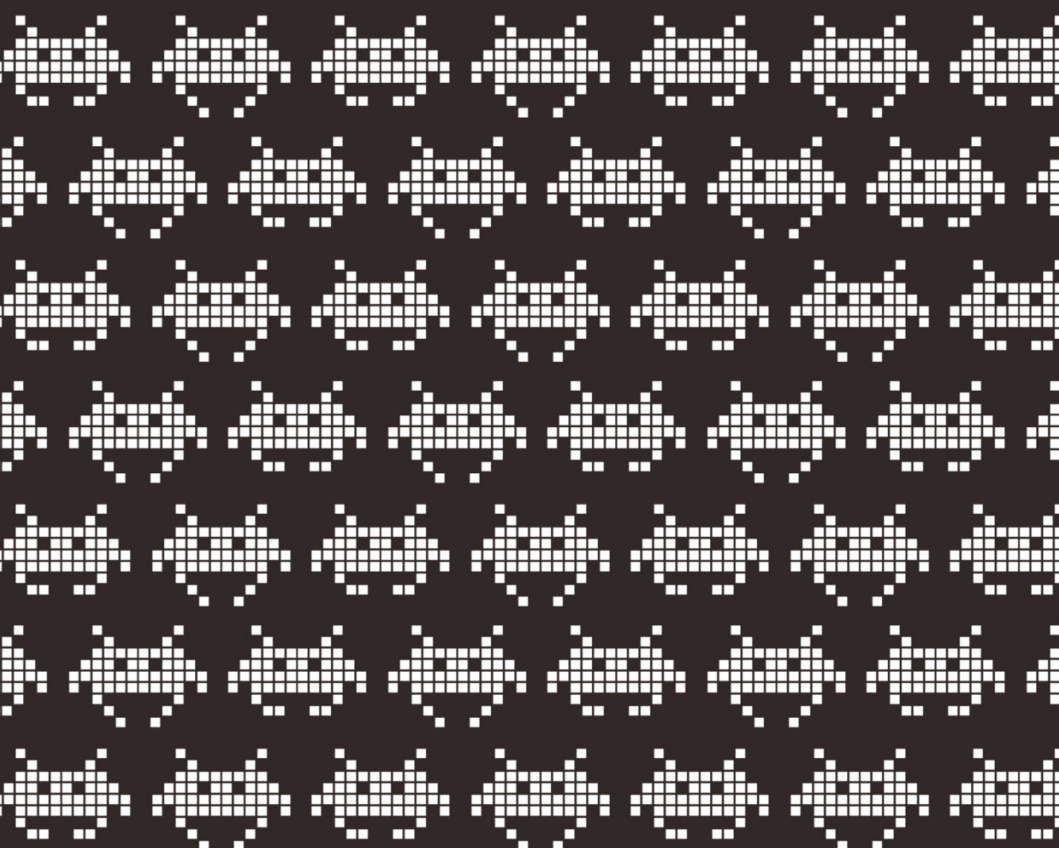


< Souvik Mukherjee >



Video Games and Storytelling

Reading Games and Playing Books



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Souvik Mukherjee

Presidency University, Kolkata, India

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1

Introduction: Video Games and Storytelling

Video Games telling stories: A debate revisited

Imagine being told to ‘start this mission by entering the red marker at the Johnson House’ (GTA Net, 2015) and then as you, Carl Johnson or CJ, meet your brother Sweet, a rival gang performs an unexpected drive-by shooting and you are to ‘hop on a bicycle and follow Sweet, repeatedly tapping “X” to build up momentum’ (GTA Net, 2015). Is this a story, is it another violent episode in a soap opera or is the reader being mistaken for a member of a real-life criminal gang? The uninitiated reader will probably be having serious doubts about what is happening in the above quote. At first sight, this extract seems to be the story of a certain gangster, Carl Johnson; if it is, then the story strangely seems to be waiting for the reader to create all the events that follow. You, the player (or reader, one could say), are suddenly thrown into someone else’s story and are expected to continue the tale. The part about ‘repeatedly tapping “X” to build up momentum’ makes it seem even stranger: it is as if, besides all the possibilities described above, there is also some kind of interaction with a machine. Given this hybrid scenario, the reader must be excused if she does not guess that this is an extract from a ‘walkthrough’, or a set of possible strategies for playing the video game *Grand Theft Auto: San Andreas* (Rockstar North, 2004).

Paradoxical as this may sound, this book is about playing stories and reading games. As the extract from the *Grand Theft Auto: San Andreas* walkthrough shows, video games have begun to raise questions about their own ludicity (or ‘gamelike-ness’; *ludus* is the Latin word for ‘game’) and about whether this intrinsically involves storytelling. In simple words, this is an analysis of whether video games tell stories and if so, of how they do this. The relevance of such discussions has increased

manifold in recent years: the Entertainment and Software Association (ESA) declares that ‘no other sector has experienced the same explosive growth as the computer and videogame industry’ (Interactive Games & Entertainment Association, 2013) and almost as if to prove them right, *Grand Theft Auto V* (Rockstar North, 2013) sales reached a billion US dollars in just three days – a global record. With the soaring profits and the burgeoning user-base of the video game industry, games have now attracted the attention of researchers from various disciplines the world over and issues relating to gaming culture and the gamer’s experience have gained more relevance. Despite the increased research focus, one crucial issue – that of storytelling in video games – retains its complexity and still remains hotly debated.

The popularity and currency of the issue is clear from the fact that critics from other media have entered the discussion: a good example is the late Roger Ebert’s famous (or notorious) assertion that video games are not art. Other celebrities from the film industry, the directors Steven Spielberg and George Lucas, have commented directly on the storytelling potential of video games. Lucas claims that the game industry is now beginning to discover how to build characters but that ‘by its very nature there cannot be a plot in a game. You can’t plot out a football game. You can’t plot out feeding Christians to lions. It’s not a plot’ (Empire Online, 2015). For him, the story is author-driven: ‘you are leading the audience along [...] if you just let everybody go in and do whatever they want then it’s not a story anymore [but] it’s simply a game’ (Empire Online, 2015). Spielberg, who himself has a past with gaming, feels that the bottleneck is simple: once the game-controller itself is gone, the storytelling experience will improve. He states that the game has ‘got to put the player inside the experience, where no matter where you look you’re surrounded by a three-dimensional world. And that’s the future’. Will Wright, the designer of *The Sims* (Maxis, 2000) games, declared in a CNN interview that ‘games are not the right medium to tell stories’ (Millan, 2011) but conceded that they are about ‘story possibilities’.

However, gamers from all over the world think differently. In his recent book on video games, *A Mind Forever Voyaging*, Dylan Holmes comments: ‘Games are bringing something new to the table. As the first widely adopted form of interactive media, video games have served as the testing ground for interactive storytelling techniques’ (Holmes, 2012, p. 10). Celebrity game designer and creator of the *Metal Gear* series, Hideo Kojima, has no illusions about the storytelling potential of games. He believes that ‘games are able to achieve something neither

movies nor novels can do, it's a unique form of story telling' (Metal Gear Informer, 2012). Intriguingly, Wright states that he does not like playing the *Metal Gear* games that Kojima is famous for (Millan, 2011). Other game designers, however, agree that storytelling is important. When asked about stories in video games, Tim Schafer, the creator of legendary games such as *Monkey Island* and *Grim Fandango*, states, 'I put story in my games just because I like making up stories. I think it makes the world real and makes the experience more immersive and engaging for the player. Also, the desire to see the story unfold provides a motivation for the player' (Kasavin, 2005). Ragnar Tornquist, designer of *Dreamfall*, adds that although 'all games don't need stories [...] the fact is, once you're dealing with quests, characters, worlds, role-playing – and more complex human (or, hey, alien) emotions – then you need to tie everything together with some sort of narrative' (Kasavin, 2005). Adding his influential voice to the argument of the literariness of video games is the author Salman Rushdie. Rushdie famously announced that he played video games during the trauma of his fatwa years. In his recent novel, *Luka and the Fire of Life* (Rushdie, 2010), video games feature importantly and in an interview about the novel, Rushdie declares:

There is all kinds of excursions and digressions that you can choose to go on and find many stories to participate in instead of the big story, the macro story. I think that really interests me as a storyteller because I've always thought that one of the things that the Internet and the gaming world permits as a narrative technique is to not tell the story from beginning to end – to tell stories sideways, to give alternative possibilities that the reader can, in a way, choose between.

(Rushdie, 2010)

Given the contentiousness of the issue, it is hardly surprising that the academic discussions around gaming as a cultural phenomenon should have started off by framing themselves around storytelling and that storytelling in video games continues to provoke critical debates. Writing on his blog 'The Ludologist', eminent game studies academic and one of the pioneering researchers in the area, Jesper Juul gently dismisses Rushdie's comments on storytelling in video games as being 'a bit on the short side' although he concedes that Rushdie 'understands Rockstar's typical mostly-linear + sandbox game structure' (Juul, 2011). Juul's earlier work clearly delineates a 'clash' between games and narratives and his reservations about Rushdie's claim for storytelling in video games are understandable if one delves into the history of game studies.

The establishment of game studies as an academic discipline is a very recent phenomenon and the initial academic responses to seeing video games as an emergent storytelling medium were markedly polarised into the theoretical camps of the so-called Ludologists and the Narratologists. The Ludologists, mainly academics such as Juul, Espen Aarseth and Markku Eskelinen, argued that although some video games may have 'artistic ambitions', they are 'fundamentally games' (Aarseth, 2006, p. 45). The so-named Narratologists, such as Janet Murray and Marie-Laure Ryan, argue that video games are a storytelling medium because they 'promise to reshape the spectrum of narrative expression, not by replacing the novel or the movie but by continuing their timeless bardic work within another framework' (Murray, 1997, p. 10). In 1997, Murray and Aarseth were writing separate pioneering studies on video games. Both recognised the capacity of video games to form multicursal structures and also their potential to be recognised as texts (although Aarseth later altered his position somewhat), but their respective approaches were very divergent.

In *Hamlet on the Holodeck*, Murray argued for an approach wherein the 'interactor in digital environments can be the recipient of an externally authored world' (Murray, p. 275). For her, 'To play *Mario Brothers* or *King's Quest* is to open ourselves to the vision of the shaping author in the same way we open ourselves to the author's voice in the novel'. The externally authored world of the video game is described by her as a proto-Holodeck. The ambitiousness of Murray's agenda for video games emerges more clearly in the following assertion:

As the most powerful representational medium yet invented, it should be put to the highest tasks of society. Whether or not we will one day be rewarded with the arrival of the cyberbard, we should hasten to place this new compositional tool as firmly as possible in the hands of the storytellers.

(Murray, p. 284)

As the title of her book suggests, she sees the video game as a step towards achieving literature of the calibre of *Hamlet* in a Holodeck-like electronic media. The Holodeck metaphor itself has major shortcomings when applied to video games but a deeper exploration of this is reserved for later. This section focuses instead on Murray's intention to place the video game 'firmly in the hands of storytellers'. Aarseth, for one, poses a strong objection to such a claim.

In his early study of video games in *Cybertext: Perspectives on Ergodic Literature*, Aarseth describes his attempt to define 'a perspective on all forms of textuality, a way to expand the scope of literary studies to include phenomena that today are perceived as outside of, or marginalised by, the field of literature – or even in opposition to it' (Aarseth, 1997, p. 18). It is understandable that for such an enterprise he needed to develop a different notion of textuality. As he states: '[i]nstead of defining *text* as a chain of signifiers, as linguists and semioticians do, I use the word for a whole range of phenomena, from short poems to complex computer programs and databases' (Aarseth, 1997, p. 20). Aarseth maintains that the video game is an 'ergodic' medium, which means that it requires the reader/player to experience the text actively and use skills which go beyond using 'eye movement and the periodic or arbitrary turning of pages' (Aarseth, 1997, p. 2). Surprisingly, however, in a later essay, he asserts that 'games are not textual or at least not primarily textual' (Aarseth, 2006, p. 47). Ergodicity, therefore, gets a different connotation, and as ergodic media, video games are not seen as texts *per se* and even less so as stories. Following Aarseth, commentators like Markku Eskelinen, Gonzalo Frasca, Juul and Greg Costikyan came up with a sustained (and often harsh) criticism of attempts to see video games as storytelling media, which they variously termed 'Narrativist' or 'Narratological'.¹ Their own position came to be known as 'Ludology', a neologism coined by Frasca meaning the 'study of games'. The 'Ludologists' found their most vocal representative in Eskelinen who declaims:

If I throw a ball at you I don't expect you to drop it and wait until it starts telling stories. On the other hand, if and when games and especially videogames are studied and theorised they are almost without exception colonised from the fields of literary, theatre, drama and film studies.

(Eskelinen, 2001)

For the firmer adherents of Ludology such as Eskelinen, the video game needs to be studied in isolation as a game and as nothing else.

Eskelinen attributes a kind of extraneousness to the story – he believes that the story in the computer game is like a prosthesis that simply enhances the marketability and is not essential to the gameplay. Aarseth, predictably, supports this idea: 'the artistic elements are merely supports for what the Finnish avant-garde writer and game theorist Markku

Eskelinen (2001) calls “the gaming situation”, the gameplay’ (Aarseth, 2006, p. 47). In a rather hyperbolic attack on stories in video games, he states: ‘[e]ven the most entertaining of these games, like Warren Spector’s *Deus Ex* (1999), contains a clichéd storyline that would make a B-movie writer blush, and characters so wooden that they make *The Flintstones* look like Strindberg’ (Aarseth, 2004, p. 51). This statement is, needless to say, rather extreme in its assertiveness and would probably upset many *Deus Ex* fans who enjoy the storyline of *Deus Ex*. In a recent lecture, Aarseth has spoken of the possibility of a ‘broken’ fictionality in video games; he still does not agree that video games tell stories. For the Ludologists, the story is still shown as an extraneous element: for the Ludologists, it is a prosthesis. Lending more weight to the Ludologist position, popular video game commentator Steven Poole (2000, p. 170), in his book *Trigger Happy*, refers to the back-story of a computer game as the ‘meat’ of the game, the actual storyline of which is nothing more than a record of steps and jumps. This idea of the prosthesis, however, is itself one that has come under scrutiny. A subsequent section shall explore it in detail.

Game designers have also started losing patience with the Ludology–Narratology debate because of the polarisation of opinions. As designer Ernest Adams complains:

There’s a lack of a common vocabulary; a lack of a common approach. And there are turf wars. Literary theorists of narrative – ‘narratologists’ believe that narrative is rightly their turf, so it’s up to them to decide what *interactive* narrative will be. Theorists of gameplay – ‘ludologists’ – believe that interactive entertainment is *their* turf, and only they can properly decide what interactive narrative will be.

(Adams, 2005)

Adams is right in pointing out that the sparring between rival academic camps does not help at all and that such extreme positions, whether they are Murray’s holistic claims for narratives in electronic media or the Ludologist argument against it, had game studies critics locked in a decade-long impasse regarding the nature of video games. Recently, however, Ludologists such as Juul, and those on the Narratologist (or rather ‘Narrativist’) camp, such as Marie-Laure Ryan and Celia Pearce, make much more moderate claims than those being made in the late nineties. In *Avatars of Story*, Ryan claims that storytelling in video games ‘must resist the temptation to try to rival the great classics of literature –

a temptation that finds its expression in the title of Janet Murray's well-known book *Hamlet on the Holodeck* – and it must learn instead how to customize narrative patterns to the properties of the medium' (Ryan, 2006, p. xviii). She prefers what she calls 'the middle ground' in engaging with the problem. She defines narrative as a cognitive construct that can take a variety of shapes or what she calls 'avatars of story'. Pearce also recognises the importance of the ludic element in games and that '[n]arrative, again, operates at a fundamentally different level in games than it does in other media' (Pearce, 2004). Such a response perhaps complements and extends Henry Jenkins's concept of transmedial storytelling that he defines as being 'based not on individual characters or specific plots but rather complex fictional worlds which can sustain multiple interrelated characters and their stories' (Jenkins, 2007). Jenkins's description fits the complex worlds of the story-based (and especially sandbox-type) video games well. Pearce's recognition of the importance of the ludic element develops the transmedial angle that Jenkins introduced earlier on.

In a similar more moderate Ludologist response perspective, Gonzalo Frasca advocates Ludology as another important method besides Narratology in analysing games where the intention is 'not to replace the narratologic approach, but to complement it' (Frasca, 1999). In a later work, Juul contends that video games are 'half real' (Juul, 2005, p. 166). He agrees that most video games 'project a fictional world' and that the fiction is contingent on the game's rules. Juul's shift in the Ludologist position is important – fiction is not defined as a prosthesis as it was in the earlier writings of the Ludologists, including Juul himself. Neither is the game and fiction seen as being mutually exclusive (as his master's thesis, titled 'A Clash between Game and Narrative', claims). Rather surprisingly, Juul does not agree that video games tell stories; he argues that fiction is different from storytelling. Unlike the 'middle ground' advocated by Ryan, for Juul the story simply does not exist in multiple kinds: he believes that fiction is any kind of imagined world but 'story' is necessarily a fixed sequence of events.

Such a restrictive definition inevitably opens more avenues for more debate and storytelling in video games remains as contested as ever despite many attempts to resolve the problem. In his recent book, Steven E. Jones echoes other theorists, such as Ian Bogost and Rune Klevjer, in describing the Ludology–Narratology debate as being an exaggeration on both sides and Ludology as a reductive formalism. However, he expresses his sympathy with the Ludologists in recognising the uniqueness of games as a form although he does not wish to 'cut them off from

the larger culture' (Jones, 2008, p. 6). In trying to locate the 'meaning' of video games, Jones concludes that these games are complex social networks and that meaning flows *through* these games and link up to other forms of media such as texts, institutions and groups. One could argue that there is a similarity here with Rushdie's idea of video games allowing a 'sideways' reading of the text and its multiple alternatives.

