Chapter 3: Computer game fiction

First-person experience

Torben Grodal's article "Stories for Eye, Ear, and Muscles: Video Games, Media, and Embodied experiences" (2003) presents a view on computer game experience that ties in with the theoretical perspective of Walton and Ryan in some important respects. Grodal's point of departure is that playing a computer game, unlike watching films or reading books, is not something that is mediated and second-hand; it is not a representation of someone else's experience. Like real-life experience, computer game experience is 'embodied'. It is first-hand and takes place in 'a progressing present' (2003:134). Videogames, Grodal argues, "are simulations of basic modes of real-life experiences" (2003:130). He then extends this basic argument into a discussion of 'story' and the essence of narrative structure: Discursive narrative (as found in books and films) is derived from a more fundamental 'narrative format' of first-person and pre-discursive experience, and the stories of computer games must primarily be understood and theorised as a more direct variation of the latter. Computer games, just like life, offer basic, real-time and embodied 'story-experience' rather than 'stories' understood as discursive mediation.

This perspective has similarities to the concepts of simulation and fiction as they are discussed in the two previous chapters. The basic model of make-believe defines fiction in terms of active and embodied simulation, performed in real time, as opposed to a linguistic or diegetic model of fiction in which fiction is always something that is communicated, something that is told. Grodal's contribution, which shows no direct links to literary theory or philosophical aesthetics, is a kind of no-nonsense variant of the anti-linguistic approach, essentially claiming that virtual experiences should be treated no differently than any other first-hand and 'first-person' experience. This approach deserves attention as a critical and potentially useful alternative to dominant theories of computer game representation. However, at the same time Grodal seems to avoid or ignore some of unique and defining aspects of gaming 'experience'. Also, his analysis draws heavily on a set of contested philosophical assumptions, which limits the potential applications

of his theory and diverts the attention from the specificity of games and game genres.

Grodal is right to point out that computer games model real life experiences in terms of similarly 'first-person' experiences. In simulations as in real life, meaningful action requires mastery and control, and has actual (– and, in principle, unpredictable) consequences. Also, on the most general level, Grodal's theoretical perspective draws on fairly uncontroversial and established philosophical ideas about how human beings make sense of the world and their immediate surroundings. His basic orientation is evolutionary and ecological, taking the notion of embodied subjectivity as point of departure. Meaningful interaction and self-reflection, including language and culture, must be understood in the context of how an organism has evolved within an environment, within its particular ecological niche. This resonates with the theories of James Gibson – which I will return to below – even if Grodal does not comment on this relationship in the relatively brief article.

However, even if one points out the link between computer game 'stories' and real-life experience, the question still remains how best to study and describe the meanings of embodied experience in its various aspects – whether in games or in life. We can agree that simulated environments in games are similar to real-life practices in some important respects, but the question of how human embodied practices in general should be theoretically in the first place opens up, obviously, a broad field of philosophical discussion. Grodal's elaborations on what constitutes the 'basic embodied experience' is rooted in the theories and findings of cognitive psychology, with an emphasis on pre-linguistic and pre-communicative "story-mechanisms in the brain" (2003:130).

This theoretical tradition is committed to the idea of pre-linguistic thought, a discussion of which goes beyond the scope of the present study. What I want to emphasise in the context of my own argument is that it is possible to advocate non-linguistic and – in the case of fiction – non-diegetic theoretical descriptions of human practice without implying any specific claims about the relationship between thought and language more generally. On the contrary, I would say that to rigidly delineate a sphere of 'experience' that is disconnected from language and culture constructs an unnecessary limitation on how to understand embodied practices, especially when fiction is concerned. Within Grodal's conceptual framework, the cultural and artistic dimension of simulated practices becomes hardly more than a footnote. This is because his category of the 'unmediated' is never relaxed or questioned. In comparison, even if Kendall L. Walton in *Mimesis of Make-Believe* also argues against the hegemony of the linguistic paradigm in the study of fiction and narrative, he is not committed to an idea of 'raw' experience. Walton's concern is the non-linguistic dimension of symbolic practice, not the pre-linguistic and 'unmediated' status of non-symbolic practice. Because Walton

emphasises the non-discursive rather than the *pre*-discursive, he assumes no sharp distinction between what is mediated by language and what is not.

More specifically, the central difference between Grodal's and my own approach to computer game aesthetics is that Grodal only sees computer games as a matter of embodied experience, not as a matter of embodied *fiction*. Within the perspective of cognitive psychology, the notion of subjectivity becomes quite irrelevant: there is only one subject who interacts, namely the actual subject – or, to be more precise, the embodied (and decidedly non-fictional) brain of the playing subject. This means that Grodal does not need to address the role of the avatar in computer game 'experience'. In contrast, my argument is that we need a concept of fiction and a concept of fictional embodiment in order to account for the central mechanisms of computer game representation and interaction. Recognising and analysing the 'full experiential flow' of perception, cognition, emotion and action (2003:132) does not necessarily tell us – specifically – what makes computer game play meaningful as different from other types of embodied 'flows'.

We should note that Grodal does not address the fact that our 'real-life' interaction (pressing buttons or moving a mouse) translates into something quite different when mediated via a screen, into a 'world' that is conveyed to me as sounds and images. In other words, the embodied 'rehearsals' of the actual and the simulated do not correspond to each other. Without a concept of embodied fiction rather than just 'experience', the experiential significance of these projections and transformations is not being accounted for.

Moreover, as long as the researcher's eye is on brains rather than subjects, genre-dependent relationships between fictional and actual practice recede to the background. In fact, Grodal never makes much reference to computer game genre at all. From the examples that he uses, it seems that he is primarily talking about avatar-based and three-dimensional simulated environments (and specifically First Person Shooters), but no explicit generic qualifications are made. The central 'story mechanisms' of the embodied brain presumably apply to the computer game experience on a general level, of which genres, we must assume, are different variants over the same basic type of 'first-person' interaction[23].

In other words, Grodal seems to imply that an FPS is engaging for largely the same reasons that *The Sims* is engaging. This generalising assumption weakens his arguments and makes it unclear what kind of 'experiences' he is actually talking about. When he argues, for example, that 'interactivity is not centrally about changing a world' (2003:143), my objection would be that the 'centrally' will depend on what type of game he is talking about.

23 We may note that the central 'generic' difference in Grodal's account is discussed on the level of the *player* rather than the level of the game itself; the nature of the experience depends crucially on whether the player is a novice or a master (Grodal 2003:144).

Finally, it is important to keep in mind that our 'first-person' relationship to computer games is made possible within a self-contained and formally defined rule-system – a rigidly articulated magic circle. This rule-system describes the possible operations of the computer, and also integrates the rules that construct the computer game as a game rather than merely as a simulated environment. By comparison, life outside the contained spaces of games is not a system of formalised procedures, even if our everyday environments (roads, buildings, cars etc) obviously are, as Grodal points out, designed in ways that enable, restrict or encourage particular behaviours[24]. Computer game environments are designed in a more radical sense than the designed environments of non-fictional, everyday life. Not only are gameworlds formally defined and closed-off from the rest of the world, but they are also *unified* as a self-contained whole, subject to a coherent purpose, a 'master plan' (– however haphazard or flawed) that runs through every detail of the environment. The notion of general 'design' does not cover it, as Grodal seems to imply. A theory of world-interaction in computer games, whether focussing on fictional or non-fictional aspects, must somehow relate to the unity, the artificiality and the *gameness* of game-worlds. Why do, for example, Hitler's soldiers in *Brothers in Arms: Road to Hill (Gearbox Software 2005)* have bright red circles over their heads?

Moreover, we should note that the kind of games Grodal mainly seems to be talking about – contemporary, three-dimensional and avatar-based games – are also often governed by rules of dramatic design, in a way that makes them not directly comparable to architecture or city planning. In these cases, game-space is not just a gaming environment but also functions as a *stage*, which frames and gives dramatic significance to actions. This dramatic quality requires that the events taking place in the game are somehow scripted to achieve dramatic significance. In Grodal's own terms, we could say that certain kinds of avatar-based computer games are scripted first-person experiences.

If we accept that dominant types of gameworlds are worlds in which principles of dramatic, cinematic or literary orchestration also determine the modality of our 'experience', we will also need to discuss the role of textuality and of narrative – both as this relates to notions of 'gameness', and as it relates to the concept of fiction as outlined in chapter 2. In the following I will discuss some of the major theoretical efforts within computer game studies that address this question. I will start with Espen Aarseth's pioneering work *Cybertext* (1997).

24 "In a real world as well as in simulated worlds our influence is limited by the general design of that world: we follow roads, tunnels or career tracks, and obey rules, but within a given framework we may alter some elements, take different roads, build houses, and so on" (Grodal 2003:142).

