught up in the Aristotelian definition of narrative. By postulating that „[the] middle is the really interesting part," he is led to conclude that this middle is a sequence of circular internal narratives that are embedded in the frame of a reading and that it is inevitable to play certain passages of a game over and over again, until the player is granted access to the next level. His acceptance of the code's absolute authority necessitates the conclusion that „[t]he appeal of games isn't in mastering a complicated set of controls, but rather in submitting to a set of rules and trying to accomplish something under these rules' restrictions." [4] Kirksæther concedes that he regards it as impossible to separate the

graphic interface from the logic and the structure of the game. But thus he renders the differentiation between text and reading futile.

As we have seen, literary studies broaching the topic of computer games as if they were interactive narratives or interactive films tend to adjust their object of analysis according to the means they have at hand. But if their analysis is to produce valid results, scholars approaching the subject of computer games from a literary perspective must be aware of this tendency and they must ensure that the instruments employed are appropriate to this subject. Espen Aarseth must be credited with outlining the dangers of exporting the terminology of literary studies to a new field of study:

> [...] I wish to challenge the recurrent practice of applying the theories of literary criticism to a new empirical field, seemingly without any reassessment of the terms and concepts involved. This lack of self-reflection places the research in direct danger of turning the vocabulary into a set of unfocused metaphors, rendered useless by a translation that is not perceived as such by its very translators. [...] Even if important insights can be gained from the study of extraliterary phenomena with the instruments of literary theory (cautiously used), it does not follow that these phenomena are literature and should be judged with literary criteria or that the field of literature should be expanded to include them. In my view, there is nothing to be gained from this sort of theoretical imperialism, but much to lose [...] [5]

That is why, in assessing the possibilities of literary terminology for analyzing computer games, I will also try to show the limitations of this approach. Furthermore, I will highlight the aspects of this field for which there is no appropriate terminology as of yet. For the development of new critical terminology I depend on the work of other scholars in this field, for it is only through a critical assessment of their accomplishments that this project can be realized.

4 Aesthetic Criteria

To date there have been few approaches to the field of computer games from a broad cultural perspective. The establishment of institutions such as the Computerspielemuseum in Berlin, and events such as *LaraCroftism* in Munich, or the

Computer Games and Digital Textualities conference in Copenhagen, show that there is a growing number of scholars working in this field. Furthermore, the publication of books such as David S. Bennahum's *Extra Life* and Steven Poole's *Trigger Happy* make it obvious that computer games have become a part of our culture and that there is public interest in discussing this phenomenon in a broader context.

Therefore, a serious approach to computer games which attempts to develop an appropriate terminology should be concerned with developing independent aesthetic criteria; i.e. independent of the criteria established in commercial reviews and independent of the criteria employed in the criticism of other media. As early as 1993 Ted Friedman pointed out the need to develop a 'software theory', and he stressed the role of computer games in this enterprise: „One area that has received scant attention from cultural theorists, however, offers particularly fertile ground for inquiry: the world of computer games." [6] Friedman is hardly the first to draw attention to this area – in 1985 Mary Ann Buckles wrote her doctor's thesis on the game *Adventure* [7] – but he must still be credited with pointing out the limitations of a literary approach to this field. Consequently, Friedman concentrates not on a narrative genre of computer games, but rather on strategy games such as *SimCity*, marketed not as a computer game but a 'software toy' by its manufacturer. Although Friedman is aware that *SimCity* has been derived from the level generator of another computer game, he differentiates between the possibilities for manipulation offered explicitly by the software, and those that might be regarded as 'inofficial' strategies such as 'cheats'. Mostly due to this discrimination, Friedman agrees to Orson Card's claim that „[e]very freedom you can give to the player is an artistic victory."[8] Establishing a poetics of computer games, rather than an aesthetics, cannot be the aim of a critical 'software theory', however. Games in which the player is required follow certain guidelines cannot be excluded from analysis because they do not offer as many possibilities for interaction at first glance. Notwithstanding the establishment of specialized areas within this field, a theory of computer games should initially keep its focus as wide as possible. Such an approach has been suggested by Espen Aarseth. In his book *Cybertext* he defines the term 'cybertext' as follows:

> The concept of cybertext focuses on the mechanical organization of the text, by positing the intricacies of the medium as an integral part of the literary exchange. However, it also centers attention on the consumer, or user, of the text, as a more integrated figure than even reader-response theorists would claim. The performance of their reader takes place all in his head, while the user of cybertext also performs in an extranoematic sense. During the cybertextual process, the user will have effectuated a semiotic sequence, and this selective movement is a work of physical construction that the various concepts of 'reading' do not account for.[9]

As Aarseth points out, the characteristic feature of cybertexts is that they are 'ergodic', a term borrowed from physics and put together from the Greek words for *work* and *path*: „In ergodic literature, nontrivial effort is required to traverse the text." Obviously, this term includes not only computer games, but also hypertexts, MUDs and MOOs, as well as a number of printed texts ranging from the ancient Chinese *I Ching* to Raymond Queneaus's *Cent mille milliards de poèmes*. In his essay „Aporia and Epiphany in *Doom* and *The Speaking Clock*" Aarseth stresses the importance of an inclusive definition: „The worst kind of mistake an aesthetic theory of ergodic art can make is to assume that there is only one type with which to be concerned [...] with a single set of properties."[10] But for a study exclusively concerned with computer games this definition has to be modified. Aarseth's definition of ergodic texts combined with Friedman's insistence on regarding software in its own right, i.e. as a unique form of aesthetic expression, supplies us with a working definition of what a computer game is. Thus, games with a graphic interface are included as well as 'text adventures', while interactivity might refer to the game as well as the code. Nevertheless, this definition might require further modification in the future.

5 Computer Game Genres

A first attempt to establish independent aesthetic criteria can be made by regarding computer game genres. The differentiation we find in popular computer game discourse seems rather arbitrary, but since any other way to classify them would be equally arbitrary, I think it makes sense to analyze the existing genres rather than create new ones. There

are five basic genres taken into account: action games, adventure games, role playing games, simulation games, and strategy games. A closer look at these genres reveals that they can be differentiated by the following three criteria: narrativity, openness, and interactivity. The genres can be placed in a triangular matrix that is defined by these criteria, since they appear to be complementary (FIGURE 1) Thus, adventure games, for example, rank high in narrativity, but by the same token their openness and interactivity are reduced by the game's inherent narrative structure. Strategy games, on the other hand, have a high level of openness, for there is usually no order in which to complete certain tasks, and the possibilities for interaction are often numerous. The result of this open structure is that there is no real narrative to speak of, and the frequency of interaction is relatively low. Contrarily, action games usually have a very high frequency of interaction, while the range of these actions is rather narrow. Thus, action games are characterized by a high level of interactivity, and a low level of both narrativity and openness. Role playing games and simulation games take intermediate positions in the matrix.

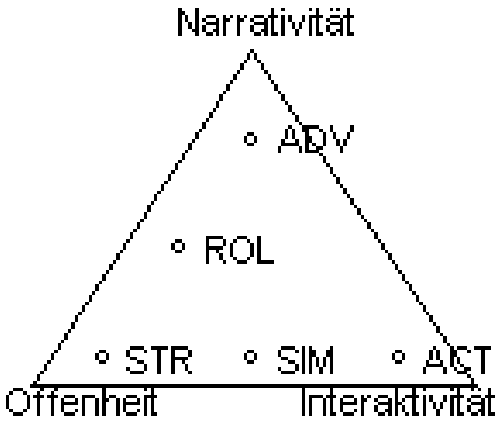

Figure 1

One way to judge a game by aesthetic criteria is to see how well it succeeds in fulfilling the criteria of its genre. While this is certainly not all there is to it – often an aesthetic success depends on breaking the rules rather than submitting to them – the criteria that define the different genres deserve more attention. First of all, we have to differentiate between openness and interactivity, since they are easily confused. Both criteria refer to the 'freedom' of the player in the fictional world

of a computer game. But while interactivity refers to the frequency of the player's interactions with this world, openness refers to the range of different interactions offered by the game. It is important to keep in mind, however, that both criteria apply to the interface as well as the underlying code. Since games that offer a high level of openness at the interface usually allow quite a bit of manipulation on the level of the code as well, it is futile to differentiate between these levels at this point. But the interplay between code and interface highlights another important aspect. Since it is possible to increase the level of interactivity by exhausting the full spectrum of interactive possibilities the game offers, it is obvious that these criteria are interdependent. The level of interactivity and openness might even change during the game – but an increase in openness will necessitate a decrease in interactivity and vice versa. Therefore, the borders between the genres are fluent, and especially hybrid genres are often difficult to categorize.