As mentioned earlier, though, eminent critics (such as Juul) still do not agree with such a description, often making the claim that video games are more about the experience of playing ('fiction', according to some commentators) than about storytelling. Tom Bissell has a useful rejoinder to such claims:

Too many games insist on telling stories in a manner in which some facility with plot and character is fundamental to – and often even determinative of – successful storytelling. The counterargument to all this is that games such as *Fallout 3* are more about the world in which the game takes place than the story concocted to govern one's progress through it. It is a fair point, especially given how beautifully devastated and hypnotically lonely the world of *Fallout 3* is. But if the world is paramount, why bother with a story at all? Why not simply cut the ribbon on the invented world and let gamers explore it? The answer is that such a game would probably not be very involving. Traps, after all, need bait. In a narrative game, story and world combine to create an experience.

(Bissell, 2011, p. 11)

Judging from the many responses, it is hardly surprising that the complexity of video games makes them difficult to understand, resulting in much controversy and confusion. This is because video games show up some important characteristics of textuality that are not comprehensible under traditional methods of textual analysis. There are two assumptions related to this, in the main, which need to be noted. The first is that there is a tendency to club all video games, despite their disparities, as 'the video game'. The second is, as stated earlier, to consider one aspect of gameplay as a prosthesis of another: this is usually either the storytelling experience as the prosthesis of the pure play experience or the technical (the machine and the code) as a prosthesis of pure play. Bissell, importantly, clarifies that he is discussing a particular type of game (games such as *Fallout 3*) as opposed to a general concept of 'the video game' and he also believes that stories and the game world cannot be seen separately when one thinks of gameplay. This book will argue for

more: it will aim to analyse the story, the game rules and the experience of the game world as intrinsically linked.

Video games, supplementarity and assemblages

Before commenting further on textuality in video games, it will be useful to note the significant growth of interest that the last few decades have seen in redefining textuality itself. Writing in 1971, Roland Barthes was already pointing to the plurality of the text in his essay 'From Work to Text' and even linking the process of play to the text and the reception of the text.² In the decades immediately afterwards, the authorship of the text was being contested by thinkers like Barthes, Michel Foucault and the reader-response theorists. Poststructuralist thought, such as that of Jacques Derrida or Gilles Deleuze and Felix Guattari, also carries the notion of the text as being informed by the process of play and as being characterised by multiplicity. By now, of course, all of this is firmly established in humanities curricula, especially in literary studies, cultural studies and film studies. Recent critical theory is increasingly concerned with technicity, with the need to understand the text as a machinic entity and with how this relates to the reader's own identity.

'Machinic', as used here, has a Deleuzoguattarian connotation. It indicates the relationship between the heterogenous elements in an assemblage and this does not imply that machines are necessarily mechanical. Guattari states that even thought is machinic: the relationship between the machine and the body is fluid and by implication both are intrinsically linked to each other. This also applies to any understanding of the text as being machinic – irrespective of whether the entity in question is the computer-mediated storytelling in video games or its non-digital counterpart.

Video games, which embody much more complex levels of all of these aspects within them, can significantly contribute to the analysis of the playful, the multiple and the machinic aspects of texts by taking them beyond their present limitations. Game studies, although growing rapidly as a discipline in its own right as well as part of the burgeoning digital humanities programme all over the world, is still relatively a newcomer to the mainstream humanities debates and there is a need to establish how games 'plug into' aspects of humanities studies in ways that are vital.

One of the possible reasons for this is that video games simultaneously connect to many aspects of cultural and social life, as mentioned above; their multiplicity itself can be a problem for commentators who

have hitherto been used to the older linear conceptions of textuality. Secondly, so far, game studies itself has remained confined to parts of Europe and the US and, as such, has not addressed other gaming cultures and their notions of textuality.³ Games also connect constantly to other narrative media; for example, *S.T.A.L.K.E.R.: Shadow of Chernobyl* (GSC Gameworld, 2007) can be seen as an adaptation of the Strugatsky brothers' novel *Roadside Picnic* (Strugatsky and Strugatsky, 1978) and Andrey Tarkovsky's film *Stalker* (Tarkovsky, 1980), as well as to other games (the *Assassin's Creed* series, for example).

The first thing to observe is that if video games are rapidly gaining importance then this is so because of the multiplicity of networks (socio-cultural, political or economic) to which they connect. In themselves, too, they are characterised by multiplicity: they have a multiplicity of endings and game events take place in multiple points in time. Only by studying the multiple nature of video games is it possible to gain a fuller understanding of the growing influence of video games and to envisage their role in the future. To do so, however, the methodology of analysing games in terms of opposing binaries, out of which emerges the assumption of video games as one core essence, needs to be challenged. Instead of binaries, perhaps a model that considers games as a multiplicity of assemblages would be more appropriate.

The basic problem with exclusive positions such as that of Eskelinen and Poole is that one or other aspect of the video game is treated as prosthetic. To his and the Ludologists' argument about how storytelling in video games is prosthetic to the playing experience, Poole also applies the idea of prosthesis to the technological aspect of video games. Arguing that video games prostheticise play, Poole maintains that while football can be played with a 'scrunched up newspaper' (p. 281), one needs a computer to play video games. He states:

Writing in English, for instance, cannot take place without an alphabet, which is itself a technology [...] But in the modern sense of technology as a physical device or gadget, videogames clearly belong in the lineage that was started only by photography, in which the execution of the artwork (or form of entertainment) is impossible without certain complex apparatus.

(Poole, 2000, p. 174)

Such a statement involves the assumption of a 'pure' form of play/game to which technology can only exist as prosthesis. This is again similar to the Ludologist argument, where narrative is the prosthesis of a 'pure play'.

The fact that many commentators tend to think through the situation in this manner begs further questions. Obviously, what is being assumed here is the watertight categorisation of the various aspects of video games and the resulting binarisms. Such a conception of the 'pure' has been contested in the playful (non)philosophy of Derrida where the categories themselves are seen 'in play' and the process of play subverts rigid categorisations and displaces centrality. Poole's comment on prosthesis makes a differentiation between the 'modern sense of technology' and the alphabet as a writing technology. Such a differentiation is an oversimplification that has long been refuted by poststructuralist theory. Derrida's own position on writing is outlined in his seminal text *Of Grammatology* as follows:

We say 'writing' for all that gives rise to an inscription in general, whether it is literal or not and even if what it distributes in space is alien to the order of the voice: cinematography, choreography, of course, but also pictorial, musical, sculptural 'writing' [...] And finally, whether it has essential limits or not, the entire field covered by the cybernetic *program* will be the field of writing.

(Derrida, 1976, p. 9)

The alphabet and indeed writing, itself, therefore, should not be differentiated from any 'modern sense of technology' simply because all modern technology can be seen as types of inscription or 'writing'. In fact, the suffix '-graphy' comes from the Greek *graphein* meaning 'to write'. The computer program (from the Latin *pro gramme*, 'of writing') could then also be deemed a type of writing as, for Derrida, are photography and cinematography. Following Derrida's argument, all technology, being forms of writing, are not prostheses. Instead of being prosthetic, they also inform the (non)centres of each other; at the same time, these elements are separate objects in themselves.

Poole's example of football as not being technology-specific (and therefore, perhaps, embodying 'pure' play) while video games are entirely dependent on computers, therefore, rests on a questionable notion of technicity. Just as football can be played using 'scrunched up paper' (as well as in a *FIFA* video game or board-game), video games are not limited to the computer. It can be played on the various consoles, mobile phones, handheld devices or even in books which, as some examples in the later chapters will show, sometimes exhibit clear signs of being proto-video games. Whatever the technology being referred to, it must be noted that the relation of the game to the technology is neither extrinsic nor prosthetic.

Derrida offers a nuanced perspective in what he addresses as the ‘the *technological condition*’. According to him:

There is no natural originary body: technology has not simply added itself, from the outside or after the fact, as a foreign body. Or at least this foreign or dangerous supplement is ‘originarily’ at work and in place in the supposedly ideal interiority of the ‘body and soul’. It is indeed at the heart of the heart.

(Derrida, 1995, pp. 244–245)

Technology has not merely been added after the fact or as a foreign body but is rather to be found ‘at the heart of the heart’ of other cultural phenomena; in this case, the game. As described above, this addition is viewed as a threat or as ‘foreign or dangerous’, described by Derrida as ‘that dangerous supplement’ (Derrida, 1976, p. 281). For him, this is not restricted to modern technology; even writing is such a ‘supplement’, as is evident in the following comment:

If supplementarity is a necessarily indefinite process, writing is the supplement par excellence since it marks the point where the supplement proposes itself as a supplement of the supplement, sign of sign, *taking the place* of a speech already significant: it displaces the *proper* place of a sentence.

(Derrida, 1976, p. 281)

As Derrida defines it, the supplement is neither presence nor absence and when one wishes to go from the supplement to the source, one must recognise that there is a supplement at the source itself. In these terms, when narrative, technicity and play are analysed in video games, ‘pure’ play cannot exist: the machinic and narrative aspects illustrate the problem of conceiving of any centrality that privileges any of these aspects.

Such a conception clearly challenges the Ludologists’ and Poole’s positions. If the ‘dangerous supplement’ is a threat, then this is not because of its externality to a ‘pure’ conception of play; rather the danger applies to traditional conceptions of prosthesis because it is evident now that the story, machine and the game need to be seen as supplements to each other and not prostheses. Throughout this book, supplementarity will be used to describe Derrida’s concept of originary presence and interiority, and will provide the framework for rethinking the binaries of game/story, game/machine and story/machine. Revisited in terms of

this framework, the debates around the storytelling capabilities of video games will be seen as being problematic and, in some respects, lacking credibility.

To continue with Poole's comparison between his assumed prostheticity of video games vis-à-vis writing, if writing is the key example of the supplement, then the 'writing' in modern technologies like computer software (such as video games) clearly also functions in terms of supplementarity. The object-oriented programming (OOP) approach, developed in the 1980s, is an important example. In traditional approaches to programming, there was a clear distinction made between data (the information-base) and program (the process that would operate on the data). This probably created the impression of a prosthetic relationship between the data and the program or between the non-technical element and the technical code. The OOP approach dispenses with this division. An object is composed of both the data that describes it and the code that will operate on it. Every object has within itself all that it needs to go about its business: if an object is to be drawn, it will draw itself. It will contain its own code for doing so and will not need to refer to or be acted upon by an external program. The data and the code in the OOP therefore are supplementary and are constantly modifying each other. The data gets modified by the code and the new data that is created, in turn, makes the code modify itself (Biggs, 2004, p. 181).

The OOP approach describes a supplementary relationship between the technical and the non-technical in an area which was previously understood solely in terms of the data/program binarism. Surely, then, even in video game software this binarism is no more the relevant explanation. The code constantly adjusts to the events taking place at the game level. The analogy, especially the example of the working of the OOP can also be extended to an analysis of the game and the story elements in the computer game. Simply put, the story in the computer game is usually modified by the gameplay and the gameplay has to change constantly to keep pace with the story. So video games, it can be argued, work as a functional whole involving the player (game element), the story engine (story element) and the game engine (technology element). None of these is completely central in the manner the Ludologists tend to imply, although they are characterisable by a certain degree of centrality. The nature of supplementarity, here, is similar to that in OOPs.

Gregory Bateson's answer to the question 'Can machines think?' is a similarly useful entry-point to the analysis of the role of game elements.

Although Bateson, of course, is not thinking of video games per se, his response is important for understanding all artificially intelligent media. According to him: 'what "thinks" and engages in "trial and error" is the man *plus* the computer *plus* the environment. And the lines between man, computer and environment are purely artificial, fictitious lines' (Bateson, 1972, p. 191). In a similar comparison, it can be seen how video games work as a combination of the player *plus* story *plus* game technology. Bateson's description, here, seems quite close to Derridean supplementarity. Noting the Derridean parallel, Timothy Clark states, 'Bateson effectively deconstructs at one stroke the distinction between the natural and the technical. [...] Deconstruction then upsets received concepts of the human and the technological by affirming their mutually constitutive relation or, paradoxically, their constitutive disjunction' (Clark, 2000, p. 247). This comment applies importantly to video games, where the human-computer relationship is mutually constitutive and yet also complicated by a disjunction.⁴

Clark's analysis moves on to point towards a video-game-like machine as an embodiment of the relation between technicity and non-technicity. In this context, he discusses Derrida's own textual innovations, such as *Glas*, which make multi-interaction and cross-reading possible, as genuine harbingers of some future Turing Test that will resemble some 'peculiar form of book or hypertext' (Clark, p. 253). Describing the effect of the hypothetical machine, Clark comments:

Our hypothetical machine will reinforce the status of the human as a particular but not inherently unique moment of a partial formalisation, already crudely anticipated in the case of computer chess programs. To cope with the mechanical opponent, a human player, incapable of tracing the complex algorithms that generate the other's moves, cannot treat the program as an automatic formal system, i.e. as a computer. Conscious anthropomorphism is required – the machine must be played like any other opponent. (p. 253)

What Clark describes as 'crudely anticipated in the case of computer chess programs' is now much more technologically sophisticated: video games are many times more complex and artificially intelligent than chess-playing programs. The level of conscious (and unconscious) anthropomorphism that accompanies gameplay is increasingly greater. In any playing session, the machine and the player participate in the ludic action in an intrinsic relationship, which is at the same time that of a unit and a multiplicity. Further, the 'machine' itself is the coded algorithm as well as the game rules and the two cannot really be seen as

separate. A similar originary relationship also exists between the game and the story.

The natural conclusion would then be that the narrative element acts as the supplement for the game-centred view of video games and the reverse is also true in that the traditional notion of reading and experiencing stories is constantly being threatened by the inherent ludicity of narratives, as phenomena like video games keep pointing out. In either case, to privilege one element over the other would be to miss the point. Similarly, given the originary nature of this relationship, it must be noted that even older media show similar characteristics as video games, albeit in different media-specific forms.

Instead of the earlier watertight categorisation that ends up missing the complexity of how video games function as texts, a more flexible framework is necessary. There is also another reason behind why commentators struggle to explore the ways in which video games relate to older media: video games take the multiplicity inherent in narrative media to an extremely complex level of perception. Hence it is not surprising that, as Adams comments, there is a lack of common vocabulary about them and some critics even see them as an entirely new phenomenon quite separate from earlier narrative and ludic media. The story of video games, now, is somewhat like that of the blind men trying to know what an elephant looks like: critics focus on single aspects and err in considering them to be the primary approach for understanding video games.

Instead, the fact that video games exist as an assemblage of aspects needs to be kept in mind. Assemblage, as used here, is a concept borrowed from Deleuze and Guattari (the original French word used by them is *agencement*) and as John Phillips describes it, it carries

the senses of either 'arrangement', 'fitting' or 'fixing' [...] one would speak of the arrangement of parts of a body or machine; one might talk of fixing (fitting or affixing) two or more parts together; and one might use the term for both the act of fixing and the arrangement itself.

(Phillips, 2006, pp. 108–109)

Arriving at a precise definition of assemblage is difficult because of its multiple characteristics; John MacGregor Wise, in his essay on assemblage, does well to define the concept by stating what it is not:

An assemblage is not a set of predetermined parts (such as pieces of a plastic model aeroplane) that are then put together in order to or

into an already-conceived structure (the model aeroplane). Nor is an assemblage a random collection of things, since there is a sense that an assemblage is a whole of some sort that possesses some identity.

(McGregor-Wise, 2005, p. 77)

Both of these factors are relevant to video games, which do not have a preconceived structure, and yet are not random. Wise provides an example of an assemblage that compares with video games in many ways: the mobile phone. Like video games, when mobile phones first came into circulation, their role was restricted: their potential to perform tasks other than telephony was not yet realised and any extra features were looked on as add-ons or extrinsic appendages. Further – similar to notions of technology, such as computers and consoles, as being prosthetic to ‘pure’ play – the mobile phone was seen as prosthetic to the function of verbal communication.

Such notions have changed in the two decades in which mobile technology developed from 1G to 4G (in terms of chronology, too, there is a striking parallel with the development of video games). The iPhone 5 clearly ‘plugs into’ a range of aspects besides telephony: television, radio, Internet, office applications, photography and even video games (Apple iPhone website, 2014). ‘Plugging in’, in the Deleuzoguattarian sense, means a multidirectional process wherein any entity may form flexible and variable attachments with others. True to the original sense of *agencement*, according to Manuel DeLanda, ‘a component part of an assemblage may be detached from it and plugged into a different assemblage in which its interactions are different. [...] Assemblages may be taken apart while at the same time [...] the interaction between parts may result in a true synthesis’ (DeLanda, 2006, pp. 10–11). Deleuze and Guattari identify this flexible relationship in symbiosis, such as that between the wasp and the orchid: characterised by exteriority and yet, simultaneously, by an intrinsic inclusiveness. Describing the nature of the assemblage, Couze Venn states that ‘whilst Deleuze and Guattari suggest desiring machines as exemplar, one could instead refer to weather formation and the genome, or, for that matter, to the formation of identity’ (Venn, 2006, p. 177).

