Preface to this edition

"What is the Avatar" is part genre study, part theoretical discussion of fictionality and embodiment in gaming. Its topic is what I call "avatar-based" singleplayer games, with particular emphasis on the kind of navigable real-time 3D graphical environments that were spearheaded by *Doom*, *Mario 64* and *Tomb Raider* in the mid-nineties. The avatar is that which extends our embodied self into game space in a direct and intuitive sense, beyond merely agency or perspective, in a way that makes us belong to and exposed to a gameworld. I describe and discuss the characteristic features of avatar-based play in relation to games, fiction, computer technology and cinema, and define it against other forms and genres of computer gaming.

In some ways the study looks more like a book than a doctoral dissertation. It follows a thematic rather than scientific structure, draws on an eclectic mix of theoretical traditions and concepts, and mixes theoretical presentation, analysis and discussion throughout. Chapters 2 and 3 read almost like a textbook on computer game theory anno 2006. Chapter 8 is broader in scope than one might expect from a dissertation, contextualising the "avatarial" camera in a relatively diverse landscape of new media and film theory. Some of the discussions along the way are rather tentative in nature, stabs at new concepts and models.

Broadly, the thesis discusses four main topics. The first part, chapters 2-4, discusses the relationship between fiction, simulation, and play, and proposes a general theoretical model of avatar-based embodied fiction, independently of the specific features of computer games. The second part, chapter 5, discusses the realistic ontology of real-time graphical environments, suggesting "tangibility", "reification" and "concretisation" as key concepts. The third part, chapters 6-7, is a focused game genre analysis, differentiating avatar-based games from other principles of interaction, and analysing the significance of different kinds of spaces (including 2D versus 3D) and interfaces. Finally, the last part, chapter 8, re-focuses the analysis of 3D avatarhood in the context of new media and film theory, including its relationship to paradigms of mobile visuality and Virtual Reality.

The analytical concept of avatarhood as embodied presence has a disadvantage that I was not fully aware of at the time. Etymologically, "avatar" may quite appro-

priately signify the idea of an incarnated embodied self. The concept also throws light on the function of the navigable camera in its capacity as a bodily extension, through which players get to intuitively perceive and move in a 3D-gameworld. Still, outside theory, the notion of avatar is already a well-established empirical concept in computer game and internet discourses, which either means an online persona of some kind, or simply a player-controlled character. Consequently, a quick look at "What is the Avatar" might lead one to believe that it is a theory of playable characters and/or online identities, which it definitely is not. While directly controllable characters or humanoid "marionettes" are central to the articulation of avatarial embodiment, I do not describe their function as essentially different from controllable vehicles of various kinds. My analysis, maybe disappointingly, has very little to say about character. This omission is a strong limitation from the point of view of experiential analysis, but serves to sharpen the focus on the defining features of "avatarial" or prosthetic proxy embodiment in games.

Another major limitation is the focus on single-player games. The function and significance of avatarial embodiment in online virtual communities is not directly addressed. This is partly a matter of scope and focus, and partly motivated by my interest in fictionality and cinema. Nevertheless, the general concept of the avatar, and maybe in particular the analysis of game spaces and interfaces in chapter 6 and 7, could still be useful also for thinking about shared online spaces and interfaces, in e-sport, online role-playing, or elsewhere, as I will return to below.

GoldenEye 007

The choice of topic and perspective for the study was in part motivated by my own personal experience with gaming, maybe more than I cared to admit twelve years ago. Like most kids and young people, I enjoyed playing arcade- and Nintendo games during the eighties, but was never a gamer. I never owned a personal computer, did not play board games beyond the complexity of Monopoly, and never played role-playing games. I did however play *Donkey Kong* on the orange-coloured Game & Watch to death. Later, when *Wolfenstein 3D* (id Software, 1992) and *Quake* (id Software, 1996) came along, I was fascinated, even if their dungeon-type design and game fiction did not have much appeal. The visceral experience of immersive 3D space was a new kind of thrill.