6 Games and Narratives

From a literary perspective, narrativity is the most interesting and the most problematic of the three criteria. A narrative-oriented game is not more prone to be analyzed from a literary perspective, despite the literary scholar's preference for games of the more narrative genres. After all, the field of literary studies extends beyond the narrative genres of literature and includes dramatic and poetic texts as well as scientific and philosophical texts. Yet the limitations of the philological approach to computer games become very obvious when it comes to making sense of non-narrative games. While it might still make sense to compare adventure games with medieval quest narratives, or action games to certain epic genres, it would be hard to argue that *Tetris* is an interactive poem. While it should certainly not be the aim of literary studies to assimilate computer games in such a way, we must keep in mind that by simply stating that a narrative element exists within them, these comparisons are implicitly made.

So, what terminology does literary theory supply us with to describe narrativity in computer games? Obviously, most games tell a story, even if it can

often be summarized in a couple of words. Even non-narrative computer games are often set within a narrative, paratextual frame. Jørgen Kirksæther quotes an example from the instructions for the game *Silkworm*: „[...] Earth's chances of survival hang on [sic] a thread, a thread so gossamer fine that it could be made of silk. Realizing this, the weapons scientists codenamed civilisation's last stand Operation Silkworm. Step forward hero, read the briefing and take the controls...," and he continues: „Now, if we for a minute can put aside the rather ridiculous explanation of the game's name, what happens here? I'd say three things: 1) You're being told the beginning of a story, 2) you're being invited to actively take part in it, and 3), it's quite obvious that the story isn't over."[11]

The implications of this statement are somewhat peculiar when computer games are regarded as hypertexts, as by George Landow, or as interactive films, as in Kirksæther's approach. While Landow is lead to conclude that this „calls into question ideas of plot and story current since Aristotle" [12], Kirksæther encounters serious difficulties in keeping up the Aristotelian definition of narrative, resulting in contradictions he cannot resolve. Neither approach produces a convincing definition of narrativity in computer games. When we turn to Espen Aarseth's concept of cybertext once more, we find that he is the only one who regards „[t]he adventure game [as] an artistic genre of its own, a unique aesthetic field of possibilities, which must be judged on its own terms." Aarseth also seems to support the thesis that the reading direction is reversed in computer games when he claims: „In the determinate cybertext [...] the functions of plot (*szujet*) and story (*fabula*) appear to have traded places, somehow." Yet he continues:

> But this is not exactly the case. The concept of plot is unsettled by the reader (user), who, being strategically within it, is in no position to see through it and glimpse a story behind. It is often argued that narrative plot is also something that is only discovered or reconstructed by the reader after the end is reached; and this could be seen to imply, contradictory to my argument, that there is no great difference between the narrative and the ergodic situation as far as plot is concerned. But there is a difference, and for a very simple reason: the bewildered reader of a narrative can safely assume that the events that are already encountered, however mystifying, will make sense in the end (if the plot is to make sense at all); whereas the player of an adventure game [...] is not guaranteed that the

> events thus far are at all relevant to the solution of the game.[13]

This claim is easily contradicted by pointing out that printed literary texts tend to supply their readers with irrelevant information as well. It might just as well be argued, however, that irrelevant narrative elements are clearly considered an aberration in narrative theory, while it is quite usual for the player of a computer game to be confronted with seemingly irrelevant information. In some games, this strategy of misinformation may even be regarded as one of the principal structural elements.

Aarseth's conclusions from this thesis are rather dramatic: „[The adventure game] effectually disintegrates any notion of story by forcing the reader's attention on the elusive 'plot'. Instead of a narrated plot, cybertext produces a sequence of oscillating activities effectuated (but certainly not controlled) by the reader." [14] He suggests to replace the term 'story' with 'ergodic intrigue', signifying an element that structures and controls the adventure game. The ergodic intrigue is directed against the 'intriguee', a role that Aarseth equals with the implied reader *and* the protagonist of printed narrative texts. This is consistent Aarseth's argument that the roles of the protagonist and the implied reader converge in adventure games, an argument also put forth in Brenda Laurel's [15] and Marie-Laure Ryan's [16] work. It is difficult to follow him, though, when he concludes that „[t]hus, the determinate cybertext reconfigures literary experience along a different plane than the narrative. Instead of a narrative constituted of a story or plot, we get an intrigue-oriented ergodic log – or to adopt Gérard Genette's and Seymour Chatman's term, ergodic *discourse*." [17] The problem of narrativity in computer games is merely shifted to another level in this model – since Chatman proposes that signs play the role of a mediator between story and plot. Therefore, Aarseth is unable to differentiate between narrative and ergodic discourse without introducing two new narrative concepts that he calls the 'event plane' and the 'progression plane':