Viewed in terms of their flexible relationship with multiple facets of life, it is problematic to call mobile phones prostheses because of the originary nature of the plugging in. Speaking of the *oyayubikosu* (or ‘thumb tribe’) as the texting teenagers in Japan are now being called, Wise describes the phenomenon of the phone-becoming-hand and hand-becoming-phone in the act of texting. The hand has already

originarily been a communication tool even in the earliest conceptions of communication technology. The plugging in that occurs for the mobile phone is, therefore, already a sharing in originary terms. Video games also show similar characteristics. As assemblages, they are games, stories, political and economic platforms, simulations and fitness trainers among other things; moreover, they also plug into all these aspects as well as to the human player and to the machine (literally) in an intrinsic relationship. The *Grand Theft Auto* walkthrough, with which this chapter began, can be said to plug into the *GTA* assemblage, which includes the entire series of games, the individual gameplays of the players, the cheat-codes, the geography of the American cities in which the games take place, the design elements and much more. It would be difficult to leave any of these separate elements out of any critique or appreciation of *GTA V* or *GTA: San Andreas* because of the multiplicity of narratives and related play experiences they bring together. In fact, attempts to describe the *GTA* world inevitably result in resources such as the *GTA Wiki*, the ever-growing database of information related to the games that advertises having '99,100 pages and 9,560 articles since July 2006' (*GTA Wiki*, 2015). This is not just true of the *Grand Theft Auto* games but video games in general, with their multiple play and narrative experiences, form not *a text* but a text as an assemblage.

Anyone who has played video games will know that there are some aspects of 'gameplay' (as the playing experience is called) that are unmapable and that are perceivable but not describable. The colloquial description for this is that the player is 'in the game'. The story, the game rules and the machine code constantly intersect and transform each other as well as the emotions, the muscular movements and the spontaneous reactions of the player. A traditional humanities framework cannot grasp these less perceivable elements of the being 'in the game' experience. This is why, despite their popularity, the humanities are hesitant to admit video games into the folds of serious study: within the discourse of traditional and 'major' concepts of literature, video games are 'minor'. In the Deleuzoguattarian sense, minoritarian literature leads to many significant developments in understanding the nature of the literary. The rising importance of video games as a storytelling device, therefore, can no longer be deemed accidental.

The concept of the assemblage provides an important entry-point into analysing video games as a minoritarian literature assemblage: the following chapters will explore this in fuller terms. The video game-assemblage necessarily includes the changes in movements relative to the gameplay and to other people who might be around and the words

spoken during gameplay. According to Deleuze and Guattari, they might 'group themselves into vast constellations constituting "cultures" or even "ages"' (Deleuze and Guattari, 1987, p. 448). The assemblage contains various 'flows', which, according to Claire Colebrook, 'produce diverging and multiple relations' (Colebrook, 2002, p. xv) and are even constitutive of the entities themselves.

Here it must be clarified that there is a difference between the Deleuzoguattarian idea of 'flow' and the same term as already popular in game studies, particularly following the theory of psychologist Mihaly Csikszentmihalyi. The latter concept also relates to the experience of gameplay when the player is absorbed in the game and in Csikszentmihalyi's work this is a general concept that he believes is applicable to many aspects of life and especially to sports (Csikszentmihalyi, 1990, pp. 53–54). For him, the 'flow' experience is described as being goal-oriented or based on a merging of action and awareness as well as a sense of personal control. While there may be similarities on some levels with the Deleuzoguattarian 'flow', Csikszentmihalyi's concept is limited to a single kind of experience whereas in Deleuze and Guattari 'flow' occurs across multiplicities and occurs across various levels of the assemblage. It is both the breakdown of boundaries between entities and an interruption – flows can interrupt other flows.

In the assemblage, it is possible for the 'flows' to shift from certain levels of connection to other very much unrelated levels: in Deleuzoguattarian terms, this is called 'lines of flight'. Colebrook describes the lines of flight using various examples from human experience:

Any connection also enables a line of flight; there can always be genetic mutation. The definition of the human as rational can also allow for a dispute over just what constitutes the human: is it rational to stockpile nuclear weapons? So any definition, territory or body can open up to a line of flight that would transform it into something else.

(Colebrook, p. xv)

An analysis of the sandbox style of storytelling in *Grand Theft Auto: San Andreas*, as shown in the opening quotation, can also include or shift to a discussion of the question of violence in such video games as what would constitute a line of flight. In terms of this introduction, it must be clarified that this does not mean the shift to an issue different from

its immediate concerns, but rather the awareness of such issues as linked elements in the multiplicity that video games constitute.

The vast range of issues raised in connection with video games exhibit such a structure in the video game-assemblage. The concept of assemblage, therefore, needs to be invoked to be able to describe the multiplicity that video games constitute, simply because even an analysis of the narrative, ludic and machinic elements, which is the chief concern of this book, cannot be carried out without consideration of the various other aspects and conceptions into which video games plug in. In the following chapters, the concept of the assemblage will be a key framework for describing the multiplicity of video games; the conception of 'flow', where relevant, will inform subsequent discussions of assemblages.

For this book, the supplementarity of the narrative, ludic and machinic aspects of video games as well as the multiplicity of their associations need to be considered for understanding how gameplay functions; hence theoretical frameworks that view single aspects as isolated units or parts of binaries do not suffice. It must be remembered that earlier conclusions about video games were a result of problems that theorists faced in trying to analyse video games in terms of the peculiar properties that they exhibit. Instead of claiming that they are 'new' properties of a new medium, it will be instructive to examine them within the framework of supplementarity and multiplicity that has been adumbrated above. This framework will consist of three sections, broadly classified, as the machine, game and the story. The names of each section are merely indicative of the key focus: in consonance with the argument of this book, often all the elements emerge as equally important, because of their originary relationship.

Section I, comprising Chapters 2 and 3, will further explore the originary link between the machinic and the narrative aspects of video games. Chapter 2 will focus on how even earlier textual forms, such as the printed text, are characterised by machinicity, showing, therefore, that the manifestation of a similar relation in video games has its roots in the very origins of narrative media. This chapter also compares the multiplicity of both printed and video game narratives and for this purpose, it elaborates on the account of the assemblage, outlined above, to compare the book-assemblage with the video game-assemblage. Chapter 3 shows parallels between the technologies employed for reading a printed text and those for experiencing video games. Using the popular neologism (*w*)*reading*,⁵ it illustrates, within a Derridean framework, the supplementarity of the processes of reading and writing, thus

pointing to the fact that the simultaneous active and passive experience in playing a video game is a characteristic shared by all narrative media and not video games alone. The same argument also strengthens the case for considering video games as a narrative medium.

Following the deconstruction of the story/machine binary in the first section, Section II combines an analysis of the nature of gameplay by revisiting and challenging the game/play (*ludus/paidia*) and the story/game binaries. Chapter 4 returns to the Ludology–Narratology debate examining some of its new avatars and going on to close-read and compare video games that are overtly narrative in their gameplay and those that are less so, thereby revisiting issues related to the validity of the various positions on storytelling in games. In Chapter 5, two of the less focused-on aspects of game studies are discussed. The ephemeral story experience of video games is understood through a critical analysis of its played instances, for example through descriptions of gameplay such as walkthroughs and after action reports. Because of the multiplicity that applies to the medium, video game narratives are analysed here as a story-assemblage.

In Section III, Chapters 6, 7 and 8 analyse three major issues of contention about video game narratives: their multitelic characteristics, the issue of agency and, finally, the various positions regarding immersiveness in video games. Chapter 6 examines the complex temporality of video game – stories, especially as one considers the mesh of saves, reloads, incomplete and completed iterations of gameplay that go into the story experience of the games. The next chapter addresses the freedom and choice in the narrative construction that is often attributed to video games in order to highlight the complexity of the action in video games. Instead of granting full agency to the player, it is argued here that the gameplay takes place in a ‘Zone’ where, in each decision, one event out of many possibilities is actualised. This is the ‘Zone of Becoming’, which, in Chapter 8, also works as a metaphor with which the deep involvement, which video game stories often create, is understood. These chapters argue that only by exploring the above characteristics as part of a multiplicity is it possible to approach an understanding of gameplay.

In a rethinking of game studies perspectives, then, the framework of viewing video game narratives in terms of the Derridean ‘originary technicity’ moves the discussion away from the theories of prosthesis. Similarly, to better understand the multiplicity that video game narratives form, Deleuze and Guattari’s notion of the assemblage proves useful. Taken together, these two main concepts form part of a growing

recent discourse that takes a nuanced approach towards the nature of video games. The aim, therefore, is not to privilege any univocal model – be it the game rules, the story or the code. These theories as well as key concepts from game studies, which they re-inform, together form the base for more substantive readings of video games and the stories they create, whether as direct gameplay experiences or as player diaries and walkthroughs.

While it is possible to say that the ‘walkthrough’ of *Grand Theft Auto: San Andreas* in the opening section of this chapter is a reading of a game, it is also the playing of a story. Video games like *Grand Theft Auto* make the multiplicity of the text even more obvious than ever and, from the analysis of the experience of ‘reading’ such games, there comes the realisation that in the encounter with any form of text, there is also an implicit playing with stories.

Section I

Machine

2

Machinic Stories: The Literature Machine, Technicity and the Computer Game

Nietzsche's typewriter: Introducing the idea of the machinic text

In a letter to a friend, typewritten on his famous Malling Hansen writing ball, Nietzsche observed that 'our writing instruments contribute to our thoughts' (Kittler, 1997, p. 13). Nietzsche's comment links technology to what he calls 'our thoughts': by implication, this can also mean what is understood by 'text', especially in the broader Barthesian sense, of something that is not restricted to materiality. Nietzsche's comment, made over a century ago, therefore implies that the claim made by so-called 'new media' from the last two decades to having newly established the link between the text and the machine is problematic. Of course, it is true that technological developments in the last few decades have strengthened the notion of the machinelike nature of texts. For example, hypertext and electronic text are composed of machine code that is present as a layer of machine-readable text beneath whatever text they convey to us. Similarly, machines are also increasingly being seen as texts, and complex machinic systems like video games and simulations are beginning to be perceived both as programs and as texts that can be read. However, as Nietzsche's observation indicates, the text-machine relation is not a new development; instead, it is originary. An analysis of video games, arguably one of the latest manifestations of machinic textuality, as well as 'new media', helps to examine this idea more deeply.

This chapter will attempt to show how the machinic and the textual are originary and how the study of newer machinic media like video games helps to highlight this relationship in all forms of text,

both new and old. To begin with, however, it will be useful to establish a background for the analysis by outlining the concepts which theorists like Aarseth, N. Katherine Hayles and Derrida use to describe the machinic nature of texts. This will be followed by a more detailed enquiry, in terms of a Deleuzoguattarian account of the machinic nature of printed narratives and an analysis of the textual element in video games developing the idea of the technological assemblage in the Introduction. This will aim to establish video games as a literary machine by showing how literature itself is machinic and pointing to the clear similarities that it therefore has with the computer game. Further, by comparing the reading strategies of the computer game and the printed text, it is possible to further illustrate the originary relation between textuality and technicity.

The cybertext, the technotext and the paper-machine: Models of machinic textuality

Conceptions about machines and texts have changed significantly in recent times. Cybernetics, the interdisciplinary study of complex systems, recognised that machines do not function as isolated units: the user also forms part of the machine-complex. In his work on the anti-aircraft gun, Norbert Wiener comments:

The actual fire control is a system involving human beings and machines at the same time. It must be reduced, from an engineering point of view, to a single structure, which means either a human interpretation of the machine or a mechanical interpretation of the operator, or both.

(Wiener, 2003, p. 67)

For cyberneticists like Wiener, information flow rather than energy is the key entity in the man-machine equation. The cybernetic understanding of the machine is based on the mechanism of feedback, defined by Ross Ashby, pioneer of cybernetics, as the 'circularity of action [that] exists between the parts of a dynamic system' (Ashby, 1979, p. 53). Based on information flow between the man-machine complex, many more systems could qualify as machines. A good example would be the text. The text can be seen as a machinic entity facilitating a feedback loop of information flow between itself and its user (or reader). It is therefore no surprise that this notion influences various accounts of machinic textuality. Aarseth's concept of the 'cybertext', the pioneering concept

of computer game textuality, is no exception. The term cybertext is itself an open acknowledgment of the influence of cybernetics and clearly marks a fresh approach to textuality.

According to Aarseth, 'Cybertext [...] is the wide range (or perspective) of possible textualities seen as a typology of machines, as various kinds of literary communication systems where the functional differences among the mechanical parts play a defining role in determining the aesthetic process' (Aarseth, 1997, p. 22). The implicit cybernetic angle in this account does not privilege either new or special technological features in texts as capacities to render them machinic, but focuses on feedback and the flow of information between the user and the text which need not necessarily be restricted to electronic media. Following this logic, Aarseth, unlike the advocates of the so-called new media, rightly recognises that texts from earlier media also have the capacity to be cybertexts. The *I-Ching* or Raymond Queneau's *Cent Mille Millions de Poèmes* (Queneau and Le Lionnais, 2009), both examples of printed books, would qualify as cybertexts because they are 'ergodic', which, in Aarseth's definition, are those texts that require 'nontrivial effort' to traverse them. However, some problems still remain with Aarseth's analysis, which, although it does away with the exclusivity claimed for electronic texts, brings in another kind of exclusivity.

For him, ergodicity is an exclusive property of texts that he considers to be non-linear or where 'the words or sequence of words may differ from reading to reading because of the shape, conventions, or mechanisms of the text' (Aarseth, 1997, p. 41). He is quite clear that his conception of non-linearity is restricted to the shape and structure of the text and not to the non-linearity of the narrative. The narrative is expelled from the cybertext and replaced by the ergodic. Aarseth's logic for this is that 'unlike fictions, which simply present something else, cybertexts *represent* something beyond themselves' (Aarseth, 2003a, p. 777, original emphasis). This kind of exclusivity claimed within the cybertext raises many problems: its refusal to admit to the narrative possibilities forcibly imposes a watertight categorisation of linearity and non-linearity that the text keeps refusing. Elsewhere, Aarseth himself acknowledges that 'a narrative may be perfectly non-linear [...] and yet be represented in a wholly linear text' (Aarseth, 2003, p. 762) but he chooses to retain the formal division nevertheless. The cybertext's denial of the narrative raises a slew of problems that lead to the Ludology–Narratology debate discussed in the introductory chapter. The next chapter will analyse the typology that Aarseth provides to support his conception of the non-linear narrative and, in

the process, reveal further shortcomings of this position. Meanwhile, it will be useful to list some other problems raised by the cybertextual model.

Hayles comments that 'Aarseth's functionalist approach tends to flatten multiple causalities into linear causal sequences determined by the work's functionality' (Hayles, 2005, p. 37). She explains that such an approach tends to be reductive in its omission of social, cultural and political factors influencing the text; further, quite surprisingly for a video game perspective on textuality, this approach highlights the verbal aspect of the nonlinear text at cost of ignoring the equally important visual, sonic and kinetic aspects of the game-text. This approach also does not consider the material specificity of the text, saying nothing about the sheer physicality and immediacy of the textual experience of video games. Hayles further comments that this approach is inadequate for understanding emergent processes (like the computer game) characterised by entangled feedback loops cycling back and forth between different levels. She herself posits a critical approach called Media Specific Analysis as the key method of 'forging a robust and nuanced account of how literature is changing under the impact of information technologies' (Hayles, 2005, p. 19). This approach examines literary texts in their embodied form and claims that the materiality of these 'interacts dynamically with linguistic, rhetorical, and literary practices to create the effects we call literature' (Hayles, 2002, p. 31). Materiality is defined as an emergent property where the form, content, author and user contribute actively. Hence it is not possible to determine the materiality of a text in advance.

In an interview with Lisa Gitelman, Hayles says that she hopes to 'electrify the neocortex of literary studies into recognising that the print book is after all an interface with its own presuppositions, assumptions, and configurations of the reader' (Gitelman, 2009). This does not mean that the print book will become obsolete but that a whole new apparatus for analysing texts will come into literary studies. The text in question is a special kind, termed 'technotext' by Hayles. She defines it as literary works that 'unite literature as a verbal art to its material forms' (Hayles, 2002, p. 25). In 1999, Jay David Bolter and Richard Grusin broke with the myth of the newness of new media in their notion of 'Remediation', which argues that each new media re-fashions at least one older medium. The technotext proposed by Hayles is based on a modification of Bolter and Grusin's concept; to describe this Hayles uses another neologism, 'intermediation', which she defines as 'complex transactions between bodies and texts as well as between different forms

of media' (Hayles, 2005, p. 7). Therefore, intermediation, according to her, is not just the refashioning of older media; it is an entanglement of various media. Although it is of signal importance in understanding texts like video games that are constructed through an amalgamation of media, this concept also points out the need for reading other forms of texts in relation to the other media that they connect with. A striking example among printed texts would be William Blake's poetry: reading the poetry without the illuminations presents an incomplete and sometimes very different picture. The process of intermediation in video games merits a separate treatment in the following section.

Hayles's explanation of machinic textuality develops significantly on the notions of machinic textuality proposed by 'new media' theorists and challenged and modified by Aarseth. It is important to link this to other theoretical discourses on the subject, such as the Derridean account of originary technicity in the introductory chapter. This will involve separate discussions of the concepts of technotext and intermediation, while of course keeping in mind their interlinked nature against the backdrop of Derridean conceptions of the technicity of the text.

The term 'technotext' tends to raise further questions about whether it is generally applicable to all texts or is an exclusive category like the cybertext. However, Hayles's clarification does not leave any doubts:

When a literary work interrogates the inscription technology that produces it, it mobilises reflexive loops between its imaginative world and the material apparatus embodying that creation as a physical presence. Not all literary works make this move, of course, but even for those that do not, my claim is that the physical form of the literary artifact always affects what the words (and other semiotic components) mean.