The real turning point for me was *GoldenEye 007* (Rare, 1997), without which the doctoral project would most likely never have happened. Like other games of the so-called First Person Shooter genre, which was already established at the time, *GoldenEye* had navigable tunnel-vision and gun-centred spectacular combat. Yet it felt different, and was clearly not just *Quake* or *Duke Nukem* (3D Realms, 1996)

dressed up in James Bond clothing. Backed by a blockbuster film license and storyworld, and designed for the console market, it was both a shooter and a proper cinematic adventure. It did not matter that the plot was minimally narrated and rather loosely thrown together, as long as settings, scenes and characters were James Bond.

A new type of gameplay realism was made to match the mainstream appeal of *GoldenEye 007*. The arcade-inspired strafing mechanic and frantic movements of *Doom* (id Software, 1993) and *Quake* were replaced with fast bullets (including, notably, a sniper rifle), careful use of cover and reloading, and stealth tactics. Enemy bodies slumped and fell in convincing ways depending on where they were hit. The sound and feel of firing a gun, aided by the "rumble pack" attached below the Nintendo 64 controller, produced a visceral sense of direct physical contact. The non-intuitive and rather unwieldy single-stick interface of the N64 controller took a good while getting used to, but then disappeared from view, as second nature. Precisely because of its lack of smooth efficiency, the controller interface felt more intuitively realistic to me than the standard mouse and keyboard FPS interface. Because it did not allow me to run and aim at the same time, I had to calm down and stand still if I wanted to shoot with any precision. Aiming with a rifle or shotgun involved actual movement and wiggling rather than pointing a reticule with instant precision. After learning the ropes and getting into the action, the clunky and non-intuitive fingertip interface still produced an intuitive sense of operating a body, of some sort, inside game space.

In my experience, *GoldenEye 007*– which was the first action-adventure video game I had ever played through to the end – was not really a game in the way that, say, Chess or *Pac-Man* is a game. There were no points or levels, and no scorekeeping other than the progress through missions along the way. As in a pilgrimage or a polar expedition, "winning" means getting to the end of the journey. While my efforts would definitely qualify as a voluntary attempt to overcome unnecessary obstacles, *GoldenEye 007* felt more like a contest or a dangerous adventure than a game.

Theoretical motivations

Classic texts in new media theory were a major influence on the study. Lev Manovich' (2001) theory of cinema as a cultural interface to digital media, and his analysis of the role of navigable space and the virtual camera, was particularly influential on my approach. Another important influence was Marie-Laure Ryan's (2001) discussion of fictionality and immersion in relation to different forms and genres of representation, and her phenomenological account of

embodiment in Virtual Reality. Looking back, my strong interest in Kendall Walton's theory of representation (Walton, 1990) was most likely inspired by Ryan's work.

At the same time, new media theory around the turn of the century arguably relied on fairly general assumptions about the nature of computer games. More dedicated attention to the specificities of different game genres was long overdue, particularly with respect to the role and significance of real-time navigable 3D graphics as a dominant media form. Spaces, interfaces and structures of interaction in different kinds of games are highly diverse, and they also feel very different when you play them. Even if we stay within the domain of singleplayer games only, attempts to describe the common and unifying features of, for example, *Space invaders* (Taito/Midway, 1978), *Sid Meier's Civilization* (MicroProse, 1991) and *Ico* (SCEI, 2002) would be a fairly limited exercise. In computer game theory, specificity of form matters.

An influential paradigm in new media theory was to conceptualise computer games primarily as interactive media, alongside for example multimedia encyclopaedias or interactive cinema. In this conception, *Myst* (Cyan Worlds, 1993) is the central archetype of gaming. Much game research at the time also emphasised the interactive textuality of games, often with the aim to analyse the relationship between "game" and "text". I wanted to explore an alternative approach. In the case of *GoldenEye 007* and its siblings, neither "interactivity" nor "reading" seemed to capture the heart of the experience. Instead, I found a strong resonance in literature on the history and characteristics of cinematic attractions, in particular Erkki Huhtamo's (1995) account of motion-ride simulators, and, drawing on Huhtamo, Martti Lahti's (2003) analysis of the significance of corporeal immersion in video game history. Lahti's analysis, however, is mainly concerned with the sheer visceral spectacle of immersive 3D, and pays little attention to the challenge of games, the hard learning, the struggle to survive.