> In a narrative, the discourse consists of the event plane, where the narration of events takes place, and also what I call the progression plane, which is the unfolding of events as they are received by an implied reader. [...] In adventure games, the relation between events and progression is defined by a third plane of discourse: a negotiation plane, where the intriguee

> confronts the intrigue to achieve a desirable unfolding of events. [18]

So, after plot and story have been dismissed as irrelevant for the analysis of computer games, they are reintroduced as newly defined planes of discourse. The model that Aarseth presents us with actually differs from Chatman's model in only one detail. The mediating plane that is called 'discourse' in Chatman's, and 'negotiation plane' in Aarseth's model, is interactive. Unfortunately, this model does not supply us with an explanation of the connection between interactivity and narrativity either, for they are regarded as inseparable parts of the negotiation plane. A more promising model is supplied by Janet Murray, who differentiates between traditional printed texts and interactive texts by regarding them under the aspects of 'agency', 'rapture' and 'immersion':

> These 'three key pleasures' [...] are uniquely intensified in electronic media. [...] Immersion [...] is 'the sense of being transported to another reality, such as a game world. Rapture is the 'entranced attachment to the objects in that reality' – in other words, the addictive trance that gamers fall into for hours at a time. And agency is 'the player's delight in having an effect on the electronic world,' which is possible because the player is a free agent who can make choices. [19]

7 Agency, Immersion, and Rapture

The term agency must be regarded as more than just an alternative term for interactivity, since it encompasses elements of narrativity and openness as well. Therefore, Murray's terminology seems to be predestined to take a closer look at the connections between these three categories. Being more than just a duplication of our original triad, we must assume a more complicated relation between the two sets of categories. Indeed, it makes much more sense to put these categories into a causal relation (FIGURE 2): Thus, rapture results from the combination of narrativity and openness, while immersion stems from combining interactivity with narrativity. Agency, on the other hand, is the result of the combination of interactivity and openness. Narrativity and agency are opposed to each other, since there is hardly

a way to regulate a narrative in a game that grants the player great influence on the course of his actions. Immersion is opposed to openness, because a great range of possible actions tends to make a game more abstract, and thus anti-immersive. And rapture is opposed to interactivity, since a high level of interactivity will effectively counteract „the entranced attachment to objects in that reality."

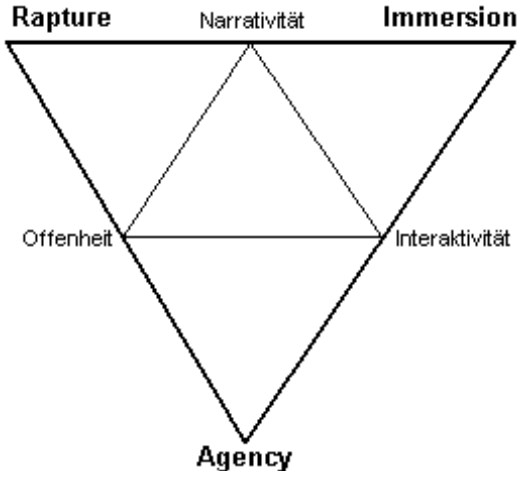

Figure 2

Narrativity is thus connected to openness and interactivity, respectively, by a relation that results in rapture on one hand, and immersion on the other. Murray's observation that the traditional 'pleasures' of the text are intensified in electronic media is consistent with this model, since in interactive texts such as computer games these pleasures are enhanced by openness and interactivity. In this light, we must reconsider Aarseth's thesis that plot and story are of little relevance to computer games, whereas the importance of discourse is increased in an interactive environment. It is clear from the above model that rapture and immersion decrease the reader's critical distance towards the text, thus counteracting her ability to discern the unfolding of events (story) and the temporal and causal structure (plot). The same tendency can be discerned in printed text, even though it is not quite as strong. But if rapture and immersion are responsible for plot and story being of little relevance, they must also be responsible for stressing the discourse in computer games. And indeed, games in which there is an equilibrium of openness and interactivity, thus offering a maximum of agency, tend to disregard the underlying narrative structure in favor of the momentary events and the way

these events are related. That this description characterizes simulation games very accurately is consistent with Marie Laure Ryan's statement that a simulation system is „not a narrative, but a narrative matrix" [20]. The level of narrativity is necessarily very low in a narrative matrix, for in such a structure there is no internal hierarchy that necessitates a certain narrative direction.