(Hayles, 2002, p. 25, original emphasis)

It is important to note that Hayles describes the text as the 'literary artefact', a phrase indicating its artificiality and its identity as a construct and by implication, how it exists in an originary relationship with its inscription technology. This comment also makes it clear that this relationship is not exclusive to computerised media. With the above in view, the Derridean concept of originary technicity will now be developed further so as to facilitate a more informed understanding of the machinic nature of texts.

The very etymology of the word 'text' is loaded with implications of machinicity that bear out Hayles's point: the *OED* gives the root of 'text'

as the Latin *textus* meaning the 'tissue of a literary work, that which is woven or a web' ('Text,' 1990). The text, even by judging from its etymology, is seen as an artefact, always linked to a machine and even as a machine in itself. The sense in which 'machine' is being used here is similar to the use of the term 'machinic' as discussed in the previous chapter. The woven tissue of literature is easily connectable to a material object. For centuries, since its invention in the first century AD in China, this has been paper and many other materials, such as papyrus, even before that. This medium, however, is not entirely circumscribed by physical constraints. In *Paper Machines*, Derrida points out that 'the page nowadays continues [...] even where the body of paper is no longer there in person, so to speak, thus continuing to haunt the computer screen and all internet navigations in voyages of all kinds' (Derrida, 2005, p. 46). He gives the example of the Notebook software on his computer, which exists as the remediated form of the paper-based notebook.

For Derrida, the description of electronic media as future manifestations of the paper-text does not successfully address the question; he claims that paper was always a 'virtual multimedia' and that 'it is still the chance of a multiple text' (Derrida, 2005, p. 47). As he comments, 'by carrying us beyond paper, the adventures of technology grant us a sort of future anterior; they liberate our reading for a retrospective exploration of the past resources of paper, for its previously multimedia vectors' (p. 47). The concept of the 'future anterior', an important notion in Derridean philosophy, is useful in locating electronic media within the corpus of textuality. The 'future anterior' or the 'will have been' does not belong to or is not grounded in the present: in *Dissemination*, Derrida describes 'what will have been written – the past of an anterior future or the future of an anterior past [...] which is itself neither anterior nor ulterior' (Derrida, 1983, p. 361). For him, textuality as such is characterised by this non-belonging to a specific present and is, therefore, a mirroring or an echoing of the 'trace of its own reflection'; the text is both the reflection of its past as well as the anticipation of its future forms. Using this logic, video games (as well as all of the so-called new media) can be called 'texts' which actualise the multimedia vectors that are anterior to the existence of the physical constraints of paper. By the logic of the future anterior, just as video games reflect properties of earlier texts, paper-based texts also anticipate digital games in their multimedia vectors.

That is, however, not to deny the technological specificities (futuristic in comparison to the physical reproductions of most paper-based texts)

of the game as a separate and unique medium. The following comment by Derrida supports this view:

While we do have to recognise the 'multimedia' resources or possibilities of paper, we should avoid that most tempting but also, the most serious of mistakes: reducing the technological event, the invention of apparatus that are multimedia in the strict sense of the word — in their external objectality, in the time and space of their electro-mechanicity, in their numerical or digital logic — to being merely a development of paper, its virtual or implicit possibilities.

(Derrida, 2005, p. 47)

One of the conclusions, therefore, is that print-based texts are as much machinic texts as electronic media like video games and there are similarities between the two because both have the potentiality of producing a multiple text using multiple media. The other conclusion is that the media-specific analysis that Hayles advocates is of signal importance in reading the machinic text. Therefore, the machinic text is neither the computer-oriented futuristic entity of 'New Media' theorists and nor is it an informational abstraction that is totally devoid of formal constraints. Having established this, how the text exists as an intermediation and how it constructs its materiality need to be examined.

Materiality in the literature-machine

The breaking out of their physical constraints by various media, described above, also has consequences for the materiality of texts. Materiality is constructed and, like the text, is 'woven' into existence. This leads to an emergent notion of materiality. Hayles redefines materiality as 'the interaction of its [the text's] physical characteristics with its signifying strategies' (Hayles, 2005, p. 103). For her, as for Derrida, this notion of materiality 'extends beyond the physical object, for its physical characteristics are the result of the social, cultural and technological processes that brought it into being' (p. 103). Aarseth's concept of the cybertext misses a consideration of the text's emergent materiality. Consequently, it fails to admit to the originary machinic nature of narrative itself. The above model of materiality and emergence obviously indicates an ongoing construction of nonlinear textuality within even the so-called linear literary texts.

In a lecture of 1967, entitled 'Cybernetics and Ghosts', novelist Italo Calvino describes literature as a 'literature-machine' where meaning is

created not just on the linguistic level but has 'slipped in' from another plane. He describes literature as 'a combinatorial game that pursues the possibilities implicit in its own material' (Calvino, 1987, p. 22). This bringing-together of the machinic and the ludic within the frame of the literary clearly prefigures the later phenomenon of the computer game, which was instrumental in reigniting interest in this aspect of textuality over three decades later. Calvino goes on to make a somewhat enigmatic comment about the literature-machine:

The literature-machine can perform all the permutations possible on a given material, but the poetic result will be the particular effect of one of these permutations on a man endowed with a consciousness and an unconscious, that is, an empirical and historical man. It will be the shock that occurs only if the writing-machine is surrounded by the hidden ghosts of the individual and his society. (p. 22)

Considering the time when this was written, Calvino's conceptions are extremely prescient. The permutations performed by the literature-machine cannot exist in isolation. The writing-machine is surrounded by the 'ghosts' of the individual and his society: the many traces and writings, or 'spectrographies' (Derrida and Stiegler, 2002, p. 113) as Derrida calls them, which 'slip in' from various planes into the narrative. This is all too normal in the experience of playing a computer game: there are permutations of narrative, especially in 'freeform' games like *GTA: San Andreas*, but these cannot happen in isolation. The computer game narrative is dependent on player feedback as well as on numerous connections with various other narratives and levels of information. In *GTA: San Andreas*, there are historical links to the Los Angeles riots of 1992, to several genres of cinema, styles of animation, some critiques of American culture and to controversies regarding some features of the game. Of course, there are other factors such as the way the game and the player control each other, the level of skill (which may correlate to the player's experience with similar games) and the player's state of mind during the gameplay. Calvino's statement effectively incorporates the various things that constantly shape computer game narratives and make them such versatile experiences of storytelling although he is actually describing the printed literary text: the similarities between the two are unmistakable. Both these types of texts show in their different media-specific ways how they qualify as literature-machines. A deeper analysis of the workings of the literature-machine would now be appropriate.

The machine in 'minor literature'

Hayles connects her account of emergent materiality of texts to the concept of the assemblage, which has already been introduced in the Introduction as a key element in the work of Deleuze and Guattari. Mention of assemblages occurs throughout Deleuze and Guattari's *A Thousand Plateaus* but very importantly for the present context, the concept is first introduced in a discussion of the book. According to them, 'In a book, as in all things, there are lines of articulation or segmentarity, strata and territories; but also lines of flight, movements of deterritorialisation and destratification [...] all this, lines and measurable speeds, constitute an assemblage' (Deleuze and Guattari, 1987, p. 4). As mentioned in the Introduction, lines of flight mark a change within the assemblage. Links across various strata and changes evoked by lines of flight are characteristic of the book-assemblage. Printed texts, being literary machines, can be 'plugged' into other machines (assemblages) at the time of writing (or reading). They have neither object nor subject and are made of variously formed matters. As Deleuze and Guattari state, the book's content is the same as its material and that as assemblages 'the book has only itself, in connection with other assemblages' (p. 4). They describe the book-assemblage quite clearly in the introduction to *A Thousand Plateaus*: 'A book is an assemblage [...] It is a multiplicity [...] the book itself is a little machine; what is the relation (also measurable) of this literary machine to a war machine, love machine, revolutionary machine, etc.' (p. 4).

Deleuze and Guattari go on to connect various novelists (and their stories) to different machinic systems: Heinrich von Kleist to a war machine, Franz Kafka to an extraordinary bureaucratic machine, and so on. 'Literature', they conclude, 'is an assemblage' (p. 4). Such a machinic assemblage is, then, a dynamic body: the book exists only with respect to how it functions with other objects, how it changes them and is itself changed by them. It is also important to see how the book-machine is also described as being organic, illustrating the supplementarity of mechanicity and organicity, which is also characteristic of the man-machine complex that forms in the cybernetic feedback loop between machine and user, computer game and player or text and reader, as noted earlier. However, the literary machine is not homogenous.

In Deleuze and Guattari's terms, the book assemblage can be seen in terms of root-books, radicle-systems and rhizomes. The first type is the linear book with a strong principal unity governing its structure, almost like a tap-root supporting secondary roots. The second type, or the

radicle-fascicular system, is like the tip of the root structure replaced by a series of secondary roots that give the impression of a multiple branching. However, according to Deleuze and Guattari, this does not represent true multiplicity. The modern world, in its present chaotic state, has become impossible to represent, therefore 'the multiple must be made' (Deleuze and Guattari, 1987, p. 7) and the root structures should be replaced by the multiple dimensions of the rhizome. According to them, the book and the world together form such a rhizome:

The same applies to the book and the world: contrary to a deeply rooted belief, the book is not an image of the world. It forms a rhizome with world, there is an aparallel evolution of the book and the world; the book assures the deterritorialisation of the world, but the world effects a reterritorialisation of the book, which in turn deterritorialises itself in the world.

(Deleuze and Guattari, 1987, p. 12)

Here, Deleuze and Guattari describe the structure that is most associated with the multiple text; this description also anticipates a more detailed discussion of the book assemblage that will establish further connections with video games. Before moving on to the rhizome-book, it will be useful to understand what Deleuze and Guattari mean by 'deterritorialisation' and 'reterritorialisation'. Colebrook explains 'deterritorialisation' as follows:

Everything, from bodies to societies, is a form of territorialisation, or the connection of forces to produce distinct wholes. But alongside every territorialisation there is also the power of deterritorialisation. The light that connects with the plant to allow it to grow also allows for the plant to become other than itself: too much sun will kill the plant, or perhaps transform it into something else.

(Colebrook, 2002, p. 22)

This transformation into something else is a key characteristic of the conception of literature that will be linked to video games in this chapter and later on, in Chapter 5.

The concept of the rhizome, already mentioned in connection with the book assemblage, now needs to be further clarified with reference to its special Deleuzoguattarian context. According to John Marks, 'the rhizome is an "acentred" system; the map of a mode of thought which is always "in the middle"' (Marks, 1998, p. 45). Marks shows how

Deleuzoguattarian thought changes the binary subject/object organisations of systems in Western thought:

Deleuze and Guattari's contribution to this re-evaluation of the concept of the system is the figure of the 'rhizome'. The rhizome is a figure borrowed from biology, opposed to the principle of foundation and origin which is embodied in the figure of the tree. The model of the tree is hierarchical and centralised, whereas the rhizome is proliferating and serial, functioning by means of principles of connection and heterogeneity. In simple terms, any line can be connected to any other line. However, these lines do not converge to form an organic whole [...] the rhizome is a multiplicity [...] it is always an open-system with multiple exits and entrances. (p. 45)

The rhizome-book, therefore, changes the way literature is understood: it connects to various assemblages and forms an open and multiple structure that is constantly proliferating while simultaneously being disrupted by various lines of flight. Such a structure necessitates a conception of literature that is very different from traditional notions.

Deleuze and Guattari draw a distinction between what they call a minoritarian and a majoritarian literature. They introduce the concept of 'minor literature', which is 'that which a minority constructs within a major language' (Deleuze and Guattari, 1986). Deleuze and Guattari elaborate on this concept in *Kafka: Toward a Minor Literature* (Deleuze and Guattari, 1986). Here, they discuss Kafka's work as being a literary machine which is rhizomatic and which consists of elements that are in constant transversal communication. They consider Kafka's letters, his stories and his novels as different components of a literary machine. As Marks comments:

Deleuze and Guattari seek to overturn just about every piece of received critical knowledge concerning Kafka. [...] His bachelor existence, far from cutting him off from social life, allows him a fluid, even 'dangerous' social nature. Kafka's 'solitude' and that of his narrator/character K, allows Kafka to construct a literary 'machine'.

(Marks, 1998, 136)

Kafka's literary machine is an example of minor literature: as Colebrook states, 'he wrote, not as a being with an identity, but as a voice of what is not given' (Colebrook, 2001, p. 104). Colebrook's comment further illustrates the rhizomatic character of Kafka's minoritarian literature.

The question arises as to how the Deleuzoguattarian conception of the literary machine as embodied in Kafka's stories compares with the idea of video games as a literary machine. A more detailed analysis of the minoritarian characteristics of literary machines is needed to understand this.

Deleuze and Guattari identify three characteristics in minor literature: the deterritorialisation of language, the connection of the individual to a political immediacy, and the collective assemblage of enunciation. In Kafka, James Joyce and Samuel Beckett, they identify the capacity of the text to work over its material, very like the capacity of paper, in the Derridean terms outlined earlier, to work beyond its physical constraints. They read Joyce and Beckett as prime examples of reterritorialisation and deterritorialisation of language. They comment on 'the utilisation of English and of every language in Joyce [and] the utilisation of English and French in Beckett' and remark that 'the former never stops operating by exhilaration and overdetermination and brings about all sorts of worldwide reterritorialisations. The other proceeds by dryness and sobriety, a willed poverty, pushing deterritorialisation to such an extreme that nothing remains but intensities' (Deleuze and Guattari, 1986, p. 19). The process of deterritorialisation and reterritorialisation connects the literary machine to other assemblages – commercial, economic, bureaucratic or juridical and, finally, this connection results in a collective enunciation of the individual.

Deleuze and Guattari observe this in a short story by Kafka:

in 'The Investigations of a Dog', the expressions of the solitary researcher tend toward the assemblage of a collective enunciation of the canine species even if this collectivity is no longer or not yet given. There isn't a subject; there are only collective assemblages of enunciation.

(Deleuze and Guattari, 1986, p. 18)

The tripartite processes of minor literature show how Kafka's works function as a literary machine, especially when compared to the workings of the machinic assemblage described above. What follows are two descriptions of the literary machine: one being that of the paper-based (and ostensibly linear) narratives such as Kafka's stories and the other being the narrative in the computer game. These accounts will then feed into each other and show how an understanding of their respective status as machinic texts also necessarily influences the reading of each form in terms of the others.

Deleuze and Guattari describe Kafka's letters as a 'rhizome, a network or a spider's web' (Deleuze and Guattari, 1986, p. 29). While the letters contain the 'motor force that [...] start the whole machine working' (Deleuze and Guattari, 1986, p. 35), Kafka's stories give him a creative line of escape in the form of what Deleuze and Guattari call 'becoming-animal'. According to Marks: 'Literature is [...] a matter of becoming, of instigating a zone of indiscernibility rather than creating identification or imitation, and literature is capable of putting into practice the principle that runs through Deleuze's work: becoming' (Marks, p. 125). 'Becoming' has very specific connotations in Deleuzoguattarian thought, as Marks's comment indicates. It must be remembered that becoming is best understood as a continual process: it is not a direct identification and nor is it any conclusive change. In becoming-animal, therefore, Kafka's protagonist does not take on the identity of an animal yet he shares in characteristics of the animal – he, as it were, occupies a zone of multiplicity where many identities are possible. Here, the continuum of identities and the assemblages with which it connects illustrate what Deleuzoguattarian thought describes as a molecular structure, one based on parts and the interaction of parts in a pure ceaseless becoming. Molecularity sees wholes as open structures based on multiplicity and existing in a continuum of duration.

According to Deleuze and Guattari, Kafka's short stories point to the ultimate form of becoming: the becoming-molecular. Their claim is based on their view that Kafka's stories are characterised by multiplicity and the process of becoming. The becoming-molecular also implies other types of becoming: the multiplicity in the stories is also characterised as 'becoming-machine'.

This molecular multiplicity, achieved in the stories, tends to become integrated with a machinic assemblage. An analysis of 'In the Penal Colony', Kafka's short story that is directly concerned with a machine and its almost-machinic human operator, illustrates this well. In the story, the punitive machine of the penal colony seems almost a part of the officer who controls it and even of the convict who is to be executed on it. The machine itself is an apparatus of justice – plugged into, as it were, the justice-assemblage. The officer's meticulous and single-minded description of the workings of the machine, his absorption in the machine and finally, his own death on the machine show a multiple machine-human relationship that can be compared to the becoming-machine as described by Deleuze and Guattari.

Deleuze and Guattari, in their own analysis of the story, acknowledge the 'seed of a novel' (Deleuze and Guattari, 1986, p. 39) in it but they

also see other possible 'becomings' in the many versions of the story: 'And Kafka can imagine an animal conclusion to this text that falls back to the level of a story: in one version of the "Colony", the voyager finally becomes a dog [...] (in another version a snake-woman intervenes)' (p. 39). They also claim that Kafka has many reasons to abandon a text but from 'one genre of text to another, there are interactions, reinvestments, exchanges, and so on. Each failure is a masterpiece, a branch of the rhizome' (p. 39). Finally, they go on to describe the three main novels as parts where the machine is incarnated in very complicated social assemblages. Kafka's conception of the novel is that of one that never stops developing its assemblages.

These characteristics are certainly compatible with Deleuzoguattarian notions of the machinic and also of minor literature. The multiplicity, the intense involvement with the machinic processes and the many versions of the story are actually associated more commonly with another more recent form of machinic text: the computer game. A comparison between these two forms will reveal how both function as literary machines and essentially demonstrate in clearer terms the originary relation between the narrative and the machinic.