In this context, David Sudnow's classic *Pilgrim in the Microworld* (1983), a somewhat obsessive phenomenological close reading of his struggle to achieve mastery in *Breakout* (Atari, 1978), came to me as a revelation, and became a hugely important influence. His use of Merleau-Ponty's Phenomenology of Perception (2002), his analogy between the "microworld" of *Breakout* and playing a musical instrument, and the analysis of how he, eventually, after much dedication and struggle, was able to "traverse the wired gap with motions that make us nonetheless feel in a balanced extending touch with things" (Sudnow 1983:37), deeply impacted on my own analysis of avatar-based play, in spite of the obvious differences between arcade action and the kind of games I was interested in. Of particular importance was Sudnow's elaborate account of the disciplining of the body in involved in computer game play, an aspect that tends to go under the radar in cinema- and VR-inspired approaches. His analysis shows that the bodily

habituation or "incorporation" involved in play is a two-way street. Instead of merely "incorporating the events on the screen within the framework of the body's natural way of moving and caring", Sudnow says, "the action on the screen must incorporate me". The same kind of disciplined re-wiring or "filtering" of the body, against its natural ways, is taking place in the habitual learning of avatar-based play.

This understanding of the nature of "prosthetic" interaction in games contrasts with the dominant paradigm of Virtual Reality, which is all about natural and continuous translation of the body into virtual space, unhindered by the obstructive apparatus of traditional video game interfaces. Also in Marie-Laure Ryan's analysis, VR is held up as the "fullest" artistic experience to which games do not qualify (Ryan, 2001, p. 20). This idea chimes with familiar techno-futuristic tropes, still very much alive in public discourses, about 3D games as a kind of proto-VR, a temporary form, to be subsumed by the real thing as soon as the technology has matured. But the nature and purpose of embodiment in games is very different from immersive VR. The disciplining of the player to the requirements of a proxy body, as illustrated by the non-intuitive operations of the *GoldenEye 007* interface, is central to what avatar-based gaming is about, and is not something to be "solved" by technological advances.

Another central motivation for the study was the so-called ludology debate, in which I participated with In Defence of Cutscenes (2002). What is the role of storytelling in games, and to what extent is narrative and literary theory (or similar) relevant tools of inquiry? While this debate was in large part taking place on confusing terms, and ebbed out after 2002, it was symptomatic of an emerging dominance of game-centred and design-oriented formal theory and analysis in computer game theory. Juul (2005) and Salen & Zimmerman (2004) were particularly influential. Formal game theory is concerned with games in their abstract conception, as medium-independent structures of human activity. Whether games are played with boards or cards, or in computer-generated environments, they are all formally designed systems of a particular kind. From this point of view, games are games, no matter the medium. By implication, the fictional and narrative aspect of games is typically understood as themes added to the formal structure, as for example in a Star-Wars-themed chess game, or WWII-themed online FPS deathmatch; a fictional theme can change, while the game remains the same.

In contrast, I was mainly interested in the computer part of computer games, and in particular the kind of visceral and tangible experience I was having, as a player, when being in the shoes of agent 007. My own relative lack of interest in the gameness part of games was also linked to a certain kind of attitude to playing a computer game: a generally defensive, reactive and rather fearful style of play, less focused on the possibilities presented by a situation (tactically, creatively) than

on its imperatives, urgency, and danger. I also noted that a lot of people seemed to strongly dislike FPS games, or indeed any kind of navigable 3D game spaces, precisely because of the things I myself tend to enjoy: the paranoid tunnel vision, the visceral immediacy, the fear and aggression, the violence, the constant fight for survival.

As a researcher and a player, therefore, my focus was less on agency and spaces of possibility, in gaming terms, and more on the visceral and reactive dimension. To me the avatar was, and still is, not mainly a vehicle of agency, but a vehicle of being exposed. This orientation also means that I wanted to find a way of accounting for the fictional aspect of being subject to the world of the game, of acutely belonging to it, rather than merely acting in relation to it somehow. Complicating matters, this seemingly unique kind of body-based fiction is conditioned on a more general kind of "fiction", if we can use that term, namely the conceit of real-time rendered objects and environments.