Cybertext

Cybertext is not primarily about games, or about the notion of fiction in simulated environments; it investigates, as the title says, a particular type of literature – computerised as well as non-computerised – and uses the puzzle-based adventure genre of computer games as a central example. As such, the work addresses the concerns of this study only indirectly. On the other hand, *Cybertext* has been influential to how the questions of gameness and fictionality are being addressed in contemporary studies of game aesthetics, both directly and indirectly, via its strong influence on the so-called 'ludological' strand of game theory, which I will return to below.

> 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 centres 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' does not account for. This phenomenon I call *ergodic*, using the term appropriated from physics that derives from the Greek words *ergon* and *hodos*, meaning 'work' or 'path'. In ergodic literature, nontrivial effort is required to allow the reader to traverse the text. (Aarseth 1997:1)

The ergodic refers to the principle of having to work with the materiality of a text, of having to participate in the construction of its material structure. While some ergodic works lead us towards a fixed solution – like jigsaw puzzles or adventure games – others can be unpredictable and open-ended, like for example an experimental hypertext novel. The cybertext, more specifically, is a 'computerised' text (although not necessarily computed by a digital computer); an ergodic text that calculates its response to our input[25]. The cybertext is a "machine for the production of variety of expression" (Aarseth 1997:3). The ergodic overlaps with the notion of play:

25 As I am not here concerned with the distinction between 'ergodic' texts and cybertexts, the latter concept is simplified somewhat. According to Aarseth, a 'cybertext' does not have to be ergodic; the category of the cybertext would also include machines that calculate linear texts, as illustrated in his model at page 64 (Aarseth 1997).

> The cybertext reader is a player, a gambler; the cybertext is a game-world and a world-game; it is possible to explore, get lost, and discover secret paths in these texts, not metaphorically, but through the topological structures of the textual machinery. (Aarseth 1997:4)

If we choose a relatively broad definition of 'game' and 'gameness' (or the *ludic*), which covers any type of rule-based and (however loosely) goal-oriented 'magic circle' of self-contained activity, we could define the cybertext as a game-text, or maybe better, as a text-game. A cybertext is a configurable and playable text. From this point of view we could say that, while Kendall L. Walton directs our attention to games of make-believe, Aarseth directs our attention to games of literature; to game-like literariness.

This 'ludic turn' also implies a theory of the relationship between computer games and literature, which centrally focuses on the distinction between games and narration. Ergodics, Aarseth suggests, is not a variant of narrative, but constitutes a mode of discourse of its own, a different model of literariness, which is separate from and in potential conflict with narrative – although the two forms typically co-mingle and interact in a number of ways (1997:5)[26]. In narrative discourse, the user is invited only to engage in the semantics of the text and does not have to worry about its material configuration; the user is only a reader, not a co-constructor in the material sense, not a player.

The ergodic, in other words, describes a type of textuality, not simulation or fictionality. Some ergodic works have little to do with simulation (like for example computer-generated poetry), whereas others can also be considered as models, as functional representations. Conversely, many simulations can be said to be 'ergodic', which would mean that we choose to look at them as texts. In computer game studies, a text-oriented approach may in certain cases be useful, depending on the genre and the aims of our study. Clearly, text-based adventure games, which Aarseth analyses in *Cybertext*, invite this type of approach, as they are, in a literal sense, 'text-games', setting up an explicit dialogue between the player/reader and the textual machine. Aarseth analyses this dialogue in narrotological terms: The playful text is an 'intrigue' in which there is an exchange between the 'intrigant' of the textual machine and the 'intriguee' of the (implied) player, who is being challenged by the intrigant (1997:112-114).

26 See also Aarseth (1999), where he adds that the relationship is "...dialectic, not dichotomic. Narrative structures and elements can be found in ergodic works, and narrative works may contain ergodic features, to the extent that only a single element from one mode is found in a work belonging to the other" (Aarseth 1999:34).

Although Aarseth's model operates within the established narratological frameworks of Gerard Genette and Seymour Chatman, the focus is moved elsewhere; in adventure games, the interesting action is no longer going on in the world of the *diegesis*, but on the level of discourse itself, on the level of the dialogical text. While narrative discourse produces a story world, ergodic discourse produces an intrigue, a game of narration. 'Ergodics' can therefore be considered as an anti-narrativist branch of structuralist narratology, which can be used as a building-block for a dedicated theory of computer game representation.

However, as Aarseth has demonstrated also in later works, the formal structures or types of 'paths' that can be revealed by the ergodic approach may be valid and productive also beyond a linguistic and text-oriented framework. Notably, this applies to what Aarseth calls the 'master figures' of ergodic aesthetics, aporia and epiphany, which articulate the dialogical relationship between the player and the voice of the game. In games, these should not be seen as literary tropes, but as formal figures that reflect the most basic structure of the ergodic experience.

> When an aporia is overcome, it is replaced by an epiphany: a sudden, often unexpected solution to the impasse in the event space. Compared to the epiphanies of narrative texts, the ergodic epiphanies are not optional, something to enhance the aesthetic experience, but essential to the exploration of the event space. Without them, the rest of the world cannot be realized. (Aarseth 1999:38)

Inspired by Paul Ricoeur's *Time and Narrative* (Ricoeur 1984-1988) – and tying in with Grodal's later emphasis on 'first-person' experience – Aarseth argues that aporia and epiphany are the 'pre-narrative master figures of experience, from which narratives are spun' (1999:39). Operating on the same level as Ricoeur's epistemological variant of 'narrative', aporia-epiphany is a figure through which time manifests itself as experienced time.

With respect to the question of fiction in games, the notion of ergodic discourse has been productive because it represents an alternative to standard diegesis-based models of narrative and fictionality: games are not told, even if they may *contain* narration as well as other forms of mediation. The worlds that they invite us to engage with are not primarily diegetic worlds, but gameworlds. The specific nature and status of a gameworld as opposed to other kinds of worlds is a dimension that is lacking from Grodal's account.

However, the textual approach is limited in that it neither addresses the role of simulation nor fiction. While Aarseth's approach does not reject or deny the dimension of world simulation in computer games, it is nevertheless being subordinated under the model of the dialogical text. Consequently, the worldness of games is seen as a device in the repertoire of the intrigant rather than as a world in which intrigues take place. From this structuralist perspective, not much sepa-

rates *Doom* (id Software 1993) from *Zork* (Infocom 2005[1981]) or *Castle Wolfenstein* (Muse Software 1984), because the world simulation – and the particular kinds of perceptual participation that follows with it – is incidental to their primary functioning as ergodic works.

In contrast, I want to argue that in avatar-based games, the world simulation is the primary world of the game, a world that has the capacity to contain or colonise the 'intrigue' that structures interaction. Through simulation, the 'master experience' of aporia and epiphany does not have to be told (as in narrative) or enacted (as in drama), but can be experienced first hand. After *Cybertext*, Aarseth has moved on to more specifically game-oriented research, emphasising the role of simulation and virtuality rather than text-based interaction or 'ergodics'. However, as I will return to in chapter 4, Aarseth's concept of virtuality is articulated in opposition to the notion of fiction.

Ludology

Although ludology constitutes no clear group of theorists or tradition of works, the general term as it is typically being used nevertheless captures a distinctly game-centred and anti-narrativist strand of thought which developed in the wake of Aarseths's *Cybertext*, and which has developed as a response to the lack of a dedicated theoretical perspective on computer games in theories of digital media.

Following up on the general narrative-versus-ergodics model proposed by Aarseth, the Danish game designer and game theorist Jesper Juul (1998; Juul 2004) developed more specifically game-oriented ideas about how to understand the relationship between narration and play, calling special attention to the difference in temporality between narration and play. Playing a game is an activity that is always in the present, happening *now*, while narration is about the *prior*, what has happened. Therefore, Juul claims, you cannot have narration (the act of telling a story) and interactivity at the same time.

Other theorists who have been most commonly referred to as 'ludologists' are Markku Eskelinen (2001) and Gonzalo Frasca (Frasca 1999) – the latter being the one who most explicitly advocates ludology as the 'father discipline' of computer game studies[27]. As the name indicates, this strand of theory emphasises the distinctive nature of 'ludus': the activity of playing a game. As a privileged way of analysing this activity, ludology focuses on the formal mechanisms of games, with attention to the basic elements and structures that distinguish different

27 For an overview of the main arguments in the ludological position, see Frasca (2003). For my own critical review of the game-centred formalist approach, especially in its radical variant as represented by Markku Eskelinen, see Klevjer (2002).

kinds of game systems. Following up Aarseth's structuralist approach in *Cybertext*, Eskelinen and Frasca (especially the former) draw on literary semiotics[28] to argue how games require a parallel but different *lud*ology.

Even if ludology in its anti-narrative, polemic and 'purist' form is today largely denounced in computer games theory (including by Jesper Juul himself), the ludologist argument has had a strong and lasting impact on computer game theory during the early and formative years of the field of game studies. Game researchers now generally recognise that the overwhelming majority of computer games are not primarily in the business of telling stories, and that narrative in games performs a very different role from narrative in novels or films. Moreover, the tradition following Aarseth has brought attention to the aesthetic and cultural importance of what Jesper Juul refers to as the 'gameness' of games (Juul 2003a). The game, understood as an artificial conflict taking place within a rule-based system, is a distinct yet diverse cultural form that often blends with but should not be conflated with either 'fiction', 'simulation' or any other mode of practice or discourse.