Video games as 'minor literature'

In the above introduction to the idea of the machinic in literature, various new perspectives have opened up which now redefine our idea of literature. It is clear that the computer game narrative, despite its underlying elements of technicity, is not a unique literary phenomenon. It also has its literary antecedents. In fact, Deleuze and Guattari's concept of the machinic text finds many similarities in video game. The following sections will compare the machinic nature of literature with the computer game narrative and establish similarities between them. The sections will illustrate how the Deleuzian concepts of becoming and the rhizomatic help to explain some of the major characteristics of video game narratives that prove to be beyond the analytical capabilities of the apparatus used by more traditional forms of literary criticism and games criticism. The purpose of the present section is mainly comparative. Three major elements in both types of texts will be compared: the existence of the text as assemblages, the multiplicity of the narrative and the ability of the assemblage(s) and the user(s) to 'plug into' each other.

The computer game narrative, like Deleuze and Guattari's assemblage, is a complex of various entities. It is a dynamic body, the existence

of which is governed by how it changes other objects and how it itself gets changed by them. Like other Deleuzian assemblages, the computer game plugs into various other assemblages, for example the economic-assemblage. Especially in massively multiplayer online role-playing games (MMORPGs), the game links many individuals together through the Internet and the worlds that the game-developers create soon spawn and re-spawn into a network. As Edward Castronova (Castronova, 2005) comments, these 'synthetic worlds' develop their own economic systems, which then spill over into real economic systems, with virtual characters and game 'property' being auctioned on online markets like eBay. Conversely, the outside world's economics can affect the playing of games. In games like *World of Warcraft*, it is possible to actually hire the services of a superior gamer to play a certain part of the game and thus gain an advantage within the game system. This concept is called 'power levelling' and there are even companies (such as Guy4Game and Eaglegame.com) that do business by selling power-levelling services.

There are obvious other assemblages where the game plugs in: for example, the political assemblage. The whole schema of 'Persuasive Games' is based on this. The home page of Persuasivegames.com declares: 'We design, build, and distribute electronic games for persuasion, instruction, and activism. Our games influence players to take action through gameplay. [...] While often thought to be just a leisure activity, games can also become rhetorical tools' (Persuasive Games, 2015). The company has created video games like *Fatworld*, which is about the politics of nutrition, *Presidential Pong*, about the 2008 Presidential campaign in the US and *Airport Insecurity*, about the conflict between passengers' rights and security measures. These games indicate the wide range of assemblages (political, juridical and sociological) which the ludic text keeps plugging into.

Among other machinic assemblages that the game 'plugs into' is the war-machine. Besides, the numerous real-time strategy games like *Age of Empires* (Ensemble Studios, 1997) or team-based shooters like the ever-popular *Counter-Strike* (Valve Corporation, 1999) and the *Call of Duty* series, video games have entered the realm of 'serious' military training in games like the US Army's *America's Army* (United States Army, 2002) or the Syrian-developed first-person shooter (FPS) *Under Ash* (Dar al-Fikr, 2001). Both games claim to present 'true experiences'. *America's Army* claims to provide 'the most authentic military experience available' and is used by the US Army for simulating real-life engagement experiences, recruitment propaganda and training. The developers of

Under Ash claim that its 'level contents are inspired by real stories of Palestinian people, that were documented by United Nation records (1978–2004)' (UnderSiege, 2006). The developers claim that 'we had to do our share of responsibility in telling the story behind this conflict and targeting youngsters who depend on video games and movies (which always tell the counter side) to build their acknowledgement [sic] about the world' (UnderSiege, 2006). Both of these games target the younger generations to encourage participation in their respective war efforts. In the process, they also connect to the political assemblage through their respective political positions and plug into the rhetorical machine. Besides the above examples, the computer game also connects to numerous other machinic assemblages such as cinema, music and competitive sports.

Finally, it is also at the same time a literature-machine, given that there is a story of some sort that the games tell when they are played. The literature-machine, itself, exists in further intermediation with various other media-assemblages, as mentioned earlier. *Max Payne* (Remedy Entertainment, 2001) is a classic example of such an assemblage. It combines elements of film noir (especially in the grim but hyperbolic dialogues), the graphic novel, sci-fi films such as *The Matrix* (Wachowski and Wachowski, 1999), from where it borrows the 'bullet-time' technology, numerous cleverly disguised allusions to its own ludicity as well as to other texts and it even has an 'official strategy guide' in print form. In this sense, like Kafka's stories, the game is perhaps rhizomatic in that it deterritorialises and reterritorialises various lines of movement between the assemblages and it accommodates lines of flight within the intermediated assemblage (for example, when the action sequence leads to the cinematic cutscene within the game).

The concept of the rhizome is not new to game studies although its current mode of application needs to be examined further. One major characteristic of computer game narratives is that they consist of multiple stories with a number of different endings. While this seems so different from conventional notions of literature, it bears a distinct similarity to Deleuzoguattarian conceptions of the rhizomatic book. Indeed, the concept of the rhizome has been seen by commentators as the key to an understanding of the labyrinthine character of the game narratives, which otherwise tend to create plenty of confusion regarding their true characteristics. Since the very inception of game studies, this concept has been applied in this context. Murray, in her description of 'digital labyrinths', describes the postmodern hypertext narrative as a rhizome:

Like a set of index cards that have been scattered on the floor and then connected with multiple segments of tangled twine, they offer no end point and no way out. Their aesthetic vision is often identified with philosopher Gilles Deleuze's 'rhizome', a tuber root system in which any point may be connected to any other point. Deleuze used the rhizome root system as a model of connectivity in systems of ideas; critics have applied this notion to allusive text systems that are not linear like a book but boundaryless and without closure.

(Murray, 1997, p. 132)

However, though the rhizome-model proves useful in describing the game narrative, it is used here in an oversimplified way. Murray's definition, while relevant, tends to be incomplete in certain aspects, as a comparison with the Deleuzoguattarian formulation will illustrate.

According to Deleuze and Guattari, the rhizome is multiple in that it is multi-dimensional, or rather it has $n-1$ dimensions because the recognition of multidimensionality implies a subtraction of the unique from all the dimensions possible (where the unique is also counted as a dimension). Murray's model of the rhizome using index cards tangled with twine in no way approximates to the complexity of the Deleuzoguattarian model. Neither is the Deleuzoguattarian model about any tuberous root-system: Deleuze and Guattari are categorical that 'a rhizome as subterranean stem is absolutely different from roots or radicles' (Deleuze and Guattari, 1987, p. 7). In *A Thousand Plateaus*, the concept of a rhizome does not simply mean 'allusive text systems that are not linear like a book but boundaryless and without closure' (see Murray's comment). The radicle-fascicular root-book described above can also answer the same description. In a rhizome, which unlike the radicle-systems is a true multiplicity, any part can be connected to any other part and that different regimes of signs are connected to each other on varying planes of complexity. Therefore, the rhizome, unlike the hypertext narratives (especially Interactive Fiction) to which Murray compares it, has no beginning either. The hypertext narrative does not behave like a rhizome structurally. It can, of course, form a rhizome with other narratives and assemblages through its allusiveness in a process similar to the print narrative.

The computer game narrative, as will be shown in the next chapter, is of course more often than not structurally quite different from the hypertext narrative. It is more rhizomatic; although of course, to claim that it *is* a rhizome would be stretching the comparison. It must be remembered that the rhizome does not connect points: it connects lines,

which criss-cross each other on various planes. Allusive text systems may increase the number of possible connections, true, but in hypertext literature and in video games the multi-dimensional linkage that is essential for rhizome-formation is not present. Also, connectivity is limited to the requirements of the basic plot. There are only so many connections that a hypertext can provide on a page. The computer game (especially one with good AI) can provide a great deal more variety though, of course, even that has its limits. So a connection between the rhizome and the computer game is not as simple as it may look.

Examined structurally, hypertexts and many early video games (especially adventure games like *Zork*) correspond to a branching tree structure but most single-player computer game narratives are far more complex although they come nowhere near the visually unrepresentable Deleuzoguattarian concept of the rhizome. At best, they occupy a spot in between the radicle-fascicular root-book structure (like the texts by William Burroughs) and the rhizomatic.

This might not be the case, however, with multiplayer games and especially MMOs that are played over the Internet and have worlds that link to a plethora of real and virtual worlds on many different levels. Though he argues against any simplistic identification of the Internet with the rhizome, Marks notes that 'it is also undeniable that the concept of the rhizome as a proliferating multiplicity which has no organizing dimension or centre suggests metaphorical and analogical links with the Internet as a global system' (Marks, 2006, p. 193). Structurally, multiplayer games can therefore be more like the rhizome: however, the structure, in this case, is not a formal unidimensional structure; rather it is like the Deleuzoguattarian 'body without organs', which does not just involve the game itself but rather, the game as well as everything else including the milieu, the player's experience, the system on which the game is being played and so on. Like the Internet, multiplayer games exhibit, to a large extent, the rhizomatic qualities like connection, heterogeneity, multiplicity, asignifying rupture, cartography and decalomania. Like the Deleuzoguattarian rhizome-book (e.g. the Kafka texts described in the previous section) they undergo deterritorialisation and reterritorialisation with the external world. The following sections argue for the rhizomatic nature of the digital games.

In general, however, all video games can be said to possess some rhizomatic characteristics. For example, as the possible outcomes of the computer game multiply, its nature also changes considerably and makes the text heterogeneous. Connection with other assemblages also contributes to the heterogeneity. Consider the popular simulation game

The Sims. The numerous expansion packs and mods (modifications), released both by the manufacturer and by independent players, have considerably multiplied the possibilities of the game and in most cases changed the nature of the game, as well. For example, whereas the original game did not allow the characters to have pets, the modified version does. Even within the ordinary single player game, the gameplay multiplies the possibilities of the game and certain paths make the game relatively easy while others make it less so. This element of multiplicity is a key feature of the game narrative. The possibility of playing the computer game narrative all over again from a particular point using the saved game feature is difficult to imagine within the literary structure of the root-book. In the rhizome-book, however, it corresponds to the principle of asignifying rupture. According to Deleuze and Guattari, 'A rhizome may be broken, shattered at a given spot, it will start up again on one of its old lines, or form new lines' (Deleuze and Guattari, 1987, p. 10). Correspondingly, players have the chance to try out totally new strategies or to develop on an old one when they start a saved game. This can happen on various different levels: there is also the possibility of modifying the earlier situation (in the saved game) using cheat codes. Finally, in some respects the game is like a map as defined in *A Thousand Plateaus*: the game-trees (despite the name) are not always arborescent, especially in complex games that construct their own world in both spatial and temporal terms. The connections in such game-trees occur between instances of gameplay and are open on all sides, as will be shown in on the analysis of the temporal and telic characteristics of the computer game in Chapter 6. In such a case, they form a map in Deleuzoguattarian terms. On the extreme formal level, however, the game tree is a dendritic structure with multiple branches from a radicle – in other words, it is a tracing. Though not totally definable as a rhizome, the computer game in its rhizomatic nature shows clear similarities with the Deleuzoguattarian reading of Kafka's stories.

Both types of texts are characterised by multiplicity in that they have various possible endings. Kafka's story has alternative versions and the computer game, of course, has the many versions that are played into existence. The existence of both texts depends on their being in assemblages as illustrated by a comparison between the intermediated assemblage of a multi-faceted computer game like *Grand Theft Auto* (DMA Design, 1997) and Kafka's novels which form assemblages with various social systems, like *The Trial* (Kafka, 1999) with the juridical system. Like Kafka's stories, the computer game can be seen as a 'minor

literature': it does not have any final identity and it always needs to be considered in terms of its potentialities. Furthermore, like Kafka's writing in the early twentieth century, the computer game is not recognised as literature under the traditional norms. In that sense, it is truly 'minor literature'. Two characteristics of minor literature, namely multiplicity and political immediacy (directly in 'Persuasive Games' and indirectly in other games like *Grand Theft Auto*), have already been recognisable in the computer game narrative. It is now necessary to look in more detail at the third. The collective enunciation of the researcher towards the canine species in Kafka's 'The Investigations of a Dog' or that of the officer towards the machine in the penal colony in another story, takes place through the Deleuzoguattarian concept of 'becoming', already described in the context of Deleuze's reading of Kafka. It remains to be seen as to how video games exhibit collective enunciation: one possible way to assess it is as the encounter between the user and the machinic assemblage.

The computer game is a literary/ludic machine that is literally plugged into an electronic socket, into an artificial or simulated environment, as well as into an assemblage of rules. The player, in turn, is plugged into the machine and a key factor in the creation of the gameplay and the narrative. There may be an outline backstory in the game but the development and denouement of the story is user-dependent. Moreover, the game is governed by the flow of information from the user to itself and vice versa. The user can influence the game and change its structure, both through gameplay and through generating mods and cheats. The game, similarly, has a pervasive influence on the player. As Martti Lahti observes,

Games actually anchor our experience and subjectivity firmly in the body or in an ambiguous boundary between the body and technology. That is, video games invite us to retheorise bodily experience through the corporeal co-ordinates of our subjectivity.

(Lahti, 2003, p. 158)

Lahti goes on to discuss the computer game's 'cyborgian influence' on the player. The game-player complex combines the human and the machinic within the medium of the computer game. According to him, games force players to learn and re-learn repetitive bodily movements that help the player (and her avatar) survive and as it were, 'melt into the game world' (p. 158).

As implied in Lahti's comment, playing the game also involves 'becoming' the avatar and the machine. Torben Grodal points out the intensive physicality of this kind of involvement:

Video games and some types of virtual reality are the supreme media for full simulation of our basic first-person 'story' experience because they allow 'the full experiential flow' by linking perceptions, cognitions, and emotions with first-person actions. Motor cortex and muscles focus the audiovisual attention, and provide the 'muscular' reality and immersion to the perceptions. Even visually crude video games such as Pac Man (1980) might provide a strong immersion because of their activation of basic visuo-motor links.

(Grodal, 2003, p. 132)

The experience described here by Grodal shows how both physical and mental elements are involved in the gameplay process: this makes it similar to the process of 'becoming'. Just as Gregor Samsa in Kafka's *Metamorphosis* (Kafka, 1996) literally illustrates the process of 'becoming-animal' as described by Deleuze and Guattari, the computer game player's metamorphosis into the avatar onscreen and into virtually the whole of the machinic assemblage also illustrates a form of becoming. The collective enunciation is achieved: with text, technology, mind, body and the senses expressing themselves within the machinic assemblage. The computer game narrative is, therefore, a 'minor literature'.

Texts and technicity

The description of minor literature points to a different conception of the way such literature is experienced and how the reading process itself is implicitly machinic. The machinic-text cannot be understood in isolation from the reading process and therefore, before arriving at any conclusions regarding the machinic-story, the experience of reading it also needs to be analysed. In the section above, it is impossible not to notice the implications of the intense physicality of the ways in which Lahti and Grodal describe player-game (text) interactions. These can significantly alter the ways in which the experience of reading the technotext is understood in terms of the physicality of the experience. Indeed, without recognition of these factors, any discussion of the machinic text remains incomplete. When Lahti mentions the computer

game's cyborgian influence on the player, he is in effect showing how the process of 'reading' is also a process of 'plugging into' the machinic-text assemblage. At the same time, the reader (much like the officer in Kafka's short story) becomes part of the machine.

In Donna Haraway's words, such a reader could be called a 'cyborg'. Haraway defines a cyborg as 'a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction' (Haraway, 2003, p. 516). For her, the cyborg has many politico-scientific implications, which are not germane to the present discussion, but her definition of it as 'a matter of fiction as well as lived reality' (p. 516) reads like an appropriate definition of the computer game – in the sense of the experience of being able to 'live in' the computer game narrative. Considering the cyborgian process of identity-formation in the computer game, Jos de Mul points out that 'we should not forget that video games are ontological machines in the sense that they [...] not only structure our (concept of the) world, but also (our concept of) ourselves' (Mul, 2005, p. 260). Even applied to other forms of texts, given their originary machinic-ity, the textual experience is a cyborgian activity implying a machinic orientation in the reader's identity.

This process has been described by the relatively new term 'technicity' which encapsulates the importance of technology in the construction of identity. Though the term may be new, the idea of the interaction with or plugging into the text and the resultant change in the reader's identity dates back to the very origin of the text. In fact, reading as we know it now is itself a technological construct and did not always represent the way texts were experienced. As Leah Marcus comments, during the early days of printing technology, the interaction with the printed text was much more physical and 'live' than it is now:

When the exiled Machiavelli finished his farm duties and robed himself for his scholarly encounters with the ancients, he did not describe the activity as reading but as conversation with the ancients whose books he consulted – perhaps some manuscripts but predominantly printed humanist editions of the classics.

(Marcus, 2000, p. 23)

Machiavelli's transformation is a transformation of his identity and it takes place when he is 'plugged into' the works of the ancients or rather, as Brad DeLong describes it, into 'those components of their minds that are instantiated in the hardware-and-software combinations of linen, ink, and symbols of Gutenberg Information Technology'

(DeLong, 2005). It can be argued, therefore, that Machiavelli's interaction with the printed text is as much an example of a Deleuzoguattarian 'becoming' as that of a computer game player experiencing the story, albeit using quite different media-specific technological devices.

Conclusion: From storytelling machines to storyplaying machines

Such an argument makes it obvious that processes of technicity exist in an originary relationship to notions of textuality. As the analysis of the text in the computer game illustrates, there are many ways in which the game-text functions like printed literature and vice versa. The above analysis performs a two-way role: it identifies the originary machinic characteristics of texts and shows how literary texts, in particular, behave like machines; further, in doing so, it shows how a machinic entity like a computer game can, therefore, share so many characteristics of literary texts. As a storytelling machine with some distinctive characteristics that current literary theory fails to account for, the computer game prompts us to rethink the ways in which we approach other kinds of texts, which are also storytelling machines in their own media-specific constructions.