8 Perspective

It is impossible to analyze the narratological strategies in computer games without regard to the perspective from which the events of these games are being related. In other words: we have yet to answer the questions of point of view. This question is intertwined with two highly problematic questions in respect to narrative control, i.e. what it is exerted by, and whom it is exerted on. But before an attempt is made to answer these questions, we have to discuss how the terminology of literary theory can contribute to analyze narrative roles and point of view. At first glance it seems simple enough to rely on a traditional approach such as Stanzel's classical model of narrative situations. After all, terms such as 'first-person shooter' and 'third-person shooter' seem to be derived from terms coined in narrative theory. These models do not account for the difference between the narrator and the observer, though. Because a differentiated analysis depends on a differentiated model of point of view, Gérard Genette's work should be taken into account, since he was the first to point out that „most studies of point of view [...] treat two related but different questions as if they were interchangeable. [...] [T]hese questions are 'who sees?' v. 'who speaks?'" [21]

In trying to answer the first question – who sees? – we have to understand through whose eyes the player of a computer game perceives the fictional world presented to her on the screen. It seems all too easy to answer this question in respect to games in which the player sees quite literally through the eyes of a character in this fictional world, as it is the case in 'first-person shooters', such as *Doom* or *Quake*. In these games the player is represented through an 'avatar',

similar to the way a 'first person character focalizer from within' represents the reader in a traditional narrative. In this terminology, 'first person' refers to the perspective from which the fictional events are narrated, while 'character focalizer' means that the narrator is actually involved in this narrative. A narrative related 'from within' will not grant the reader access to information that is not known to the narrator. This perspective has certain characteristic limitations: a limited overview of the temporal and spatial dimensions of the fictional world, and limited knowledge about what is going on in this world. Yet there is something of an objective normative system in the form of implicit rules that define what is 'right' and what is 'wrong' within the limits of the fictional world. This draws our attention to the fact that seeing often implies being seen, and this raises the question of in which way this view *on* the player is implemented in the game. Apparently, this manifestation is in some way connected to the code of the game, and thus we are tempted to identify it with an 'implied author'. But the implications of this assumption are problematic, since the role of the implied author is at least partially transferred to the player in a computer game. The ensuing dilemma can be resolved in two ways. Either the role of the implied author is divided into two different roles, one of which is taken by the player, while the other is part of the code, or the division between (implied) author and (implied) reader is regarded as non-existent as in Kirksæther's model.

Yet the problem of mediation can be avoided in its entirety if we regard computer games as an immediate form of communication. Brenda Laurel suggests to regard computer mediated communication as a form of dramatic interaction. In this model, instead of a convergence of the roles of reader and author, the communication process is conceptualized as a convergence of spectator and actor. Thus, the player has some 'creative freedom' in fulfilling his role, although he is limited by the possibilities offered to him by the text, or code: „The users of such a system are like audience members who can march up onto the stage and become various characters, altering the action by what they say and do in their roles." [22] This model could also be adapted for computer games in which the player does not perceive the game-world through

the eyes of his avatar, but in which he actually sees a representation of his character that he controls in a fashion similar to directing a play. While it seems simple enough to transpose this model into narratological terminology by transferring the role of focalization to the player, the convergence of the narratological and the dramatic model becomes more complicated when we turn to the question 'who speaks?'