Without a basic understanding of how different types of games are structured on a formal level, we will not be able to understand any of the complexity or representational messiness of game aesthetics as expressed through different technologies, genres and gaming situations. Also, the formalist approach – whether we call them ludologists or not – has contributed strongly to the construction of computer game studies as field of research with its own identity. The so-called ludology-narratology debate is so far the only obvious candidate for a disciplinary 'tradition' that might identify the young field of computer game studies.

My dedicated focus on simulated environments and the role of the avatar at the expense of formal game structures represents in this context a complimentary perspective, but also implies a critique of a tendency to place too much weight on the structures and mechanisms of the abstract game system, particularly with respect to avatar-based games. My approach also implies that the difference between a game and a computer game is more significant than the term 'ludology' in many cases seem to imply. As I will return to below, the formalist and structuralist approaches are also often problematic in the way they tend to confirm and reinforce an unproductive binary of 'representation' versus action and control, and in the way they are uncritically borrowing established conceptions of fiction from film and literature.

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28 While Eskelinen seems to be the only 'narratologist' in the group (– developing his formal theoretical framework of the 'gaming situation' in dialogue with leading figures like Gerard Genette, Seymour Chatman and Gerald Prince), Frasca's thesis *Video Games of the Oppressed: Video Games as a Means for Critical Thinking and Debate* (Frasca 2001) draws mainly on the semiotics of Charles S. Pierce.

On the other hand, I find that a particularly productive element to be taken from the formalist tradition is the concern with *simulation* as a fundamental representational form of the computer game. This emphasis is especially strong in Frasca (2003) and Aarseth (2004), both of whom have informed the general orientation of my own work. The centrality of simulation and the principle of the model is my most direct link to the formalist tradition, although re-interpreted via Kendall L Walton's theory of representation, and applied to the more specific context of avatar-based singleplayer games[29].

I also want to point out that my own approach is less directly design-oriented than some variants of the formalist approach (notably Frasca and Juul). My main focus is on the role of fiction and embodiment, not on how game systems and game mechanics are (or should be) designed from a formal and structural point of view. As noted in the introduction, my analysis could have implications for certain aspects of computer game design, but the traditional issues and problems of game design are not addressed.

Textplay

Julian Kücklich's paper "The playbility of text vs. the readability of games: towards a holistic theory of fictionality" (Kücklich 2003) applies possible world theory to the analysis of computer game fictions, emphasising the process of 'fiction-making' (2003:101), of how fictional worlds are established and maintained through the interaction between player and the game system. However, Kücklich's application of possible world theory is different from Ryan's theory of recentring. A central concept in Kücklich's 'holistic' approach is Wolfgang Iser's notion of *textspiel* ('text-play'), which posits the reading of literary texts as an interactive process, in which the reader 'plays' with the text in order to establish meaning. Just as the reading of literary texts is an interactive process, Kücklich argues, playing a game can also be considered a form of reading, an interactive process of meaning-making. Texts and games are analogous processes of fiction-making ('poiesis'); as readers/players we construct worlds by 'gap-filling' the real into the imaginary, and it is this interplay between real and fictional worlds which can be described in terms of possible worlds theory. The playing of a computer game, Kücklich suggests, is a 'semiotic machine' (a concept borrowed from Umberto Eco) in which different processes of meaning-making (or 'semiosis') interlock with each other in the interaction between the player and the game.

29 The relationship between the 'Waltonian' notion of fiction and Aarseth's recent discussion on the 'virtual' as applied to games will be discussed in chapter 4.

Kücklich's unified model of playing-as-reading or reading-as-playing represents in many ways an antithesis to the concept of 'fictional world' as found in Walton and Ryan. While Ryan uses the category of possible world to formulate a theory of immersion and subjectivity, Kücklich adopts it as part of a reader-response theory of fiction in computer games. 'Fiction', according to Kücklich, whether in literary texts or in computer games, is the result of *reading*, a semiotic process of world-building in which the reader 'plays' the text. This notion of fiction has no place for simulation, other than as a metaphor for a semiotic process of interpretation:

> However, in fictional texts, the procedural activity is something external to the text, something that takes place in the reader's mind rather than within the text itself. In this sense, fictional texts are more interactive than simulations, because they absolutely require the participation of the reader. Simulations, on the other hand, are mostly self-sufficient enough to run at least for some time without external input. [...] Many digital games, however, are both: simulations *and* fictions. The physical aspects of the game-world are simulated by the game's physics engine, while the aesthetic aspects are the product of a process of fiction-making that takes place between the player and the game itself. (Kücklich 2003:101)

This model is quite instructive in the way it contrasts with the notion of fiction that has been outlined in the previous chapter. The archetypical model of simulation is the closed computer simulation, which simulates all by itself and does not need our participation. Fiction-making is then something that goes on 'in the reader's mind', as an interaction-based interpretation of what the simulation means. This 'de-fictionalisation' of simulation in games makes perfect sense from the point of view of reader-response literary theory; simulation is seen as discourse, as 'text', which is being read as fiction when we interact with it. Our interaction is not merely a 'material construction', as Aarseth would say, but becomes an 'investment of belief' into the simulated environment:

> The player's role in the process of fiction-making cannot be overestimated. It is only through the player's investment of belief into that world that the game-simulation becomes a fictional world that can be inhabited and explored by the player. Samuel Taylor Coleridge's "willing suspension of disbelief" is of equal importance in game-fictions as in literary texts or in other forms of fiction. Therefore, if we want to understand digital games as forms of fiction, we must take the player's interaction with the game into account. (Kücklich 2003:102)

What Kücklich argues is that the fictions of literary texts and computer games are constructed via analogous processes of reading. This 'textplay' unifies the literary

world and the computer game world under a single (holistic) concept of fiction-making, according to which game-playing is seen as a semiotic construction of diegetic worlds. In this perspective, whether a computer simulation is entirely self-sufficient or 'mostly' self-sufficient is of little importance, as it is not the interaction itself but the *interpretation* of this interaction that matters to the establishing of a fictional world. Interaction (playing) is the means through which the player can comprehend and understand what the simulation is about. The player-reader puts the pieces together, in an act of practical (or experiential) hermeneutics.

We should note that Kücklich's notion of the text-game is different from the 'intrigue' of Aarseth's ergodics. While both variants highlight the playable text, Kücklich emphasises that the play of ergodic construction is also a play of interpretation, an investment of belief into a fictional world. In other words: 'ergodics' cannot be separated from the semiotic process of constructing a fictional world, and this process can be described with the help of possible world theory.

Kücklich's theory of play-reading is a useful alternative to Aarseth's distinctly anti-diegetic dialogical model, and it highlights the importance of the process of fiction-making over the ergodics of material construction. However, the notion of gap-filling does not capture the fictional rationale of the interaction itself, as a practice of make-believe. This practice of make-believe is itself not a textual practice, not a reading, although it can be interpreted or read in various ways.

Half-Real

The aims of this study partly converge with the concerns in Jesper Juul's recent book *Half-Real. Videogames between Real Rules and Fictional Worlds* (2005), which is so far the only systematic and genre-oriented analysis of the role of fiction in computer games[30]. While the book clearly differs in important respects from Juul's earlier 'ludological' work, the central themes and arguments still inform his conceptualisation of fiction in games. Theoretically, there are many points of contact between *Half-Real* and my own approach – including a central focus on the relationship between 'world' and 'system', and a concern with the uniquely computerised nature of computer games. Like Ryan and Kücklich, Juul also draws

30 Juul's Ph.D dissertation from 2003 and his book from 2005 have identical titles – the latter being a revised version of the former, but differing from it in a number of respects. Theoretically, a notable difference is that the dissertation uses Walton's *Mimesis as Make-Believe* to describe the relationship between rules and fiction, a reference which (for good reasons) has been removed entirely from the book version. My discussion here uses the revised book edition as a point of departure, but refers specifically to the theoretically more elaborated dissertation version when indicated.

on possible worlds theory to conceptualise the notion of 'fictional world', and proposes a dualist model that is similar to Kücklich's model of 'simulation' versus 'fiction'. The main concern of *Half-Real*, as the title indicates, is the relationship between the reality of the game and the imagined world of the fiction. The book analyses how game rules and fictional worlds combine, collaborate and compete in different ways in different categories and genres of computer games. When we play games that encourage us to imagine worlds, Juul argues, our actions are at once meaningful here-and-now (in the actuality of playing the game) and in the fictional world that is projected by the game. At the same time, he emphasises that playing a game is at heart a rule-based activity that does not need make-believe in order to be meaningful and interesting; many types of games have no fictional worlds at all, and many have 'incoherent' worlds which strongly discourage us from imagining them as worlds (Juul 2005:123).