The relevance of such questions becomes more apparent in single-player than in multiplayer or online competitive gaming, which at least on the face of it are more straightforwardly structured by the traditional logic and motivations of sport and gaming. The role of cinema and narrative fiction is also less important, and often entirely absent, in competitive gaming. Hence researchers with a primary interest in fiction and cinema, like myself, tend be more interested in adventure than sport, and more interested in the journey than the arena.

Fiction?

Drawing on Kendall Walton's *Mimesis as Make Believe*, I am proposing in this study the concept of "fictional embodiment" as key to the functioning and definition of the avatar. As I am centrally concerned with the question of representationality in computer games and avatar-based play – roughly, the relationship between actual experience and represented actions and events – Walton's theory of representation, and his close attention to different forms and principles of representation across a broad and diverse range of artistic expression, turned out to be a productive resource. His idea that any kind of representation, whether play-fighting, reading a novel or glancing at a painting, is something we *do*, a game of make-believe in which we participate, offers a way of situating and de-mystifying the nature of computer games in the context of other kinds of model-based and simulation-type fiction, as found for example in children's make-believe.

Walton's framework, and in particular his notion of "reflexive" props, opened up a new way of thinking about the mimetic significance of the player-avatar relationship. The Waltonian approach also presented an alternative to the idea that fictionality is about the theming of games or an added layer of representation,

and as way to counter the assumption that diegetic worlds are the only relevant kind of make-believe to consider in game theory and analysis.

In hindsight the idea of fictional embodiment also raises a few problems. As I have argued elsewhere (Klevjer, 2012), the claim that fictionality is essential to the definition of avatarhood is probably too strong. Maybe it is better to frame the problem of mimesis in avatarial self-embodiment as a question of virtuality. The problem we are faced with in virtuality, which is very different from domains of pretence and traditional stage performance, is that distinctions between the actual and the represented appear to collapse. This is a philosophical problem that "What is the Avatar" is also struggling with, albeit between the lines.

Avatar theory

In the years after 2007, a lot of theoretical research has been done related to avatarial embodiment and fictionality. Some were also working on similar topics as myself around the same time. Peter Bayliss' *Beings in the game-world: characters, avatars, and players* (2007) draws on Newman (2002) and Linderoth (2005) to discuss the way in which player-controlled characters take the function of both characters and vehicles of player agency within the gameworld. David Velleman's (2008) description of how computer game avatars become prosthetic extensions of the body does not explicitly reference Merleau-Ponty, but the analysis is similar to my own.

Ulf Wilhelmsson's concept of the "Game Ego function" (2006), based on his 2001 Ph.d dissertation, is broader in scope than my "avatar", but have clear similarities with respect to the analysis of prosthetic agency and being. Wilhelmssons cognitive approach has later been developed and expanded by, among others, Gregersen and Grodal (2008), and Schröter (2016).

In computer game studies, avatar-based engagement with gameworlds has been the topic of a number of substantial contributions in recent years. Jørgensen (2013) presents a comprehensive game-oriented approach, analysing how avatars and gameworlds function as interfaces to the playing of a game. Calleja (2011) offers a multi-dimensional and integrative experiential account of ways of being "incorporated" in the virtual environment of games. Vella (2015) emphasises the shaping of player subjectivity and consciousness in avatar-based gameworlds. He is particularly concerned with the ludic orientation of the experience, and the specific role of playable characters in relation to the ludic self-positioning of the player. Kania (2017) proposes a coherent philosophy of avatarhood via existential readings of literary- and conceptual auteur-games. Kania is particularly interested in the relationship between existential self-embodiment and avatars as objects of aesthetic reflection and contemplation.

Quite a lot of philosophical work has been done over the last decade on fictionality and games, and interest in this topic seems to be still on the rise. A central point of reference is Grant Tavinor's book The Art of Videogames (2009), in which he employs Walton's framework to analyse the function and significance of make-believe in different types of games, arguing that 'fiction' and "simulation" are overlapping concepts. Meskin & Robson (2016) discuss the significance of acting through player-characters in the context of interactive fiction, and suggest that interactive fiction in games is of a special and "self-involving" kind. Carlson & Taylor (2019) propose that player-controlled characters function as fictional proxies of the player rather than via a relationship of fictional identity.