After all, Laurel's model does not include a narrator, and even if we assume a 'dramatic narrator', this poses the same problems that we tried to avoid by turning to the concept of *Computers as Theatre*. The implications of consolidating the narratological and the dramatic models become even more puzzling when turning to games in which there is simply no way of identifying the player with one of the *dramatis personae*; games such as *Popolous* or *SimCity* in which the events are being focalized externally. In these games, the only 'voice' we can identify is the player's voice, which is giving instructions to the inhabitants of the fictional world. If the player identifies with anything at all, it is a whole tribe, people, or nation. This special problem might be resolved, however, by a suggestion brought forth by Ted Friedman in „Making Sense of Software":

> We could see playing SimCity, then, as a constant shifting of identifications, depending on whether you're buying land, organizing the police force, paving the roads, or whatever. This, I think, is part of what's going on. But this model suggests a level of disjunction – jumping back and forth from one role to the next – belied by the smooth, almost trance-like state of the gameplay. Overarching these functional shifts, I think, is a more general state of identification: with the city as a whole, as a single system. [23]

Therefore, in order to answer the question of what role the player takes in the communication process of a computer game, we have to take a closer look at what role identification plays in this process. And it is only in relation to the position of the player in the communication process that we can determine the position of the 'narrator'. But this can only be accomplished if we keep in mind that the narrative equivalent of the point of view in a 'first-person shooter' is actually a narrative in which the reader is addressed in the second person singular. The text-based

adventure game *Zork*, for example, begins as follows: „You are standing in an open field west of a white house, with a boarded front door." It seems paradoxical to equate a point of view from which the player sees through the eyes of an avatar with a narrative perspective that directly addresses the player. Yet this apparent paradox is the key to understanding the basic communication process of computer games, because it is obviously not the player herself who is addressed in such a way, but the 'narratee'. This element of the communication process is not identical to the implied reader, although Aarseth seems to suggest such an equation when he identifies the 'intriguee' in adventure games as the implied reader. Yet the way in which the narratee is addressed is clearly not meta-fictional, as opposed to the meta-fictional strategy of directly addressing the reader in traditional narratives. On the contrary, this means is employed to simplify the 'willing suspension of disbelief', i.e. the player's immersion. The narratee, on the other hand, can be equated easily with the spectators of a play, since the actors on stage can address the audience without leaving the fictional frame by pretending the spectators are part of the fictional world.

9 Communication

Apparently Laurel's model can be reconciled with a modified model of communication in narrative texts after all. Our original thesis – that the reading direction in computer games is reversed – can then be abandoned as trivial. The unified communication model does not supply us with the means to determine the position of the 'narrator'. This can only be accomplished by taking a look at Aarseth's model of a computer game's principal components (FIGURE 3). In this model, the game's code is mediated through an interface that fulfills the two functions of analysis and synthesis. It is through this interface that the player is able to communicate with the code at all. The communication between the code and the interface is further mediated through a 'simulation engine' and a 'representation engine'. These engines are the parts that have to be taken into

account when we want to locate the 'narrator' in this communication process, because they are the parts of the code that can be manipulated by the player, whether directly or indirectly. It is worth noting that this model is dialogic, which makes it seem worthwhile to approach the field of computer games with the terminology developed by Mikhail Bakhtin, as suggested by Geoffrey Rockwell.