The notion of the 'half-real' resonates with Ryan's distinction between the 'telescope' and the 'space travel' mode of interaction; we could say that whereas the former positions the user in front of a rule-system, the latter encapsulates the user within fictional world. However, Juul's dualist ontology is not articulated in terms of subject-positions; it is not to do with the recentring or non-recentring of the subject. As Kücklich, Juul does not employ possible worlds theory as a theory of immersion, but as a theory of interpretation, of 'gap-filling'; a theory of how we as players construct fictional worlds out of the 'cues' given to us in the game.

In Juul (2003b), the concept of 'cuing' is proposed with reference to Walton's *Mimesis as Make-Believe*; the various elements of the game (including the rules) are props that 'prompt' imaginings when we play. In this 'prop-centric' account (2003b:119), Juul emphasises that *actions* also function as props in games of make-believe.

> Games can *prompt* players into imagining worlds in a large number of ways: graphics, sound, text, cut-scenes, the game title, the box or manual, haptics and rules. Additionally, the actions that the player performs by moving a mouse, pressing a key on a keyboard or using a game controller, are *props* that signify actions in the game world: pressing the mouse button may signify shooting a gun; pushing the stick on the game controller to the right may signify moving a character to the right in the game world. (Juul 2003b:120)

In Juul (2005), Walton's theories are left out, with little or no change to the analysis. The most immediate reason for this seems to be that a theory of 'props' and 'prompters' is not really needed in the context of his argument, as the notion of 'cuing' brings the idea across well enough. Also, I would argue, Walton's theory of make-believe, if implemented as more than merely a theory of prompting or 'cuing', would in fact conflict directly with Juul's formal separation between rules

and fictional world. Whereas the former is a theory of games *of* make-believe, Juul attempts to explain games *as* make-believe. Walton's central argument throughout *Mimesis as Make-Believe* is rooted in the concept of fictional truth; fiction is that *which is to be* imagined. Juul's notion of fiction, in contrast, represents precisely the position that Walton argues against: fiction is that which is imagined. It is this imagined world that is 'cued' by the playing of a game; whereas the playing takes place in the rule-governed reality of here-and-now, this (real) activity also *projects* a fictional world. The projected fictional world is constructed in the mind of the players, as "the player fills in any gaps in the fictional world" (Juul 2005:121).

The projected world, according to Juul's model, must be separated from the notion of *game space*, which is a space defined by rules:

> Rules separate the game from the rest of the world by carving out an area where the rules apply; fiction projects a world different from the real world. The space of the game is *part of* the game in which it is played, but the space of a fiction is *outside* the world from which it is created. (Juul 2005:164)

This strikes a chord with Huizinga's notion of the 'magic circle' as discussed in chapter 2; the 'world' of games is not the same as the 'world' of fictions. Juul's distinction between 'world space' and 'game space' is an attempt to clarify this relationship with respect to the particular case of computer games. He points out that computer games typically structure the relationship between game space and world space differently than board games or sport. He uses computer sport games as a central example: in those games, the (playable) game space is placed *inside* a fictional world, delineated as for example a fictional football field or a fictional boxing ring (2005:165).

How this relationship between game-space and fictional space is played out in games like *Super Mario 64* (Nintendo 1996) is more unclear from Juul's argument. Without going into specifics, he concludes that the bounds of a 'coherent world game' are 'reasonably motivated by the fictional world' (2005:166) – with reference to the phenomenon of 'invisible walls', which is a common (and often debated) feature of contemporary action adventure games. It could be that he considers game spaces of such games to be framed within a fictional world in a similar fashion as with sport games, only less explicitly so, and with a need for invisible boundaries to define the game space. The game space that is projected on the screen is placed in a fictional context, but is nevertheless delineated as part of the real world, otherwise it could not be a game space; otherwise it could not be played.

This is a paradox that sits well with Juul's general model of the 'half-real': A real, playable space is being framed within a fictional world. While Juul's primary concern is with how the meanings of the latter are being 'cued' by what is going on in the game space, he also emphasises how the rules of game are typically 'cued' by

the fictional world; when we face evil-looking monsters, we are usually correct to assume that there is a rule prescribing that they should be destroyed or avoided (2005:177).

Unlike game spaces, in which our activity necessarily takes place in the here-and-now of play, projected fiction is separated from the actual world by virtue of also projecting its own *temporality*; the fiction of games, Juul argues, just like the story worlds of film or literature, takes place in a different time-space. Whereas play is real-time, fictional space has its own *fictional time (Juul 2005:141)*. In a game like for example *Tomb Raider*, Juul argues,

> [...] the *actions* that we perform have the duality of being real events and being assigned another meaning in a fictional world. Additionally, since our actions take place in time, that time shares the duality of being both real time *and* fictional world time. (2005:142)

Fictional time is ontologically separated from play time (the time it takes to play the game), the former being a projection of the latter. The time of the (fictional) game world is a projection of the time of the (real) play world. In real-time games, the play time "has a 1:1 projection to the game world's fictional time". A game like *SimCity* (Maxis Software 1989) is not real-time, because fictional time maps onto play time in a different way: "Playing for two minutes can make a year pass in the fictional time/game world." (2005:143).

The theory of how fictional time is 'cued' by play is linked to Juul's distinction between coherent and *incoherent* game worlds. An incoherent game world is when "the game contradicts itself or prevents the player from imagining a complete fictional world" (2005:123). It is difficult to understand, for example, why Mario in *Donkey Kong* (Nintendo 1981) has three lives, and this makes it difficult for us fill in the blanks, to imagine a coherent fictional world. Instead we simply explain it with reference to the rules of the game; we accept that three lives is a game convention:

> While, technically, any world can be imagined, and we could explain Mario's reappearance by appealing to magic or reincarnation, the point here is that nothing in *Donkey Kong* suggests a world where people magically come back to life after dying. In an informal survey of *Donkey Kong* players, all players explained the three lives by appealing *to the rules of the game*: With only one life, the game would be too hard. (Juul 2005:130)

Fiction in incoherent games like Donkey Kong, Juul concludes, is a provisional matter, and it makes the players more aware that imagining the fictional world of a game is optional; we can choose to believe in the fiction, or we can choose not to (Juul 2005:141).

Most contemporary avatar-based games in the action adventure genre, according to this perspective, are both real-time and coherent, and they generally do not have 'provisional' fictional worlds. The principle of the avatar serves as a privileged interface, as it were, which secures a 1:1 relationship between play time and 'fictional time'. As Juul notes, singleplayer adventure or 'journey' games, through their linear and progressive structure, bring the fictional world more to the fore of experience. Because the spaces and events of the fictional world are meant to be experienced only once, and because the journey model encourages a lot of 'local' variation of rules and potential actions along the way, the adventuring player is more likely to become oriented toward the fictional meanings at the expense of the underlying rules that define the game space (Juul 2005:195).

A critical approach to the rules perspective

Half-Real's investigation into the role of fiction in computer games is a vital contribution to the field, integrating a theory of fictionality in games with a systematic and empirically founded account of central generic variations. In comparison to more general theories of fictionality (or narrative), Juul's conceptual framework is dedicated to games and – specifically – to computer games. The role of fictional worlds is analysed from the point of view of the abstract rules that structure games, and this is a perspective that is not included in Walton and Ryan's account as outlined in the previous chapter. Whereas Walton never considers the function of rules in games that are *not* games of make-believe – essentially because his theory is a theory of representation, not of games – the attention to this type of rules is precisely Juul's point of departure; rules of play have the capacity to operate as game systems that structure meaningful activity independently of any mimetic dimension. Such rules are abstract in the sense that they constitute a set of instructions, which has a non-ambiguous formal structure. It is because a rule-set is given an abstract and formal articulation that we can think of it, on a formal level, as *themable*, in the sense that "a set of rules can be assigned a new fictional world without modifying the rules" (2005:199). The unique status and functioning of formal rule-sets is lost if we uncritically apply traditional theories of representation to the study of games.

An emphasis on the abstract articulation of rules and game systems also makes sense when applied to computer games. Because the rules need to be implemented by a computer, they need to be expressed in terms of an abstract, formal system. The central difference between games and computer games is that in the case of computer games, instructions are not instructions to the player

directly but instructions to the computer[31]. Consequently, the player cannot break the rules unless the computer can be manipulated or otherwise made to cooperate. This also means that the player cannot relate directly to the instructions without somehow sharing the point of view of the computer.

Finally, Juul makes an important point when he observes that screen-mediated environments are 'carved out' from the larger world in a different way than other game spaces. In this respect, Walton's discussion of 'modes and manners' of make-believe is unsatisfactory, as he does not address directly the difference between screen-based 'work-worlds' and the worlds of, for example, children playing make-believe in the woods. It is hard to see how this distinction would not be significant in terms of how fictionality and participation is structured in the process of make-believe; screen-based spaces – unlike other spaces of mimetic play – are information spaces, projected as synthetic images but still playable in a concrete and tangible sense. Juul goes some way to account for the paradox of how play relates to fiction in those kinds of information spaces.