These characteristics are in no way new to the electronic medium: the later chapters will illustrate how even literary texts in earlier media possess similar features, which of course, are expressed differently according to their respective media-specific constraints. Though the machinic element forms a principal part of any understanding of the text in the computer game and of texts in general, the analysis nevertheless misses another very important factor. This factor, the ludic element, is a key element in video games and, as this thesis will show, in other forms of machinic texts. Having established the link between the text and the machine, the next chapter will focus on how the machinic text is read and, at the same time, begin to take into account the element of ludicity in relation to the computer game text.

3

(W)Reading the Machinic Game-Narrative

(W)reading between the lexia and the scriptons: Experiencing the machinic text

In the introduction to his book on reading program-code, author and programmer Diomidis Spinellis writes that ‘in a few years our students will learn from existing open-source systems, just as their peers studying a language learn from the great literature’ (Spinellis, 2006, p. xxvii). This comparison between reading code and reading literature cannot be considered fortuitous; rather it vindicates and simultaneously follows from the machinic nature of literature itself, as Chapter 2 illustrates.

Nevertheless, it must be noted that reading in the machinic text does not work unidirectionally. According to the model of feedback discussed earlier in relation to cybernetics, the machine also responds to the user’s reading: in other words, it ‘reads’ the user. Compiler programs read and translate into low-level computer languages the commands written by the cyborgian assemblage formed by the programmer and the high-level language. Although the process is more complex than it sounds on paper, its complexity is less apparent to the lay user. However, this is more difficult to miss in video games where the reading is more obviously bidirectional. The game constitutes a text that is ‘read’ by the user and which, in turn, reads the user, by making artificially intelligent responses to the user’s actions. The text in question combines the program-code and the story in an originary relationship. Whereas the code’s relation to the user is more latent at the level of the software; on the level of the story, it is obvious that the machine and the user jointly engage in story building. This observation raises two other major issues. Firstly, the act of reading is intrinsically related to the act of writing (because the processes of reading and building the story work in a feedback loop). Secondly, the act of reading (and writing) is shown as being

contingent on the act of playing. The experience of the machinic text in video games is, therefore, constituted by a complex of reading, writing and play taken together.

Knowledge of the intricacies of the structure of the machinic text is required before it is possible to understand how to read it. First, it will be necessary to study the recent models of analysing the machinic text. Computer-oriented textual forms such as the hypertext and the cybertext claim to have a different set of textual characteristics than earlier textual forms and consequently, also necessitate different approaches to reading when compared to earlier media. This analysis will study each model separately.

In the 1960s Theodore Nelson coined the term 'hypertext' to describe these 'text chunks connected by links which offer the reader different pathways' (Landow, 2006, p. 3), where the text was thought to exist as varying combinations of hyperlinks, actively chosen by the reader or user. Therefore, the reading process was considered different from that in earlier texts in that, here, the reader was seen as effectively constructing the text. This led to the coinage of the portmanteau word 'wreading', combining both senses of writing and reading. According to Michael R. Allen:

The reader of the hypertext is, according to George Landow and others, a wreader who is as much a producer of texts as a consumer of them. In this new reader, both production and consumption of texts is combined into one process that is self-contained.

(Allen, 2008)

Landow, a key theorist of the hypertext, further develops on this in his concept of 'very active reader'. He distinguishes between the active reading possible within electronic texts such as typical hypertexts, which is experienced through a movement from link to link, and what he calls the 'atypical hypertext', like weblogs, which permit readers to add their own links and materials. As he comments, 'no matter how much power readers have to choose their ways through a hypertext, they never obtain the same degree of power – or have to expend as much effort – as those who write their texts in response to another's' (Landow, p. 9).

Although, for Landow, the hypertextual experience is more immediate in technologies such as weblogs, which allow on-site comments on texts, this (w)reading is not restricted to electronic media and 'when one considers the history of ancient literature and recent popular culture, the figure of the reader-as-writer hardly appears at all strange'

(Landow, p. 6). The 'very active readers' or '(w)readers', whatever one chooses to call them, have always been there – even in earlier forms of texts such as the printed narrative. He compares (w)reading to the act of rewriting where later authors provide a different reading of texts written earlier: Landow cites Jean Rhys's *Wide Sargasso Sea* (1992) as a (w)reading of Charlotte Brontë's famous novel *Jane Eyre* (Brontë, 2014) from a postcolonial perspective. There are also numerous examples where printed texts show possibilities of link-based (w)reading. Game-books such as the *Choose Your Own Adventure* series, a literary phenomenon of the 1980s and 1990s, are the most obvious examples. They are characterised by a branching-plot structure very similar to hypertext fiction (which may even be said to derive to a great extent from the former). Further, they even highlight the interaction of play and narratives in ways that prefigure the more complex multiplicity of narratives in video games such as *Assassin's Creed* or *Grand Theft Auto IV*, as addressed in Chapter 5. However, even game-books have been a comparatively late entrant into the world of (w)reading in print technology. Books like Milorad Pavić's *Dictionary of the Khazars* (2012) and Julio Cortázar's *Hopscotch* (1987) or short stories like Jorge Luis Borges's 'A Survey of the Works of Herbert Quain' (Borges, 1993), all use types of branching narratives in their plots. In fact, the notion of nonlinearity and narrative multiplicity does not even need to be restricted to actual structural features of the text: *Tristram Shandy* (Sterne, 1759), a eighteenth-century novel by Laurence Sterne, is arguably the best-known case in point. Allen sums up the characteristics of Sterne's novel that have clear links with the hypertextual, in the following comment:

[In] Laurence Sterne's novel *Tristram Shandy* – which Landow credits as a precursor to hypertext – [...] many intertextual elements appear: a marbled page; an approximation of a tombstone; and the narrator Tristram Shandy's sketches of his own meandering narrative paths.

(Allen, 2008)

Texts like *Tristram Shandy* show that, paradoxically, the printed book may in some ways be as hypertextual as hypertext fiction itself, especially in the way they involve reading as encountering 'blocks of text'. This will be seen in an analysis of Landow's governing concept of hypertext structure.

Clearly conscious of the links with this aspect of printed books, Landow finds his key term for analysing hypertext structures in Barthes's

concept of *lexia*. Barthes's first use of *lexia* occurs in his description of the reading process in *S/Z* (Barthes, 1975), where he analyses Balzac's novel *Sarrasine*. Landow, however, believes that *lexia* are more closely representative of hypertexts:

In *S/Z*, Roland Barthes describes an ideal textuality that precisely matches that which has come to be called *computer hypertext* – text composed of blocks of words (or images) linked by multiple paths, chains, trails in an open-ended perpetually unfinished textuality.

(Landow, 2006, p. 2)

In other words, for Landow this feature of textuality, 'ideal' in printed texts, is characteristically embodied in the hypertext. Having established the link between hypertext and *lexia*, Landow then expounds on the mechanism with which this works saying that *lexia* create nonlinear text, are multilinear and that 'although conventional reading habits apply within each *lexia*, once one leaves the shadowy bounds of any text unit, new rules and new experiences apply' (Landow, p. 3).

Although Landow delineates how rules and reading experiences apply within and across *lexias*, he does not really define what a *lexia* is and what it is not. The electronic link is itself not the *lexia* and the block of text that supposedly corresponds to a *lexia* is actually without determinable dimensions since Landow allows for intermedial composition of the hypertext: the block of text may comprise any different number of media elements which in turn form *lexia* within the frame of *lexia*. The very nature of *lexia* is in question because Landow's model is actually quite different from Barthes's original. For Barthes, *lexia* are to be seen as part of the 'starred text' or text that is cut in a manner 'arbitrary to the extreme' (Barthes, 1975, p. 13). The true nature of the problem emerges when the full description of the Barthesian *lexia* is considered, as follows:

The *lexia* will include sometimes a few words, sometimes several sentences; it will be a matter of convenience; it will suffice that the *lexia* be the best possible space in which we can observe meanings; its dimension, empirically determined, estimated, will depend on the density of connotations, variable according to the moments of the text.

(Barthes, 1975, p. 13)

In the hypertext, the navigation is less free than in the empirically determined 'starring' of blocks of *lexia* in Barthes's reading of the printed text.

Rather than being precisely matched with the concept of the *lexia*, the hypertext seems to be more constrained than the former.

The hyperlinks are, after all, author-created and they remain the same blocks of texts for all users who do not have the knowledge of web-designing or access to specific software. There is the possibility to choose the links, admittedly, but this is far more limited than is implied in Barthes's formulation. Of course, it is possible to 'star' and read hypertext as *lexia* but this is not because of its structural affordances and the process, in this case, is not different at all from *lexia* in printed texts. The multilinearity and the interaction promised by the hypertext are, as shown in examples like Sterne's novel mentioned above, already characteristics present in printed texts. The difference between the two lies more in their media-specific affordances than anything else. The machinic text is clearly much more restricted than Landow's *lexia*-based (w)reading claims and therefore cannot be explained by such a model. The restrictions are wholly or partly based on the media-specificity of the machinic text, as described by Hayles, which Landow does not consider.

Although he does not see the medium as an emergent materiality in the same way as the Haylesian media-specific analysis does in the previous chapter,⁶ Aarseth is aware of the importance of the medium in what he calls his textonomy for machinic texts. The experience of Aarseth's cybertext, already described in the previous chapter, differs significantly from Landow's model in many ways. It is to the intricacies of this other model of machinic textuality that this analysis must return for a different perspective on reading the machinic text. Aarseth is openly sceptical of terms like 'wreading', as is clear in the following comment:

It seems somewhat self-contradictory to claim, as Landow does, that hypertext blurs the distinction between reader and author while at the same time permitting the former to become the latter. Neologisms such as *wreader* (for writer-reader) suggest that this blurring could be merely a question of terminology. [...] [R]ather than trying to identify the new author and reader [...] I try to locate the various performative positions and to describe their relations as parts of a creative, receptive sign system, or discourse.

(Aarseth, 1997, p. 173)⁷

For Aarseth, the best way to describe those who access hypertexts would be as 'users' who could in turn become 'developers' if they acquired greater technological competence to configure the system.

In view of the above notions, Aarseth constructs a typology for his textonomic analysis of the cybertext. He maintains that information in a text can be divisible into two types of 'strings': he calls those strings which appear to readers, *scriptons*, and those which exist in the text, *textons*. Aarseth distinguishes both scriptons and textons from *lexia*. According to him, unlike *lexia*, scriptons are not necessarily identical to what the readers *can* actually read because they are determined by the text as combinations of textons. As he further elucidates, 'instead, scriptons are what an "ideal reader" reads by strictly following the linear structure of textual output' (Aarseth, 1997, p. 62). He also clarifies, as already noted by this analysis, that *lexia* cannot be alternatives to textons since he believes that in Barthesian terminology 'lexies are not the building blocks of textuality but a violent and powerful demonstration of reading' (Aarseth, 2003, p. 767). Finally, his model involves a third mechanism – called the traversal function – which combines and projects the textons as scriptons to the user. An example of a traversal function could be anything from an instruction given verbally (such as 'pick a random card') to a complex computer program. From the above analysis, it is worth noting that already some contradictions start emerging in Aarseth's model: he refers to 'ideal readers' instead of 'users', the term which he had earlier claimed as the more appropriate one. Further problems are revealed with the texton-scripton typology, as the analysis proceeds.

Based on the above typology, Aarseth claims that the term 'hypertext' is useful 'when applied to the structures of links and nodes, but it is much less so if it includes other digital texts as well'. He maintains that the attempt of hypertext theorists to view all electronic texts as hypertexts is a 'sort of imperialist classification' (Aarseth, 1997, p. 75). Instead, he coins his own term 'cybertext' to describe 'texts that involve calculation in their production of scriptons' (Aarseth, 1997, p. 76). The chief characteristic of the process of using (since Aarseth's schema does not allow for 'reading') the cybertext is that it is ergodic and that that very fact excludes the possibility of cybertexts being read as narratives. The following analysis shows how this conception further compounds the problems, already encountered in Chapter 2, with using the cybertextual model to represent machinic texts.

Aarseth applies the concept of the ergodic to games and concludes that while a football match and a story both consist of a succession of events, they are not the same because in itself the football match does not tell a story and if at all there is a story, then it exists as a separate entity from the game itself. The issue will be examined more in

terms of the textual structure, in this chapter.⁸ The key example that Aarseth provides to illustrate the conflict between narration and ergodics is Michael Joyce's canonical hypertext narrative, *Afternoon*. Aarseth describes it as containing the two elements of narration, categorised as the descriptive and the narrative, in addition to the ergodic element. Before proceeding to analyse the so-called clash between ergodics and narration, it will be instructive to first consider Aarseth's categorisation of the narrative element itself. This is what he refers to as the Narratologist Gérard Genette's 'claim that narratives consist of two kinds of representations, description and narration, and that description [...] is always subordinate to narration' (Aarseth, 1997, p. 94). This observation effectively divides narrative into two constituent elements, seemingly separate.

This assumption, it can be argued, is inherently problematic and even Genette himself regards the converse of this as being true. *Pace* Aarseth, Genette does not conceive of the two categories as distinct from each other; what he has to say is far more complicated. The problem, Genette argues, lies in speaking of the categories of mimesis and diegesis as binaries, as described by earlier criticism ranging from Plato to Henry James. Genette's own position is quite different: for him description is not 'subordinate to narration' but is in fact an inseparable function of narration itself. For Genette, there is only the 'illusion of mimesis'. As Shlomith Rimmon-Kenan states, 'The crucial distinction, therefore, is not between telling and showing, but between different degrees and kinds of telling' (Rimmon-Kenan, 2002, p. 109).

Aarseth, it must be noted, has no problems in acknowledging the coexistence of description with the ergodic: he agrees that even a video game like *Pac-Man* (Iwatani, 1980), an arcade game without conspicuous intentions of storytelling, contains the element of description together with ergodics. Yet description originarily implies narration as the above analysis of description-narration binarism shows and therefore it follows that Aarseth's claim is difficult to accept. Another problem arises when, commenting on the impossibility of the coexistence of ergodics and narration in *Afternoon*, Aarseth contends that 'to make sense of the text, the reader must produce a narrative version of it, but the ergodic experience marks this version with the reader's signature, the proof that *Afternoon* does not have a narrative of its own' (Aarseth, 1997, p. 95). What he concedes, by implication, with the assertion that the ergodic experience *marks* the narrative version produced by the reader (note that he does not say 'user') is something very much akin to the experience of (w)reading, with which he earlier seemed to disagree. The reader's

signature, in this comment, actually signifies a writing within the reading process,

Aarseth, however, complicates his approach and makes further conflicting statements that need to be unpacked carefully. He points out that 'it could be argued that the reader *is* (or at least produces) the story' (Ibid.). This is again like a description of (w)reading encountered above; surprisingly, however, he follows it up by stating that 'a more moderate proposition is that there is no story at all' (Ibid.). If he has his reasons for thinking that the sudden and total break with the story is 'more moderate', then he does not state them. Instead, he believes that the cybertext (more specifically, he refers to the adventure game in his chapter) effectively disintegrates any notion of story by 'forcing the player's attention to the elusive "plot"' (Ibid.). His model is to replace the concept of 'plot' with that of 'intrigue' or a situation where the 'user is the innocent, but voluntary, target (*victim* is too strong a term) [...] with several possible outcomes that depend on various factors, such as the cleverness and experience of the player' (Ibid.). Instead of being a (w)reader, the 'user' in Aarseth's scheme is what he calls *intriguee* (adapting Seymour Chatman's term, *narratee*).

This is another position that is difficult to accept since it ignores the fact that the player is aware of the objectives, the backstory, the character outlines and of course the rules of play; he or she is, therefore, not quite the 'innocent' target of the game-designers. Moreover, as Diane Carr (Carr, 2006) points out, the situation in recent video games is very different from text-based games like *Deadline*, which formed the basis of Aarseth's conclusions when he first formed his theory over a decade ago. As she sees it, the protagonist can be a narratee when other characters in the game are telling him or her about events and he or she can simultaneously be a narrator when events are subjectively rendered from his or her experience. When players are told of events by various elements within the game they are readers but they can simultaneously be the authors as they orchestrate events. Carr's point tends to bring up yet another comparison with (w)reading and this leads to an obvious preference for the model of (w)reading to describe the encounter between the video game player and the machinic text.

Surely, then, Aarseth's 'textonomy' based on the scripton-texton model needs to be revised. If the experience with the machinic text is a (w)reading, then the scriptons can also write changes into the textonic level, even as they come into being during the reading process. There is, therefore, no need to see textons as being fixed and constant; nor should the scripton be considered a mere derivative of the texton.

The texton-scripton model, if retained, must be made less restrictive and on no account should it be seen as a binarism. Like Landow's problematic emphasis on the flexibility of (w)reading the narrative in the machinic text, Aarseth's all too restrictive position also does not provide a convincing model for the method in which the text can be read.

Aarseth, however, does agree to the possibility of having an indeterminate number of textons in a different kind of cybertext: the MUD (multi-user dungeon). In collectively constructed cybertexts such as MUDs, there is an element of authorship involved in the gameplay and Aarseth calls MUD-users 'literary cyborgs' or 'cyborg-authors'. The cyborg-authorship is not restricted to the MUD: similar processes of (w)reading characterise electronic media, in general. Of course, it is a more restrictive process than the 'starring' of text into *lexia*, as Landow believes.