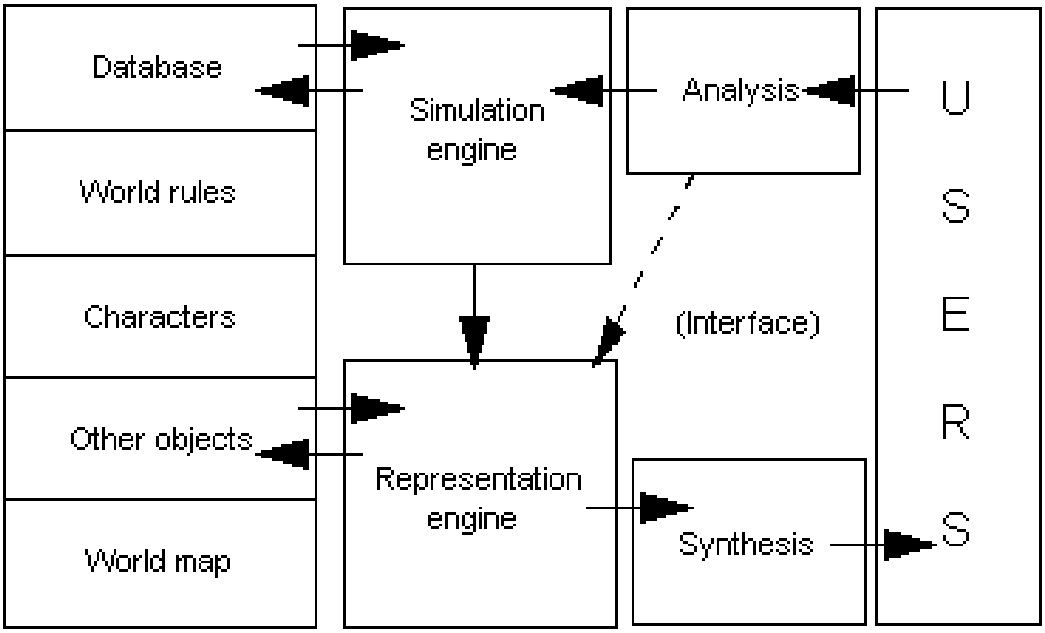

Figure 3

Before we turn to the implications of this approach, though, we have to consider the role that the representation engine and the simulation engine play in the player's dialogue with the code. It is clear from Aarseth's model that representation corresponds to the 'voice' addressing the player in text-based adventure games. This voice is mediated through the interface that synthesizes the output of the code in order to make them 'legible' for the player. The precondition for the player's ability to make sense of these data is the player's identification with his avatar, or narratee. This is necessary, because the signs produced by the interface only make sense in the context of the fictional world. With this precondition fulfilled, the player can react to these signs appropriately and manipulate the interface in such a way that that makes sense to the analytic device of the interface. This input is then passed on to the simulation engine.

Thus, the representation engine is confronted with a narratee that is not only

'listening', but answering as well. This part of the narration process is not at all 'auctorial', but rather equal to the narratee in respect to it's information about the game-world, because it is only granted access to the data that are being transferred to it from the game's code – either directly, or mediated through the simulation engine. Therefore, we can equate the code with an implied author that determines which information is being made available to the narrator. We must then assume two narrative voices, one of which is represented by the avatar – a 'character focalizer from within' – while the other is a 'narrator focalizer from without' that can not be located within the communication process, but must instead be considered an effect of the interplay of the different narrative elements.

The internal normative system, on the other hand, that reinforces 'good' behavior, and punishes 'bad' behavior, is to be located within the game's code itself, using the representation engine merely as an executive organ of its measures. But due to the dialogic structure of the communication process, it is up to the player if he subscribes to these values or not. A drastic example for such denial of a game's internal values are those players of *Ultima Online* who no longer strive for wealth, adventure, or social status, but rather spend their time killing other player's characters. Contrarily, many *Quake*-clans subscribe to even stricter rules than those supplied by the game's code. Thus, ambushing an opponent from a secluded spot (camping) is regarded as dishonorable, even though the game's code reinforces such behavior. So the multiple voices within the game can disagree, or even contradict each other. Considering these multiple voices, it seems worthwhile to take a closer look at Rockwell's approach to questions of identification and control with Bakhtin's terminology.

10 Taking Control

This approach seems especially promising in regard to two questions that Rockwell addresses: Firstly, „[what] types of characters that interact in the game with special attention to the character the player is allowed to develop," and secondly, „the types of interactions that can be performed in the game with special attention to the interactive

possibilities for the player." [24] Rockwell points out that the question of interaction is closely related to the question „How are you defined by the choices the game affords?" This question implicitly assumes the equality of identification and interaction. This seems to imply that the player cannot fully identify with his avatar unless he ackowledges this character's limitations. Is identification achieved through interaction, then? Yes and no. On one hand, immersion is undeniably increased by the player's opportunities to act upon the game-world, and identification through action has great suggestive power. On the other hand, the player's realization of his limited possibilities necessarily counteracts the player's immersion – thus weakening the player's identification with the narratee. Therefore, the fact that the player's avatar is unable to do certain things appears to be a hindrance for identification with this character. Consequently, Friedman describes the process of playing a computer game as a process of demystification: „Learning and winning [...]a computer game is a process of demystification: one succeeds by discovering how the software is put together." [25]

Thus, 'solving' a computer game appears to be a process in which the player learns to decipher the signs on the interface as manifestations of the rules as determined by game's code – in a way, this can be regarded as a reversal of the reading direction after all. It is only through this process of demystification that the player can gain control over the game – subversive reading strategies such as 'cheats' included. The process of analyzing the inherent rules of the code that constitutes the game can then be regarded as a hermeneutic process. Only in becoming aware of the full extent of his possibilities can the player master the game – simultaneously breaking the spell of the game through the sacrifice of its immersive power. This must not be regarded as a disadvantage: the player can still recreate the magic of the game by taking refuge to the willing suspension of disbelief.

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