However, the rule-based perspective on fiction in computer games also has a number of limitations, some of which are not adequately addressed, I would argue, in *Half-Real*. Firstly, the links to a larger tradition of mimetic play are not addressed. This leads to an over-emphasis on the dimensions that distinguish formally articulated game-play from less rigid (and less agonistic) forms of mimetic play, and a theoretical blindness to what Walton would call the objectivity, the 'truths', or shared nature of (explorable) make-believe environments. Walton's basic argument that rules of games of make-believe generate fiction *independently* of what the participants imagine about those truths may be referred to in the dissertation version of *Half-Real*, yet it is not seriously taken into account, as it does not fit with the rules-versus-fiction model.

Because the rule perspective does not accommodate any notion of fictional truth or fictional objectivity, there is a lack of attention to the process of simulation as something that the players perform. This implies that *Half-Real* – maybe because one of its critical concerns is to refute literary notions of 'immersion' – has no theory of the role of participation and subjectivity in the construction of fiction. As with Kücklich's notion of 'textplay', fiction is instead conceptualised merely as subjective imagination; fiction is not constituted by acts of simulation, but by the (gap-filling) 'projection', reading, or *interpretation* of what goes on in the

31 This point only applies to instructions that are actually implemented by the computer, which the central rules usually are in computer games. Obviously, we can think of rules that are not implemented by the computer but which are still considered as authoritative game rules by the players; an example would be online racing games where the simulation allows you to go in the reverse direction on the track and crash into your fellow players – a possibility that is most often blocked, as it tends to ruin the fun for the majority of players.

game space – 'simulation' apparently assumed to be something that the computer (or the 'rules') is doing, not the player.

Secondly, Juul's concept of fiction is too strictly committed to the literary notion of 'diegesis' or story-world; fiction is never considered as anything other than *projected* fiction, operating in its own separate time-space, its own 'fictional time' – or we could add: operating in diegetic time, the time of the told. This mirroring of the narratological divide between discourse and story, as established by Gerard Genette and Seymour Chatman, is explicitly acknowledged by Juul[32], yet he does not consider whether computer games (or mimetic games in general) could be a phenomenon that calls for alternative and non-diegetic conceptualisations of fictionality. As a literary theorist, Juul never questions whether the dual-level model is applicable to games and simulated environments in the same way as it is to novels or films; in the theoretical universe of *Half-Real*, 'fiction' is simply synonymous with 'diegesis'. This straightforward import from literary and film theory has strong limitations, because it implies that the activity of play is only fictionally relevant to the extent that we can consider it as homologous to *discourse*. It rules out the idea of real-time fictional worlds, and it separates considerations of fictionality from considerations of embodiment and subject-positioning.

The diegetic (or discursive) notion of fiction also grounds, I would argue, Juul's theory of 'coherent' versus 'incoherent' fictional worlds. What is lacking from the surreal world of *Donkey Kong*, according to Juul's analysis, is the lack of an *explanation* for why Mario has three lives. In other words: the challenge to the player is here a lack of diegetic coherence, which could be fixed with a little more context – a little more narration to explain how things work out Mario's world.

However, if we accept that the notions of 'fictional world' and 'story' should be kept distinct, a nonsensical storyline does not in itself prevent us from imagining a fictional world as complete – given that the world is not so self-contradictory that it becomes impossible to imagine it as an actual possible world. From the point of view of Walton's theory of fictional truths, Mario's three lives is simply a fact within that world, no matter how puzzling or 'improvised' it would seem to a player; take it or leave it. Surely Mario's destiny is a strange thing, but fictional worlds are often very strange for no particular reasons. Mario can magically resurrect because, we must assume, he is given three attempts to complete his mission in a hostile world that is especially staged for him. It is this *gameworld* that we are invited to participate in, a world that is no less of a 'world' because it is organically structured as a stage for a contest. And it is certainly no more incoherent or provisional just because it appears surreal. We may be inclined to engage with this world in a more distanced and 'telescopic' (and in this sense 'provisional') manner than,

32 "In my description of time in games, play time is comparable to discourse time, and fictional time is comparable to story time" (2005:160).

say, *Metroid Prime*, but this tendency cannot be ascribed to fictional incoherence. It would not encourage any deeper or less provisional commitment to the fictional world, I would argue, if the *Donkey Kong* universe were provided with a storyline that specified why Mario were only given three lives instead of four. In simulated environments, being immersed into the fiction is not the same as being immersed into a story, although the two often collaborate and merge in various ways. This also implies that the 'blue arrows' of videogames (Juul 2005:190) – elements of the gameworld that are not recognised by the *characters* of the gameworld – may well belong to the fictional world even if they do not belong to the diegetic world.

The fact that simulated environments are not primarily diegetic (or story-based) fictional worlds also accounts for the typical implementation in games of 'characters who know you' (Juul 2005:183). This seemingly strange but very common phenomenon occurs when, for example, in *Sly 2: Band of Thieves (Sucker Punch Productions 2004)*, the sidekick Bentley the turtle guides Sly (and the player) through the mission via some sort of communication device while referring to the buttons on the controller. This type of instruction and guiding may also feature in less cartoonish games, like for example Metal Gear Solid 3 (Konami 2005). While such a 'subversive' transgression of boundaries may be prohibited by certain types of gameworlds, I want to argue that as a general principle, there is in fact no 'cross-dimensional' issue at play here, as game fictions are not delineated by a 'fourth wall' as in film or literature. While 'breaking out' from a *diegetic* world into the realm of the discourse that produces this same world is surely a dimensional leap (as seen for example in the film *Last Action Hero* or the didactic novel *Sophie's World*), the boundaries of non-diegetic fiction are always, by their nature, more unclear and more ambiguous. Those boundaries do not separate between the time-space of the telling and the time-space of the told, but between different frames of make-believe – boundaries that do not carry the same ontological significance. This means that when Bentley or Major Tom start talking about button configurations, we do not necessarily need to position ourselves *outside* the boundaries of fiction to make sense of it, as Juul implies; it simply means that the boundaries of the make-believe, in some important respects, are extended (as they sometimes are) to include elements of the physical interface of the game world. This kind of 'extended fiction' may not be compatible with a certain type of seriousness demanded by some story worlds, but seriousness is not a requirement in the construction of fictional worlds.

Finally, the rules-and-fiction approach implies a notion of *rules* that is unable to capture players' involvement with computer-simulated environments, and hence also poorly suited to account for the unique role and status of fictional worlds in avatar-based computer games. Even if, as Juul emphasises, "...fiction *matters* in games and it is important to remember the duality of the formal and the experiential perspectives on fiction in games" (2005:199), that does not change the

fact that rules and fiction are 'formally separable' (2005:177). In this perspective, the distinction between *game rules* – which Juul specifies as 'explicit game rules' (2005:58) – and *regularities* (or 'laws') becomes less significant:

> A computer-based soccer game needs to implement the physics of the players and the soccer pitch as well as the rules of the game. Gravity existed prior to the invention of soccer, and the human body existed prior to the invention of the foot race, so including them in a game is a choice that the creators of the game make. It therefore makes sense to see the laws of physics on the same level as the conventional rules in soccer: The main difference between the rules of a video game and the rules of a sport is that sports use the preexisting systems of the physical world in the game. (Juul 2005:58-59)

Gravity and offside rules are here seen as being on the same level, because, from the point of view of the computer, both are instructions; the kind of rules that specify or instruct limitations and affordances. Generally speaking, instructions exist independently of their implementation by a player; rules are rules whether they are followed or not, and we can specify them, write them down on paper. These particular kinds of instructions are also, by definition, formal and domain-independent – or 'themable' – otherwise they could not be implemented by a computer. In contrast, regularities are not independent from action; they exist only in so far as they are being 'followed'; we do not 'implement' regularities the way we implement instructions. It does not make sense to say that regularities are themable, unless we give them, for heuristic and scientific purposes, a formal articulation; we specify them as a set of instructions, as an abstract model.

The emphasis on formal rules instead of laws and regularities is necessary and productive when we want to understand how game systems (computerised or non-computerised) structure the activity of play. However, the rule-oriented approach does not adequately account for the phenomenological status of 'rules' from the point of view of the player. From this perspective, it becomes important that computer games – unlike non-computerised games – have the capacity to turn instructions into regularities or laws; into 'rules' that we do not 'follow' the way we follow the rules of Monopoly. This also implies that the computer has the capacity to integrate the rules of the game (including, in many cases, the rules that define goals and winning conditions) with the regularities of a concretised, simulated environment. In typically avatar-based games, like for example *Halo* (Bungie 2001), the explicit game rules are almost completely integrated with the behaviours of the simulated agents and environments; the equivalent to the conventional rules of computer game football would be the instruction to progress and to fulfil the mission objectives, as well as, in some sense (by a stretch), the general imperative to stay alive. Other than that, there are no conventional game

rules to enforce or 'uphold' (Juul 2005:53). Whereas a referee in a football match can be said to uphold the rules of the game, the central task of the computer is of a considerably more god-like nature; to uphold the simulation as such; to uphold a world.