An important point about the reading process is made by Michael Joyce when he describes it 'as a cycle in which readers become co-authors and artificially intelligent systems "read" their responses' (Joyce, 1992). This may be extended further to state that the artificially intelligent systems are also (w)readers and that the process works bi-directionally. This connects the understanding of such a reading-process to the idea of the literature-machine assemblage, where all the elements are plugged into each other, in Chapter 2. However, before moving on to the analysis of how one can (w)read video games as literature-machine assemblages, it might be helpful to unpack the concept of (w)reading in more detail.

Although the term itself may be new, (w)reading is not new as a concept. As Derrida points out, reading and writing are characterised by an originary relationship; neither reading nor writing fall conveniently into an inside/outside binarism. This, however, is not to say that they are the same thing. In a way reading *is* writing and in another, it *is not*. This is similar to (w)reading where the '(w)', indicates the separate as well as non-separate nature of writing and reading. The neologism, in fact, is very Derridean: as in *différance*, the added/changed letter conveys a more problematised relationship between the two categories than even its creators in recent hypertext theory could foresee. Reading and writing themselves are in *différance* as Samuel Weber's Derridean analysis shows:

Writing, in order to take place, must forcefully, violently, endeavour to take the place of – from – Reading, from that which repeats it, but also alters it, and which is therefore not so much its *telos* as its *tele*, the gap between its inscription and its fulfilment.

(Weber, 1987, p. 98)

Both the actions repeat and alter each other and in doing so they create a 'gap' between writing as inscription and reading as its fulfilment (in terms of conveying the 'meaning'). At the same time, the processes of reading and writing are inseparable and intrinsic: they repeat and alter each other, both constantly and simultaneously. The term '(w)reading' conveys the above very aptly: it is the 'single gesture, but doubled' (Derrida, 1983), as Derrida describes reading and writing. For Derrida, this relationship is that of *play*. (W)reading, then, is, a 'playful' activity and its relevance to video games is hardly surprising.

It must be noted that there is another originary element involved in the concept of (w)reading. Reading like writing (as seen in the Introduction), is a technology and is, therefore, already machinic. The connection with the text, which in itself is machinic, makes this clearer. A literal connection with the machine and the processes of reading-writing and writing-reading can be illustrated using software programs such as voice-recognition and text-to-speech programs. These, however, at least at face-value, address only one part of the process of supplementarity each. The software that illustrates this much more clearly and fully is, as Carr's analysis has already shown, the video game. Video games, to follow the implications of Joyce's comment earlier, are constantly involved in the process of (w)reading, but if this takes place then it does so as a human-computer network and (w)reading is, therefore, a bipartite machinic process. The bipartite human-computer relationship points towards the cybernetic complex described in Chapter 2: on modifying Aarseth's concept of the cyborg-author, what the gameplay actually provides us with is a cyborg-(w)reader.

When reading is playing: (W)reading video game narratives

The above section has provided the background that was necessary to help clarify some of the principal issues regarding the reading of video games as texts and to introduce a more nuanced analysis. It remains now to study the narrative and ludic aspects of the ways in which video games can be (w)read as literature-machines. The following analysis will further establish the originary relationship between the narrative, ludic and machinic elements of video games in terms of an analysis of the (w)reading process.

Games have been part of even the earliest developments in computer technology. Charles Babbage (Babbage, 1967), in his memoirs, shows great interest in word games. Konrad Zuse, one of the pioneers of the modern computer and the developer of the first high-level

programming language *Plankalkül*, designed a chess-playing computer program. Throughout the 1950s, various people were pioneering forms that could be called precursors of the modern video game – whether on cathode ray tubes, oscilloscopes or mainframe computers – technologies not specially designed for playing games, yet easily adapting the games to themselves.

The first games were sports emulators such as *Pong*, which was a version of table-tennis, or space-shooters such as *Spacewar!* (Russell, 1962). Although computer technology and ludic elements showed a comfortable affinity, the early games, with the exception of ‘interactive fiction’ games like *Zork*, seemed not to have much inclination for stories. Nevertheless, the originary connection with the narrative element is visible even within such apparently non-narrative games. In *Spacewar!* this is revealed in various levels of the playing experience: in the action itself, where two spaceships battle each other while manoeuvring in the gravity well of a star and in the level of rules, as laid down in the player’s manual. Michael Stern’s research on the game is revelatory:

The gameplay was inspired by E. E. ‘Doc’ Smith’s *Lensman* novels. Two players go head-to-head, each controlling a ship in interstellar combat, trying to blow the bejeezus out of each other. There is a sun in the center of the playing field that exerts an inverse-r-squared force on all objects on the screen. A talented player can aim torpedos such that their trajectory is deflected by the sun’s gravitational force until it intersects with the other player’s ship.

(Stern, 2008)

The rules of the game, described by Stern, perform a dual task. They outline the affordances that limit how the game (machine) can be operated and yet they seem to integrate within this framework some form of story. It might be argued that the story is not obvious during gameplay but often, as Derrida points out with his example of speech and writing, it is easy to mistake originary relationships for binaries. One needs to keep in mind that, simple as they may be, the rules of *Spacewar!* are still set in an environment (space) and a context (a war between opposing forces): the influence of Smith’s novels cannot be denied.

In games like *Spacewar!*, the story element is integrated with the game rules. For that reason perhaps, it would be best to call it gameplay to avoid controversy. However, the story was obviously there for those who wanted to find it. David Sudnow’s account of playing *Missile Command* is a noteworthy example:

Every so often the onslaught stops and there's a pause that defines a 'round' of play [...] You can reload ammo, attend the wounded, deal with first strike second strike problems, or run to the fridge for a beer. [...] You learn to move your cursor beneath them one by one, [...] and that's fine till they start coming faster. Then you need a new *technology* for moving. You try machine gunning, pointing all over the place while rapping the button [...] But the rules don't let you.

(Sudnow, 1983, p. 19)

Sudnow's description is important in showing the two intrinsic facets that are integral parts of video games, whether old or new. His account has a story-like feel about it because Sudnow, like gamers the world over, is using his imagination to fill in the narrative spaces and to interpret the events. The formal functions of the between-rounds pause and reloading ammunition get a narrative touch when they are combined with the inferred action of attending the wounded (the 'wounded' are nowhere visible or mentioned within the game). The later part of the extract shows another face of the gaming experience. Everything that happens here is technical; he tells the reader that the actions are carried out with a cursor and that a change of pace in the game has to be met with and within the limiting rules of the game-technology. The rules and the narrative coexist according to Sudnow's observations. So if this is a story as in the first extract, the story is in the machine. Or perhaps equally aptly, there is a machine within the story.

The casual gamer might not think of these games in the same way as Sudnow and there might be objections from the Ludologist camp of reading too much into this. When shown that this is generally characteristic to gameplay, however, such objections are quite difficult to sustain. In the last decades of the twentieth century, games like *Prince of Persia* (Mechner, 1989) and later, the 3D first-person shooters like *Wolfenstein* (id Software, 1992) and *Doom* (id Software, 1993) made the narrative patterns more obvious. They had a story to tell with environments distinctly trying to emulate those of earlier fictional media and also containing characters with names. The fact that they were participatory narratives that lacked a single ending posed problems for critics analysing them using traditional narrative theory. Another problem was that as a way of experiencing narratives onscreen, the pixelated rendition of the video game narrative was markedly jarring in comparison to the more realistic onscreen narrative experience of cinema.

A decade later, things have come into sharper focus. The games mentioned above have survived and have reemerged in forms that allow a

richer narrative experience. The affordances of present-day game technology have provided for complex movements and functions to be incorporated into gameplay, which, in its increased visual appeal, has become more engrossing and in some cases, much richer in narrative terms. Two examples of the latter are *Prince of Persia: The Sands of Time* (Ubisoft Montreal, 2003)⁹ and *Return to Castle Wolfenstein*.¹⁰

Sands of Time is graphically much superior to the older *Prince of Persia* (PoP) game and this gives the narrative more realism and depth. The game has enriched the narrative of its earlier version by giving it a new setting, developing the main character's personality and introducing new characters and obstacles. It also introduces the theme of time through which, as Chapter 6 discusses, the narrative self-reflexively points at its branching *telos* and multiple temporalities.

RTCW is also visually quite appealing: some of its settings seem to be drawn from films such as *Where Eagles Dare* and are therefore quite appropriate for a game with a thriller's plot. The levels of the game, which can be likened to chapters in a printed book, are quite cleverly divided using instructions to the player/secret agent. These work both towards building up the narrative as well as establishing the game objectives – yet another example of how rules and narrative coexist. Although the plot is not terribly innovative, it does draw heavily on the experience of earlier FPS and employs its technological developments in creating an entertaining narrative. Comparing the 1992 DOS game and *RCTW*, a commentator hints at the parallels that the two share with Hollywood spy adventures:

While *Wolfenstein 3D* set its action entirely within the castle (or at least within hallways), *Return to Castle Wolfenstein* opened up the surrounding area (along with locales in different countries), revealing that Wolfenstein itself was nestled high in the mountains and accessible only by cable car – much like Schloss Adler in the 1968 film *Where Eagles Dare*. Like Wolfenstein, *WED* is a WWII spy adventure instead of a straight-up war story.

(Reparaz, 2009)

The spy thriller narrative that is already present in *Wolfenstein 3D* is enhanced further in *RTCW* and even more so in the most recent game in the franchise. *Wolfenstein: The New Order* (Machine Games, 2014) is set in an alternate-history world where the first-person shooter genre's growing interest in exploring narrative possibilities is further reflected in the way the game treats its 1992 protagonist, the mindless Super Soldier B.J. Blazkowicz. As GameSpot reviewer Daniel Hindes sums up,

the New Order's combat intensity and variety have granted the Wolfenstein series a breath of fresh air, whilst still managing to hit the nostalgic highs that I expect from the series. It has injected some substance into the primal pleasure of shooting Nazis by way of an interesting tone that addresses the changing roles of first-person shooter protagonists.

(Hindes, 2014)

The other game in question, although similar in terms of gameplay, behaves quite differently as a narrative. The second sequel to the ever-popular *Doom*, on which generations of gamers grew up, is called *Doom 3* (id Software, 2004) and unlike *RTCW*, it marks itself out as *the* authentic sequel. However, unlike the *PoP* series or even *RTCW*, technology does not really contribute to narrative engrossment. A review from a deeply disappointed fan states the case quite well:

Although it's built from an impressive engine, *Doom 3* is ultimately a soulless derivative rehash of tired, tried, and true motifs. It is a bauble that reminds us of id's triumph when it comes to technology and their abject failure when it comes to imagination.

(Chick, 2004)

This leads back to the earlier argument about the originary existence of narrative and indicates that narrativity is not necessarily dependent on technological advancements. That, however, is not to say that it is not media-specific: the concept of media-specificity is emergent and includes many more factors than just technology. Seen in isolation, technological developments in the FPS genre do not give *Doom 3* an edge in terms of story. Just as, in the previous chapter, technological advancements were shown as not introducing any particular novelty in the so-called new media, *Doom 3* also does not show any narrative development because of its advanced game-engine.

The video game narrative is originarily present across ludic texts and at the same time, it varies according to media-specific diversity. The question that arises, therefore, is about how such narratives can be read. Earlier analyses, often focus on the reading experience of so-called 'interactive fiction' (IF, in short) because of its more ostensible association with storytelling. Among video games, 'adventure games' like *Zork* (Infocom, 1979) and *Myst* (Cyan, 1993), therefore, figure prominently in these analyses because they are very similar to IF. Although it is important to analyse the reading experience of these games, given the media-specific diversity of video games, it

would be inaccurate to view these games as representing all video games.

Zork and *Myst* work hypertextually because though they seem to provide the player with the arbitrary choice to select and influence parts of the story, they are actually quite restrictive instead. Their media-specific differences with the other forms of video games are clearly observable. *Zork* is a text-based interactive fiction game about hunting for treasure and exploring a labyrinthine fantasy world. Although praised by many for its storytelling and the sophistication of its parsing-software (especially considering the time it was built), *Zork* can be a very frustrating experience in terms of its gameplay. It turns out to be quite limited in comparison to the actions it promises: though it allows the player to type in anything she likes, in most of the cases it returns the message, 'I don't understand that' or some totally nonsensical responses. This is because it does not accept comments that are beyond the comprehension of its parser or beyond the ambit of its rule-bound ludic system. In this sense, it is like the hypertext narrative: it allows navigation only when the player follows its preferred links. This is also characteristic of some more recent games like *Myst*. As Drew Davidson comments, 'The narrative aspect of *Myst* is the multimedia, hypertext discourse itself. [...] The narrating comes from your pointing and clicking your way through the haunting worlds into which you have fallen' (Davidson, 2008). In such games, as in hypertext fiction, (w)reading occurs but in a much restricted sense.

The similarity of this structure with the model proposed by Aarseth is revelatory. Aarseth's categorisations of video games can be seen as essentially based on these kinds of games because these were at the high point of computer gaming when *Cybertext* was written. However, these games are not representative in general of video games as they are understood now. Rather, they are to be seen as examples of their specific genres. This is not to say, however, that they are limited to their respective generic conventions. For example, *Myst* has had a successful reincarnation as its massively multiplayer online game (MMOG) version called *Myst Online: Uru Live* which, according to its developers, lets the players make small changes to the story possibilities (the textonic level).

'Video game' is like an umbrella term for a huge range of games that can be played on the computer or on consoles and it is evident that there is considerable diversity among these games. It is obvious that unlike hypertextual game-narratives like *Myst*, which can be subdivided into textons and scriptons, other genres of storytelling games resist such a straightforward breakdown. The process of (w)reading in

these games is much less restricted and it often involves *reconstructing* textons rather than merely reconfiguring them. The texton-scripton model, therefore, gives way to something that is less restrictive. At the same time, given the machine's influence on the reading, the choices available are not limitless: therefore, it is not possible to conceive of the arbitrary (w)reading that Landow's *lexia*-based model proposes. How, then, is it possible to analyse how these games are (w)read?

Gameplay is (w)reading and the text it creates is situated in an area in between the texton-scripton model and *lexia*. The game does not have a tangible text of its stories.¹¹ The closest it comes to this is in its walkthrough, or the stepwise guide for game completion, written by successful players (as a text document, usually). Following the steps precisely *usually* results in reaching a preferred conclusion but a walkthrough cannot be final. There can be many additions and modifications provided in gaming forums, there are the numerous other possible solutions (or non-solutions) that cannot be covered in walkthroughs and there are also games that cannot have walkthroughs (like *The Sims*). This is because, although restrained by the rules of the game and the limits of the game program, the player has greater freedom to move about, explore and configure the environment. For example, in empire-building games it is possible to build units, buildings and to manage resources in a game-world whose exploration (and exploitation) depends on the player. At the same time, the player has to react constantly to the AI in the game, which may range from extremely predictable to quite random.

Aarseth, however, objects to this view. He maintains that (w)reading in video games is restricted by their 'string-of-pearls' structure. Under such a structure 'within each pearl (or microworld) there is plenty of choice, but on the level of the string there is no choice at all' (Aarseth, 2004, p. 367). Using the example of *Half-Life* to illustrate this, he maintains that though it is possible to influence the actions within levels, structurally the levels remain the same and this results in a constant structure for the game: according to him, the game must proceed in a set pattern. This is in keeping with his earlier assertion about the constancy in the textonic possibilities and the conclusion that if readings take place then they do so only as scriptonic combinations. If true, then this undermines the possibility of the text being read and written simultaneously.

In Aarseth's scheme, the experience of (w)reading is further hindered by cutscenes which are seen by him as a hindrance to interactivity and choice. Other commentators and game-designers, however differ. Rune

Klevjer states that: 'a cutscene does not cut off gameplay. It is an integral part of the configurative experience. Even if the player is denied any active input, this does not mean that the ergodic experience and effort is paused' (Klevjer, 2002). Klevjer sees cut-scenes as 'gameplay catapults' and planning tools in the sense that they build up suspense and provide crucial surveillance information. He also points out the dual nature of certain types of in-game scenes: '*GTA III* [...] features an interesting kind of in-game "hybrid" car-jump sequences, actually generated in real-time but looking much like a spectacular cutscene' (Ibid.). It is evident that often some instances of live gameplay can be engineered with technology similar to that used in making cutscenes and then the boundary between the cutscene and actual gameplay is no longer watertight. Aarseth's position is therefore challenged because instead of hindering the (w)reading process, even non-interactive elements like cutscenes help in advancing the narrative (and hence its (w)reading).

Furthermore, the 'string of pearls' model can be challenged using Aarseth's own metaphor. When he comments on the restrictiveness of this structure, he neglects the fact that the string itself can vary in length and the pearls in their size – corresponding to the time the user takes to complete a level and the number of actions performed within each level. Both of these factors also affect the game narrative and the (w)reading of it. In Aarseth's model, the cybertext is an ergodic creation where 'non-trivial effort is required to allow the reader to traverse the text' (Aarseth, 1997, p. 1). From the examples above, it would perhaps be more appropriate to adapt Aarseth's definition by using 'create' instead of 'traverse', because the former word connotes the active construction of text rather than the movement along self-determined paths in a pre-ordained structure. The reason for doing so will be even more apparent when certain technologies peculiar to video games are described in terms of how they represent the (w)reading process.