Finally, there is also increased philosophical interest in the reality/fictionality conundrum of embodied interaction in virtual environments. David Velleman's proposed solution, that the player "really has a fictional body" via the avatar, and that actions in virtual environments are "fictional actions literally performed" (Velleman, 2008, pp. 414-415), serves to illustrate the apparent paradox involved. A much-noted recent contribution to this discussion is David Chalmers (2017), who defends a more straightforward realism account, according to which computer-generated objects and environments are no less real (or differently real) than physical objects and environments that may equally be used as props in make-believe.

Everyday virtuality

Avatar-based 3D became an established and pervasive technological and cultural form during the nineties. Considering the far-reaching technological and cultural shifts since that time, including the rise of mobile touchscreen interfaces and social media, the basic form of this everyday virtual reality has been remarkably resilient. The dual-axis configuration (moving + turning) of *Quakes* "mouselook" and Sony's "Dualshock" controller is still the defining hardware interface in console- and PC gaming. Even the Switch, the latest in console innovations from Nintendo, launched with controllers that snap to a twin-stick configuration, and there is of course also a "Pro" dualshock-type standard controller available, for the dedicated player. In the eyes of interface innovators and VR-enthusiasts, this non-intuitive and seemingly impoverished interface paradigm must seem inexplicably entrenched. As long as people want to play games like *Fortnite* or *Super Mario Odyssey* (Nintendo, 2017b), the fingertip interface of prosthetic proxy embodiment is apparently here to stay.

Compared to games as we used to know them, gaming in computer-generated virtual environments is a new kind of thing. The role of fiction is hard to pin down, and possibly different in a very fundamental way. The idea of what it means to

play a game is changing. *Journey* (thatgamecompany, 2012) is not a computerised game, but a different kind of object, and a different kind of activity, which we nevertheless still think of as playing a game, with good reason. The formality of gaming – rules, score, winning – appear to fade to the background, and we engage with a similar yet different kind of challenge, just for the sake of it, against the forces and affordances of a virtual nature. Even in the gentlest of gameworlds, progress and a sense of achievement requires learning and habituation. Get your act together, focus, don't give up.

Journey also illustrates the significance of avatarial embodiment in shared virtual environments. The minimalistic formal structure and graphical interface, and the lack of verbal communication, makes the experience of sheer embodied togetherness more central. The way in which strangers get to share a piece of the journey in *Journey* is unique to its form, and would not be the same if mediated through, say, a top-down scrolling perspective.

Online gaming and gaming services have developed a lot since 2006. Gaming has merged with the paradigms and business models of internet culture to a far greater extent, mainly due to the rise of social media and smartphones. Associations between the concept of avatars and our personalized profiles and identities in online communication has become quite common. Maybe we can think of embodied avatars in real-time graphical environments as a kind of literal or concretised version of the broader phenomenon of "avatarial" communication and self-expression in internet culture. Avatar in this broad sense would refer to any kind of proxy self that enables us to engage with electronic environments from the inside with a re-centred frame of reference, on terms different from in our everyday offline lives.

On the other hand, the kind of avatars that some of us throw ourselves into in the wonderful *The Legend of Zelda: Breath of the Wild* (Nintendo, 2017a) are directly embodied extensions rather than disembodied personas or identities. Although such kinds of avatars may of course also be used as vehicles of expression and social communication, their essential function is constituted at the perceptual and visceral level, in a way that encourages, and indeed requires, actions and responses that we do not consciously manage or think about much. Prosthetic avatars are therefore in a way more naked expressions of ourselves than managed online profiles or meticulously customized characters. If your personality happens to be, for example, of an anxious and indecisive disposition, this would arguably be easier to hide on social media than when playing *Breath of the Wild*.

Proxy embodiment in games is a highly diverse phenomenon, some variants more ambitious and innovative than others. Think of how Mario continues to evolve his distinctive brand of hyper-dexterous and flamboyant play in *Super Mario Odyssey*, how you can invite me to your street in *Minecraft* (Mojang, 2010), or how Everything (O'Reilly, 2017) plays with scale. Think of the experience of loss in

Brothers (Starbreeze Studios, 2013). Not least, think of all that is yet to be explored: new types of worlds and bodies, different challenges and wonders new avenues of empathetic engagement. The avatar anno 2021 is not a futuristic phenomenon, but everyday technology and everyday art.

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