This 'worldness' of the computer simulation, which I will discuss in more detail in chapter 5, calls for an alternative ontology of computer games. As long as we keep within a theoretical model that focuses our attention on the collaboration (or 'interplay') between 'rules' and the 'representational layer' (Juul 2005:136), the fictional worlds of avatar-based computer games will boil down to a long list of 'modifications' or exceptions to the general rule of themeability. It is illustrative that when Juul considers the dimension of *space* in computer games – which is hardly a small detail – the rules-versus-fiction model is dangerously close to the breaking point; space, Juul observes, is a "special issue between rules and fiction", where the two 'completely overlap' (2005:188). He ends up by concluding that "... level design, space, and the shape of game objects refer simultaneously to rules and fiction. This is a case where in which rules and fiction *do* overlap" (2005:189). It is not hard not to agree with this analysis. What Juul is saying, in effect, is that our engagement with simulated environments is the (notable) exception that does not respond very well to the rules-plus-fiction model. This engagement is typically mediated by the principle of the avatar. The archetypical 'special issue' of computer game representation, in other words, is avatarial embodiment.

The cursor theory

In "The Myth of the Ergodic Videogame. Some thoughts on player-character relationships in videogames" (2002), James Newman rejects a character-based understanding of the role of the avatar, which would emphasise the role of 'identification' in relation to the visual or cinematic features the avatar. His concern is with the avatarial relationship of agency and control, and he distinguishes sharply between the player-character as part of our 'On-Line' activity of play (when the player is in active control) and the same player-character as perceived 'Off-Line' – in "periods where no registered input control is received from the player" (Newman 2002:4). The player's immersion with the game, he argues, is based on the On-Line 'interface-level connection' with the player-character, which defines how the player is able to engage with the world of the game. The visual representation of the player-character is not important to play if it has no impact on what the player is able to do through the player-character. This 'representational' aspect of the player-character has significance through the Off-Line dimension of play; the visual appearance of on-screen characters is therefore important when we are *watching* rather than playing.

My own understanding of the role of the avatar is in line with Newman's central argument: the avatar is primarily a mediator of agency and control, not a 'character' that we identify with on the basis of its visual appearance or what it may do or say as a character in 'Off-Line' sequences of the game like cutscenes, pre-written dialoges and so on. As an embodied extension or prosthesis, the avatar is important because it enables us to act in the world of the game. However, Newman's account of the 'On-Line' player-character relationship is also significantly different from my own conceptualisation of the avatar. The central difference is that, according to Newman's model, the player-character, because it does not function as a character in a film, is to be understood as more of a *tool* than as a subject-position. The primary player-character relationship, he argues, "is one of vehicular embodiment", and the playable character is a "suite of characteristics or equipment utilised and embodied by the controlling player." (2002:1). He explains:

> Thus, On-Line „character" in the sense we understand it in non-ergodic media, dissolves. Characters On-Line are embodied as sets of available capabilities and capacities. They are equipment to be utilised in the gameworld by the player. They are vehicles. This is easier to come to terms with when we think of a racing game like Gran Turismo where we drive a literal vehicle, but I am suggesting that, despite their representational traits, we can think of all videogame characters in this manner. On-Line, Lara Croft is defined less by appearance than by the fact that "she" allows the player to jump distance x, while the ravine in front of us is larger than that, so we better start thinking of a new way round… (Newman 2002:9)

My objection would be that Lara Croft or Mario, considered as 'On-Line' player extensions, are far more than 'sets of available capabilities'. At the same time it is important to emphasise, as Newman does, that computer game avatars are primarily mediators of agency rather than characters in the literary or cinematic sense of the term. Newman here draws on Mary Fuller and Henry Jenkins' influential analysis of narrative in Nintendo platform-adventure games, which also highlights the distinction between 'character' (as we know it from other media) and what children's interaction with Nintendo characters is really about:

> In Nintendo®'s narratives, characters play a minimal role, displaying traits that are largely capacities for action: fighting skills, modes of transportation, preestablished goals. The game's dependence on characters (Ninja Turtles, Bart Simpson, etc.) borrowed from other media allows them to simply evoke those characters rather than to fully develop them. The character is little more than a cursor that mediates the player's relationship to the story world. (Fuller and Jenkins 1995)

As with Newman, who explicitly links his argument on to their analysis, Fuller and Jenkins' rejection of cross-media character leads to the claim (admittedly almost as a footnote) that playable characters are to be considered merely as tools or as vehicles of action. If we follow this lead, the theoretical framework is set: Mario must either be conceptualised as 'character', or, alternatively, as 'little more than' a *cursor*. When 'agency' is being defined in opposition to (visual) 'representation' or appearance, and 'capacity' is contrasted with (diegetic and cinematic) 'character', embodiment gets lost in the analysis, and fiction is assigned to the inconsequential (and Off-Line) realm of visual appearances.

The cursor theory of avatarhood has heuristic value if we think of games as a relatively new and unfamiliar medium. When we look at computer game interaction in comparison to how we interact with and make sense of traditional media, the persistent *instrumentality* of the gaming experience stands out as a striking differentiating factor between the two (especially if we watch kids play, who are often relentlessly cynical and competitive). However, it seems to me that this initial academic shock or surprise over the sheer 'gameness' of computer games has led to a theoretical over-emphasis on the instrumental imperative that computer game interaction carries, at the expense of a consideration of how the fictional as well as the agonistic relates to the mechanisms of embodiment and subjectivity in play. Whereas the various dimensions of virtual embodiment have been thoroughly philosophised and celebrated by visionaries and theorists of art-based and industrial VR, children's (and adults') play with Mario or Luigi has mostly either been ignored or interpreted through a distinctly 'no-nonsense' comparison with the abstract cursor. The cursor is, Marie-Laure Ryan suggests, 'the minimal form' of the screen-projected avatar[33].

However, while the cursor is the 'minimal' as well as a paradigmatic form of instrumental agency with screen-projected environments in general, it does not in any way capture the essence of avatar-based play. For the cursor to be able to function as an avatar, it would need to belong to the simulated environment in some way. Like the spaceships in *Spacewar!* (Russel/Graetz/Wiitanen 2006[1962]) or Mario in *Super Mario Bros*. (Nintendo 2004[1985]), the 'cursor' would have to be, at least in a minimal fashion, restricted by and responding to the limitations and forces of the environment. It would have to be able to move – or at least to have a definite location – as a believable object or agent within that space, and it would need to show some sign of being exposed to the environment in one way or another.

If avatars are no more than elaborate cursors, agency in avatar-based games will be essentially no different from agency in any other type of computer game

33 "In third-person games, such as the Mario Brothers games for the Nintendo Play Stations, the user controls a tiny graphic of his character. The minimal form of this representation is the abstract shape of the cursor" (Ryan 2001:309).

(– or from agency in any mouse-interfaced software, for that matter). Hence, Newman can conclude:

> In games like Tomb Raider or Super Mario, just as in Friedman's Civilization, the primary-player may not see themselves as any one particular character on the screen, but rather as the sum of every force and influence that comprises the game. (Newman 2002:11)

While Ted Friedman's pioneering analysis of *SimCity* (Maxis Software 1989) and *Sid Meier's Civilization* (MicroProse 1991) may be applicable to any computer game on some level, as I will discuss in chapter 5, the principle of the avatar conflicts with the logic of management games. As I have argued elsewhere, generic differences within the diverse field of computer games need more attention and analysis[34], and the avatarial prosthesis is a central generic marker in this respect; it is neither, I will argue, a 'character on screen', nor merely a cursor or a 'complex' of forces and influences, but an incarnated subject-position for the player within a fictional environment.

This also implies that the concept of the avatar needs to emphasise, in contemporary 3D-based games, the navigable camera as a fundamental aspect of the player's embodiment within the gameworld. In Newman's analysis, the camera-mediated viewpoint is considered relevant to 'On-Line' relationship "only in so far as it impacts upon the game". He does not elaborate on what kind of 'impact' is relevant in this context; he refers to cases when the 'dynamic viewpoint' is directly controllable to some extent, as in *Super Mario 64 (Nintendo 1996)*, but seems to consider this aspect as an exception to the rule. In any case he makes it very clear that the viewpoint – navigable or not – is not included as part of the 'interface-level connection' that mediates the vehicular embodiment of the player. It is the player's On-Line relationship to the *player-character* that mediates agency and grounds the player's sense of immersion and engagement with the gameworld, not the viewpoint:

> However, if we see first-hand participation as being derived from an interface-level control loop we can disentangle viewpoint from reported feelings of immersion, engagement and *being-in-the-gameworld*. (Newman 2002:6)

This 'disentangling' of viewpoint from the interface-level control loop must necessarily exclude the entire category of first-person perspective games, in which the 'viewpoint' is also the player's projected body in the game. It must also somehow imply that when we control player-characters in a game where the camera 'tags

34 See Klevjer (2005).

along', as it were, in some fashion, then whatever that camera does will be not part of 'agency'. However, in *Tomb Raider* (Core Design 1996) or *Super Mario 64* – or any other third-person 3D action adventure game – we *do* navigate the camera as well as our 'character' through the environments, and the particular configuration of the 'control loop' that is set up between player, camera and character is precisely what also configures the agency of the player in those games. In Newman's model, the 'impact' of viewpoint on the interaction is recognised, but only as some sort of exception. As a general rule, he claims, viewpoint must be kept separate from agency or 'capacity', because "the degree of participative involvement and engagement with any specific game is not contingent upon the mode of representation". (Newman 2002:7)

My argument is that viewpoint cannot be dismissed as a 'mode of representation', and that emphasising the role of the camera in constructing a 'being-in-the-gameworld' has nothing to do with theoretical 'visualism', as Newman claims. The camera, whether controlled directly or tagging along – or anything in between – is a central mediator of player action in contemporary games, especially in the 3D action adventure. It mediates agency and subjectivity in its most basic sense: the ability to move, look and hear.

The immersive fallacy?

The discussion over the role of the avatar and avatar-player relationships in contemporary computer game theory is closely linked to the idea of 'the immersive fallacy', as formulated in Katie Salen and Eric Zimmerman's introduction to computer game- and computer game design theory *Rules of Play: Game Design Fundamentals:*

> The immersive fallacy is the idea that the pleasure of a media experience lies in its ability to sensually transport the participant into an illusory, simulated reality. According to the immersive fallacy, this reality is so complete that ideally the frame falls away so that the player truly believes that he or she is part of an imaginary world. (Salen and Zimmerman 2004:450-451)

What Salen and Zimmerman here argue against is the myth of the Holodeck, the quest for complete immersion[35]. Drawing on Bateson's theory of framing, as I have outlined in chapter 2, they claim that the nature of play contradicts the idea that the computer game experience should be as immersive as possible in terms

35 The Holodeck, which Janet Murray uses as the ultimate model of total immersion in *Hamlet on the Holodeck (Murray 1997)*, is a perfect holographic reality simulator from the *Star Trek* series.

of its simulated reality. Play is typically characterised by a hyper-awareness of the paradox that is established through framing, and this awareness produces a double-consciousness (or 'hybrid consciousness') that situates the player at once inside and outside the frame of make-believe. "The metacommunicative state of mind", Salen and Zimmerman argue, "is deeply intertwined with the unique pleasures and experiences of play" (2004:450).

On one hand, the claim involved in this critique is that the Holodeck imperative, although valid in some respect and with certain types of games, is too strong and too dominant in contemporary design discourses, at the expense of the recognition of other types of engagement. The immersive fallacy 'grossly overemphazises' the pleasure of sensory illusion, and therefore "...misrepresents the diverse palette of experiences game offer" (2004:453). On the other hand, the notion of the 'immersive fallacy' also points to what Salen and Zimmerman see as a more fundamental misunderstanding of what play is about – or should be about – and it is here that they invoke Bateson's notion of metacommunication and the paradox of play.

> In any game, players move constantly between cognitive frames, shifting from a deep immersion with a game's representation to a deep immersion with the game's strategic mechanisms to an acknowledgement of the space outside the magic circle. Devotees of the immersive fallacy tend to see this hybrid consciousness as a regrettable state of affairs that will only evolve to its true state of pure immersion when the technology arrives. Play tells us otherwise. The many-layered state of mind that occurs during play is something to be celebrated, not repressed—it is responsible for some of the unique pleasures that emerge from a game. (Salen and Zimmerman 2004:455)

While we may agree with Salen and Zimmerman's general argument that game designers should pay more attention to the 'diverse palette' of different types and modalities of engagement in computer game play, there is also a theoretical assumption here about the 'true nature' of mimetic play – which underpins the general argument that "Play tells us otherwise"; that play is inherently anti-immersive. This assumption, I will argue, obscures the discussion of different modalities of immersion, and it also tends to cloud the analysis of player-avatar relationships.

In *Rules of Play*, the assumption that play is by definition anti-immersive is based on a game-centred reading of Bateson's "A theory of Play and Fantasy" (Bateson 1972). However, the paradox of play can only be seen as 'unique' in so far as it accentuates and plays out the more general paradox of metacommunication, which is a paradox of abstraction, or representation (that is, any communication that goes beyond simple mood signals). Secondly, 'the paradoxes of play' that

Bateson discusses in the article do not apply to games or even to what we usually consider as 'play' in particular, but to a broad category of make-believe, including '3D screens', Hollywood films and therapeutic interaction – the latter being Bateson's main focus of interest. Games are really not part of the picture at all, other than as a heuristic (and imperfect) model to make a point about the formal structure of framing in psychotherapy. This means that we cannot use Bateson as support for the thesis that 'play itself' contradicts the Holodeck imperative or the kind of immersion that we find in detective novels or Imax cinemas. The paradox of play, as a broad concept of the phenomenon of make-believe, is precisely about the kind of paradoxical pseudoreality and pseudoemotion that those types of experiences offer. The quest for total sensory immersion – whether it is a fallacy or not – does not aim for the frames to 'fall away', as Salen and Zimmerman assumes, but rather for the contrary; the technological wonders of immersion, from Victorian stereographs to theme park motion rides or 'fully immersive' Virtual Reality, are all about intensifying the paradox of mimesis, creating a hyper-awareness of technologically constructed artificiality.

At the same time, Bateson's main concern is more specific than this. For the purposes of psychotherapy (at least, it seems, for neurotic patients), he advocates the more complex variant of 'Is this play?' over the safer 'This is Play', as a method to improve the patient's ability to manoeuvre and cope with the complex psychological paradox of how 'as if' relates to reality. However, Bateson never claims that this particular kind of 'game' is the default mode of how the paradox of play operates – or should operate – in most forms of make-believe. The dimension of play that Salen and Zimmerman mainly addresses as lacking among the 'devotees of the immersive fallacy', and which is at odds with the immersive imperative of the Holodeck, is the 'hybrid consciousness' of dual-frame orientation during play. This imperative highlights the pleasure (and competence) of loose and flexible positioning during mimetic play, emphasising what Salen and Zimmerman call "the many-layered state of mind that occurs during play". This kind of engagement is characterised by "…shifting from a deep immersion with a game's representation to a deep immersion with the game's strategic mechanisms to an acknowledgement of the space outside the magic circle". However, dual-mode and frame-shifting play is not the only 'metacommunicative state of mind'. According to Bateson, meta-communicative competence is at the heart of *any* make-believe (– unless, as Bateson points out, one is either schizophrenic or neurotic). The paradox of play cannot be used as an argument against the immersive fallacy.

I am not arguing here that Salen and Zimmerman's attack on the 'immersive fallacy' has not got a point, or that computer games should emphasise immersive simulation over frame-shifting playfulness. It is important to draw attention to, as *Rules of Play* does, the typically loose and frame-defying nature of people's engagement with mimetic games and toys, which is different from the more rigid

imperative of simulation that we are more familiar with from traditional media and spectacular attractions. The two are different types of fictional interaction, two types of make-believe, and it makes little sense to directly compare them in terms of which one is more engrossing or engaging in a general sense. We may argue over whether *Half-Life 2* (Valve 2004) is more 'immersive' than *Breakout* (EC Interactive 2005[1978]), or vice versa, but it would be very much a case of comparing apples and bananas. The debate over the Holodeck model is not about levels of engagement or how 'meaningful' the experience is, but about different ways in which players are encouraged to position themselves in relation to the frames that define the 'what is going on here' of computer game experience. The relatively rigid positioning of *Halo* tends to produce 'engrossment', yes, but so does *Lemmings* (DMA Design 1992). The difference is that they do it (or fail to do it) through different dynamics of framing. There is no 'rule of play' that excludes Full Total Immersion from taking its place among the traditions and variants of mimetic play. The Holodeck, as a concrete idea as well as a more general ideal, is about stabilising and intensifying the paradox of play, not abandoning it.

Avatars: the 3-layer model

The (legitimate) eagerness to counter the cultural force of the Holodeck myth, combined with an opposition to the techno-romantic rhetoric and ideology that drives the mainstream industry, is part of the reason why the cursor theory of player-avatar relationships seems to pervade so much of computer game theory – in one form or another. The cursor model, as most explicitly advocated by Newman, is very much formulated as a down-to-earth opposition to the preoccupations with representational and sensory sophistication of contemporary game-spaces. In *Rules of Play*, although in a more nuanced fashion, the distinctly anti-immersive interpretation of the concept of framing is also linked to the analysis of player-avatar relationships. Borrowing from Gary Alan Fine's study of tabletop role-playing, which also utilises Bateson's notion of framing[36], Salen and Zimmerman suggest that the experience of computer game play can be described as a "three-fold framing of player consciousness – as *character* in a simulated world, as a *player* in a game, and as a *person* in a larger social setting..." (Salen and Zimmerman 2004:454).

36 Fine draws here on Erving Goffman's concept of framing, which draws directly on Bateson's concept as outlined in chapter 3. See *Frame Analysis: An Essay on the Organization of Experience (Goffman 1974)*. In social life, 'frames', according to Goffman, is that which organises individual's understanding of what situations are about; it provides an interpretation of 'what is going on'. Frames are "..rendering what would otherwise be a meaningless aspect of the scene into something that is meaningful" (Goffman 1974:21).

Fine's 3-layer model is here advocated as an alternative to "the immersive fallacy's ideal game", according to which the player would "identify completely with the character" (2004:453). The alternative approach means that the significance of character-identification and illusionistic immersion is not rejected, but instead complimented by additional framings. The result is a model of avatar-based interaction that echoes Juul's and Newman's dualism of rules-versus-representation, but which at the same time avoids the latter's radically one-dimensional emphasis:

A protagonist character is a persona through which a player exerts him or herself into an imaginary world; this relationship can be intense and emotionally 'immersive'. However, at the very same time, the character is a tool, a puppet, an object for the player to manipulate according to the rules of the game. (Salen and Zimmerman 2004:453).

This could be seen as a 'best of both worlds' approach to avatar-based interaction in games: whereas the 'protagonist character' that we know from traditional media secures our relationship to the imaginary world, the playable avatar is a tool, a piece of equipment, which secures our relationship to the rules of the game. In "Animated game pieces. Avatars as roles, tools and props" (2005), Jonas Linderoth also uses this framework and develops it further within the analysis of children's gaming practices. He suggests a triple-frame model for the player-avatar relationship that is similar to Salen and Zimmerman's:

1. A fictive character that you can pretend to be, a role.
2. A piece of equipment, a tool which extends the player's agency in the game activity.
3. A part of the players setting, props which can be used as a part of the players presentation of self. (Linderoth 2005).

Linderoth demonstrates that a theory of framing is productive in the analysis of player interaction, allowing us to see the flexible nature of players' engagement with the fictional dimension of computer games. The 3-level model is helpful for making sense of the intensely frame-shifting and 'messy' way in which players typically interact with their avatars. At the same time, considered as a theory of avatar-player relations, it does not leave much room for a notion of embodiment that goes beyond the purely instrumental (avatar as tool). The fictional dimension is accounted for in layer 1, but as with Salen and Zimmerman, this account seems to draw entirely on notions of character identification that do not discriminate between cinematic, theatrical or avatarial 'character'. As a consequence, we must assume, the kind of player-avatar relationship that is played out in racing games like for example *Gran Turismo* (Polyphony Digital 1998) would fall entirely outside the 'inner frame' of the fictional.

Linderoth excludes everything that has to do with fiction and representation from layer 2 in this model. He points out that the 'I' of the player-avatar relationship ('I need to find that key', 'I died' etc) also "...occurs in other cases when our ability to act in a certain activity systems is mediated by a tool" (Linderoth 2005). This is a timely observation, which may serve a de-mystifying warning against assumptions of 'decentred identity' and so on, but it also supports the more general idea that computer game representation is mainly a question of visual appearances and therefore largely inconsequential to the real action of play. In this perspective, the non-instrumental dimension of the avatar may easily be seen as an optional extra, as "A fictive character that you can pretend to be". If you choose to take on this identity, Salen and Zimmerman's dual-frame or 'hybrid' orientation comes into play: you role-play your avatar, as it were, staying 'in character', but you also use it as a piece of equipment.

Lisbeth Klastrup, in her analysis of multi-user virtual worlds, suggests a model of avatar-based play that is different from the 3-layer model:

> From a literary and possible world perspective, "games" (and other fictions) conjures up a fictional universe that we take as a reference point for the understanding of our actions within the world (killing a dragon is interpreted as the act of "killing a dragon", not as the continuous clicking of the mouse on some darkly coloured pixels). Hence, what we do as avatars is not interpreted as events with real world "value" or reference, on the contrary, our actions are interpreted as meaningful within the given universe which, during the act of playing, serves as the actual world reference to us. (Klastrup 2003:102)

Klastrup is drawing on Marie-Laure Ryan's theory of recentring to explain how our actions become fictionally meaningful through avatars; when we act through the avatar, the gameworld is the 'actual world reference'. There is a notable shift in emphasis here if we compare to Juul's model of the 'half-real; it is not the actions that *project* a fictional world (through interpretation), but it is rather the fictional actual world that makes our actions meaningful in the first place – 'during the act of playing'. We could say that whereas Juul emphasises how interpretation (of the fictional significance) follows from or is 'cued' from action, Klastrup emphasises how action follows from interpretation. The 'reference point' of the fictional universe is not seen as an inner (and optional) frame of character identification or role-playing, but as a frame that is already *given* by the fact that we are acting through the avatar.

The role of the computer

Klastrup's notion of the 'actual world reference', while not fleshed out as an explicit theory of avatar-based interaction, still provides a productive general model of avatarhood and fiction in computer games. The 'best of both worlds'-approach is useful as far as it goes, but it needs to be complimented with a perspective that takes the specific nature of computer-simulated environments into account. Gary Allan Fine's 3-layer model refers to tabletop role-playing, and is not developed with computer game avatars in mind. Hence his model will only be directly applicable to computer games to the extent that the computer-simulated player-avatar relationship is similar to any other game-based player-avatar relationship. My claim, as I will be arguing through chapter 4 and 5, is that the former is different from the latter in significant respects, and that this difference goes to the core of what we might mean with 'embodiment' in games.

Salen and Zimmerman's use of the 3-layer model, which consciously avoids drawing a line between simulation in computer games and simulation in games more generally, broadly reflects how the role of the computer is conceptualised in the so-called 'ludological' tradition of computer game theory. Espen Aarseth and Jesper Juul are both keen to downplay the presumed 'revolution' of computerised play and computerised fictions as compared to games and simulations in general. In "Genre Trouble: Narrativism and the Art of Simulation", Aarseth explains:

> It cannot be repeated often enough that the computer is not a medium, but a flexible material technology that will accommodate many different media. Hence, there is no "computer medium" with one set of fixed capabilities, nor is there "the medium of the computer game". Games are, at best, a somewhat definable genre. (Aarseth 2004:46)

Because games are medium-independent, Aarseth continues, they are also, in Juul's terminology, 'themable':

> A game can be translated from board and dice, to a live role-play out in the woods, to numbers and letters on a screen, to a three-dimensional virtual world. From *SpaceWar* (1961) to *Star Raiders* (1979), *Elite* (1984), to *X—Beyond the Frontier* (1999), not much has happened in the rules and gameplay: the games have increasingly better graphics, but the theme and objectives remain the same. *Rogue* (1980) and *Diablo* are basically the same game. (Aarseth 2004:50)

Aarseth's general argument is obviously correct; games are formal systems, and as such they are a medium-independent form. The formal ontology of games (the gameness of games) needs to be emphasised in discussions of game genre and

game representation. On the other hand, interaction and play is not medium-independent, and as I will show in the next chapter, props matter in important ways. We may accept, for the sake of the argument, that the concrete examples referred to in the quote above do testify to a strong structural similarity across different technological platforms and levels of representational sophistication. Nevertheless, the games listed are all *computer* games, and it seems that Aarseth hesitates somewhat to include board games or live role-playing into a list that would exemplify 'basically the same game'. My argument is that the computer makes all the difference. Maybe 'not much has happened' between *Spacewar!* and *X – Beyond the Frontier*, but from board and dice to three-dimensional virtual worlds there is a revolution. It does make sense to address the digital computer as a 'flexible material technology' in many contexts. However, this general observation does not address the central question of computer game representation, which does not concern the computer's various capacities as a 'universal medium', but has to do specifically with the role of computer as a simulating machine. Jesper Juul addresses this question more directly:

> The main difference between the computer game and its nonelectronic precursors is that computer games add automation and complexity—they can uphold and calculate game rules on their own, thereby allowing for richer game worlds; this also lets them keep pace. So computer games create more worlds, more real time, and more single player than nonelectronic games. (Juul 2004:140)

In chapter 5, I will attempt to formulate an alternative to this approach. I will argue against the assumption that computer game worlds are merely larger, richer or more complex 'electronic' variants of pre-digital game worlds, and discuss critically the idea the computer 'upholds' or enforces rules. First, however, I will attempt to sketch out a general theory of the avatar, which is independent of the specificities of computerised and screen-based avatarhood, which complements the purely instrumental approach to avatarial embodiment, and which addresses the fictional significance of the avatar in relative independence from literary and cinematic notions of character, indentification and diegesis. I will begin by returning to Kendall L. Walton's theory of props, fictional truths and fictional participation.