The machinic characteristics of (W)reading

In some freeform games like *The Sims* series the textons allow so much flexibility that the scriptons can almost be selected arbitrarily thus making them seem similar to *lexia*. Players can construct (by playing) their own *Sims* stories and share them on online forums. Besides that, it is possible to modify the textons themselves even through changes in the scriptons, as noted earlier. What Aarseth says about MUDs is equally (and perhaps more) applicable to MMORPGs, which also involve a community of players indulging in role-play and simultaneously designing

the space of the game. Single-player games also have their own ways of direct intervention in the textonic level. Tools like 'mods' and cheat codes allow the players to make 'non-trivial' changes to textons.

In *Doom*, for example, it was possible to make 'WAD' files¹² that modified the program to create new levels or at times even new games: the *Ghostbusters* game was created as a WAD of the original *Doom*. Perhaps the best modding example in recent times is the ever-popular *Counter-Strike*, originally a mod of Valve Software's bestselling title *Half-Life* (Valve Corporation, 1998), which later packaged as a separate game. *Counter-Strike* and indeed all such mods have the same game-engine as the original game but different storylines, images and even gameplay. As GameSpy.com comments:

Counter-Strike began as a simple fan-produced mod for *Half-Life*. Thanks to a series of steadily-improving beta releases, the mod started to foster a progressively-enlarging and dedicated following. As the fast-paced, tactical game play was refined and improved, and as new concepts and maps were introduced, *Counter-Strike* moved from being a mere *Half-Life* mod to an entirely new game.

(Steam Commuinty Counter Strike 1.6 Fans, 2015)

What is more common with mods is, however, the fact that they re-configure the original game itself; while retaining most of the elements, it is possible to change some aspects of the game like the difficulty level – for example by increasing the number of enemies, the environment – remodelling the entire game background, just as the *70s Mod for Mafia* (Illusion Softworks, 2002) brings the game forward in time by almost 40 years, and obviously the weapons and power-ups available to players. Mods are designed for various purposes – not least the altering of difficulty levels. Clearly, they provide for an extreme form of (w)reading and an important challenge to Aarseth's model.

The easiest way to tweak the gameplay, however, is by using cheat codes. Cheat codes are usually openings left behind by developers so that the gameplay is less challenging (for example, when playing in the so-called 'God mode', all enemy bullets ricochet off the now-invulnerable player) and it can be argued that these are additional potential branches of the text that are coded into the body of the text. Developers release them to the public with full knowledge that players will exploit all the weaknesses in the code to gain an advantage over the game-system and reconfigure the text. Cheat codes are regularly released on websites and the ever-popular *CheatBook Database*

(Cheatbook.de, 2015) is updated yearly. Seen in terms of textons and scriptons, cheat codes expose another major gap in Aarseth's conception of reading the cybertext. The textons do not exist as a continuous unit within the game narrative and even without outright modding, they do not have the constancy or solidity of structure that Aarseth claims for them. The cheat code exposes the gaps within the textonic structure which can be exploited by the (w)reading process and indeed raise even more questions about whether such a model is sustainable at all.

Though close examination of the (w)reading process reveals problems with the textonic structure, it also reveals equally grave problems with the other extreme model of reading the game as arbitrary *lexia*: the machinic aspect of video games clearly precludes such possibilities. The elements of the above-mentioned game-texts allow new forms of textual configuration and this is dependent on the technological possibilities in the computer program or code. Ultimately, at the core level of video game operations, the reality of the text is also the reality of the code. It is at this level that the machine (w)reads back: it 'reads' the player's input and 'inscribes' its response into the game-system. In this case, it is an assemblage of hardware and software (AI, graphics, physics, audio, design and other kinds) that forms the response mechanism. Such a (w)reading involves writing into (and over) the game narrative which behaves like a palimpsest of numerous game-narratives with various different endings and structures.

This writing-over involves the repeated and varied execution of the game program. The program is rule-bound and algorithmic. These rules are intrinsic to the construction of the ludic system – the program and the game-algorithm are inseparable. Any change in the game will affect the program and vice versa. This is of course more obvious than the relation between the game and narrative or machine and narrative. The very term 'video game' already implies the connection quite clearly and this is easily accepted in critical circles. Hence, it is not necessary to dwell on this at much length. However, as this also affects the (w)reading process and ultimately, the game narrative, it is necessary to study the relationship of the game and the machine, as algorithmic entities, both separately and together.

Discussions of the game-text will remain incomplete, therefore, if we do not discuss the actual 'written' text in the game: the program. The game program is actually a complex set of instructions written in various computer languages and at various levels and aspects of creating the game. These instructions can be represented in day-to-day English in the form of an algorithm. On the machine level, they are represented

in binary language as combinations of 0 and 1. The program becomes a mesh of choices and responses in what is called conditional branching in computing terms. These choices and responses keep acting on and modifying each other. Game programming usually follows the object-oriented approach, which involves the mutual modification of data and code. If that is the case, then the programmed text is not a static one because it is being constantly written over.

As games become more complex, they tend to use masses of 'dynamic rule-based systems' called game engines. The complexity of these multiple assemblages becomes clear in Jon Dovey and Helen Kennedy's description:

The functions of a game engine can be divided into a number of discrete but interlinking spheres. The 'render' engine controls the game's visual representation, generating polygons, skins, landscapes and object as the game is played. Another section of the code controls the physics of the game world. [...] Another major part of the game engine's code is devoted to Artificial Intelligence. The game AI controls how the characters respond to one another, especially therefore how the NPCs [non-player characters] respond to the playable characters [...] The core of the engine also interfaces with the console or PC hardware, managing memory and allowing the software to speak to the hardware.

(Dovey and Kennedy, 2006, p. 58)

If the game-engine is the text (that is, the written code) then it operates on different levels and often according to specific functions. Furthermore, the game-text, in this case, directly communicates with the machine hardware. It is therefore an assemblage, as described in the previous chapter, which 'plugs into' different aspects of the architecture of the game-system, including the player. The game-engine operates on many different planes and diverse entities that are interlinked within it have varied degrees of relevance to the actual construction of the text. Moreover, not all games develop their own engines. Most game developers now concentrate on the design and plot of the gameplay itself and therefore buy readymade engines, or 'middleware', and adapt them to their purposes (it is possible to notice a similarity with the earlier discussion on mods). A good example of this would be the ever-popular Unreal Engine developed by Epic Games. Originally designed for the FPS *Unreal Tournament* (Epic Games, 1999), the engine has been used even for other genres like stealth games such as *Splinter Cell* (Ubisoft, 2002) and

MMORPGs like *Vanguard: Saga of Heroes* (Sony Online Entertainment, 2007).

The fact that two absolutely different games like *Unreal* and *Splinter Cell* can emerge from the same core text raises further questions. Commenting on the adaptation of the then in-development *Thief* engine for building *System Shock 2* (Irrational Games, 1999), which is quite a different game, designer Jonathan Chey comments:

The Dark Engine was never delivered to *System Shock* team as a finished piece of code. Nor were we ever presented with a final set of APIs [Application Programming Interface] that the engine was to implement. Instead we worked with the same code base as the *Thief* team for most of the project (excluding a brief window of time when we made a copy of the source code while the *Thief* team prepared to ship the game). Remarkably, it is still possible to compile a hybrid executable that can play both *Thief* and *System Shock 2* based on a variable in a configuration file.

(Chey, 2003, p. 7)

Clearly, an analysis in terms of the rigid textons in Aarseth's model is no longer possible since even the code is hybrid and fluid, as Chey's comment above shows. The game-engine assemblage operating along and connecting across many algorithmic plan(e)s, increasingly seems to participate, through its multi-planar links, in the rhizomatic structure discussed in Chapter 2.

The multiplicity that exists on the level of code is important in defining the nature of video games. Any attempt to locate the 'unit' of (w)reading in video games will find it impossible to succeed because in the game-text the unit becomes 'multiple'. It is in this multiple space that (w)reading can be conceived between the arbitrariness of *lexia* and the rigidity of the texton-scripton model. Chey's comment on the multiplicity and hybridity of the game-engine also points at the hybridity and multiplicity of the (w)reading process. In this aspect, it even compares well with the 'minor literature', as discussed in Chapter 2, where the same manuscript (comparable to the game developer's code-base) can be used to generate multiple stories (comparable to playing both *System Shock 2* and *Thief* from the same program).

A final point about the program in the video game-text is necessary, here. The point made in Chapter 2 about the machinic of literature and the literariness of the machine is illustrated literally and directly in video games: a fact that even game designers acknowledge. Game

designer Peter Molyneux states clearly that ‘storytelling in games [...] is an art’ (Molyneux, 2003, p. 157). Commenting on the making of *Black and White*, Molyneux comments that ‘the freeform nature of the game required an unfolding tale to give it some structure and lead it to a conclusion’ (Ibid.). Further, some features of the game are programmed into it after key elements from the story are considered; of course, in a typical illustration of supplementarity between game-code and story, the reverse is also highly possible. As Molyneux observes, ‘Another by-product of using a professional scriptwriter was that we morphed the in-game advisors, the good and evil guys, from being just sources of information and guidance into stylish, popular characters who are now bankable properties in their own right’ (Ibid.). The algorithm implemented in programs has to be written down as a story first – video games have plots; they have goals and have to determine the pathways to these goals and they also have to determine affordances for events that occur within the game. All of these, together with the graphic design, dialogues and script, if any, in the game are planned in the form of a ‘storyboard’ or a ‘design document’. The storyboard certainly tells the story but it also incorporates instructions to graphics designers and programmers in the same document. In the same storyboard, it is possible to view multiple parallel texts, such as those of the story and of the technical instructions. In the case of computer-game storyboards, however, the technical and algorithmic element is present in an inseparable association with the rules of the game. The following section will analyse this relationship in more detail and attempt to work out its influences on the (w)reading process.

(W)reading the ludic: Rules of play and the machinic text

The final part of the technotext to be analysed here is an element intrinsic to the very origin of the game itself. The relationship between the technical and the ludic elements in video games is originary and is based on the rules and affordances in a game. The influence of the affordances on gameplay has already been pointed out in the preceding sections. These rules and affordances are, of course, machinic and illustrate the machinicity of gameplay itself.

According to Juul, rules construct a ‘state-machine, a “machine” that responds to player action regardless of whether the game is played using computer power or not’ (Juul, 2005, Dovey and Kennedy, 2006). Juul borrows the term ‘state machine’ from computer science where it means: ‘A machine that has an initial state, accepts a specific amount of *input*

events, changes state in response to inputs using a *state transition function* (that is, rules), and produces specific outputs using an *output function*' (Juul, 2005, p. 60). Rules therefore make up what he calls the 'game state'. Like the computer programs (to which the term 'state-machine' is originally applied), games rules are also algorithmic. Juul identifies five main characteristics of the game algorithm by comparing it with that of programs. These are finiteness, definiteness, input, output and effectiveness. Finding corresponding characteristics in the way game rules operate, he states:

Definiteness corresponds to the description of rules as being unambiguous; *finiteness* and *effectiveness* imply that the rules of a game have to be practically usable; *input* and *output* relate to the input and output of the state machine described earlier.

(Juul, 2005, p. 62)

Juul's comparison above establishes clearer links between the ludic and the machinic. However, this is just one way in which the originary relation between the ludic and the machinic can be established.

Another illustration is found in the analysis of the different levels of rules, which, in their own turn are algorithmic in different degrees. Katie Salen and Eric Zimmerman divide these into three types: 'constitutive', operational and implicit. Operational rules are the rules that are written down in manuals and rulebooks. In video games they often form a paratext where the background information about the game, the setting, the mouse and keyboard controls and the rules are combined. These are algorithmic in terms of being precise, unambiguous and universal. Constitutive rules are the underlying formal structures that exist 'below the surface'. Salen and Zimmerman describe these as 'sets of logical relationships that are not necessarily embodied in a material form or in a set of behavioural guidelines for the player' (Salen and Zimmerman, 2003, p. 132). As they also point out, the constitutive rules are composed of abstract logical principles without mentioning specific representational details like the operational rules. It might be noted that the constitutive rules show basic similarities with the conditional statements in computer programs (which function with arbitrary variables to which values can be assigned). Lastly, implicit rules are the so-called unwritten rules that concern playing etiquette, sportsmanship and other implied rules of propriety. These vary from player to player or from group to group and hence they have varying algorithmic structure. Salen and Zimmerman's three categories are important in unfolding

three aspects in which the rules work together with the state-machine described by Juul.

On the constitutive level, the game involves the algorithms of the various processes that it permits and disallows. These algorithms are coded into it using computer languages and are hence part of the machine code. On the operational level, the algorithms are more akin to the literature-machine described earlier: paratexts such as manuals which make the links between the machinic and the narrative clearer and, simultaneously, act as algorithmic guidelines for the (w)reading of the machinic narrative. Finally, on the implicit level, the algorithm is connected to the other aspect of (w)reading: the unwritten rules of play. As indicated earlier, play is an important part of the (w)reading process. Writing and reading are in-play, in the Derridean formulation. Furthermore, as the player (w)reads into existence a certain event within video games, she is in-play. The rules for the (w)reading are inferred through the process of play, indicating a complex relationship between rules and the play-element, which will be analysed in depth in Chapter 4.

As technical elements, game rules are both formal and formative, in the sense that they create the underlying structure of the game-system and also facilitate the emergence of new forms through various combinations of rules. It is the possibility of creating emergent structures that make games potential creators of narratives and this is especially evident in video games where, as seen above, the technology affords the possibility of highlighting the supplementary relationship between the story, the machine and the game. The video game text, perhaps better than older forms of text and game, illustrates how the story allows itself to be played, how the game allows itself to be narrated and also shows the originary machinicity of both game and narrative.

(W)reading: Further implications

In closing, this chapter has aimed to pursue the consequences of the process of analysing video games as literature-machines. It has established the relationship between the three important facets of the game-text, discussed above, through its analysis of the process of experiencing such a text as a multiplicity – or (w)reading. It does not attempt to totally replace the older methods of understanding the game-text; instead, it reappraises them in terms of recent media-specific developments in game technology and tries to point out the ways in which a fuller analysis, which takes the variety of features in the games into account, is needed. That, however, is not to make claims for novelty or

exclusivity for these texts like the new media theorists might have done but rather, to illustrate how these new technologies instead of totally metamorphosing textuality, express more clearly some key realisations about textuality that have always existed but have been simplified or have 'become minor' because of literary traditions that failed to account for them and therefore ignored them. A good example would be Samuel Johnson's incorrectly dismissive prediction about *Tristram Shandy*: 'nothing odd will do long' (Boswell, 2006). The same applies to the current dismissive attitudes towards key aspects of video games by the literary establishment or by game studies critics alike.

Therefore, the (w)reading process, considered in its multiplicity, is equally applicable to earlier media in ways similar to its application in video games. This analysis of (w)reading further demonstrates the originary supplementarity between the machinic and the narrative as well as between the ludic and machinic elements in texts, using the media-specific tools available for analysing video games. In doing so, it opens up the route to a more complex understanding of the ludic element itself and how this leads to a deconstruction of the apparent binarism between the ludic and narrative. Section II will focus on these two analyses.

Section II

Game

4

Reading Games and Playing Books: Game, Play and Storytelling

The ludic and the narrative: Crossed destinies

The traveller in Calvino's *The Castle of Crossed Destinies* begins his series of strange tales with an even stranger description of how they were narrated to him. In a castle, where some unknown power had rendered everyone speechless, the guests were still telling each other their stories but they were doing so in a rather unique way. The traveller describes a scene where tarot cards were laid out after the banquet and what followed thereafter:

One of the guests drew the scattered [tarot] cards to himself, leaving a large part of the table clear; [...] We all noticed the resemblance between his face and the face on the card, [...] and that he was preparing to tell his story.

(Calvino, 1979, p. 6)

In the novel, the guests tell their stories using combinations of tarot cards: ludic combinations having in them an essential narrative purpose. Written in 1969, long before critics started making claims for video games as narrative media and the ensuing Ludology–Narratology debates, Calvino's novel brings to the forefront the essential supplementarity between stories and games by using the trope of storytelling through tarot cards.

The account in Calvino's novel does not come as a surprise. In fact, it connects well with his concept of the literature-machine described in Chapter 2, where literature is described as a 'combinatorial game', which prefigures the machinic textuality of video games. Working with

concepts similar to Calvino, some accounts of gameplay contribute to the definition of video games by further enlarging on its textual aspect. Dovey and Kennedy's definition of the video game 'text' in their foundational book, *Game Cultures*, clearly links it to the concept of 'gameplay', a term used by gamers to describe the playing experience: 'the "text", if we are to use that term at all, becomes the complex interaction between the player and the game – or what is described as gameplay' (Dovey and Kennedy, 2006, p. 6). Therefore, video games are simultaneously literature-machines besides being ludic-machines. At its very outset, this book has argued for the *intrinsic* relationship between the game and story elements in video games; in this chapter, it will look at the supplementarity between the very concepts of the ludic and the narrative.

Before addressing the relationship of games and storytelling, it would be useful to unpack the notion of what games are. Critical thinking on video games has concentrated for very long on the very nature of games per se. According to most definitions of games, rules form the most important means of defining games. Salen and Zimmerman define games as 'a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome' (Salen and Zimmerman, 2003, p. 96). Juul claims that rules give all games their technical and machinic characteristics and they construct a 'state-machine' that responds to player actions (see Chapter 3). This, then, is an important similarity that non-electronic games have with their electronic counterparts – by this definition, all types of games are machinic systems.¹³ Writing his 'Manifesto for a Ludic Century' in 2013, Zimmerman has no doubts whatsoever:

The rise of computers has paralleled the resurgence of games in our culture. This is no accident. Games like Chess, Go, and Parcheesi are much like digital computers, machines for creating and storing numerical states. In this sense, computers didn't create games; games created computers.

(Zimmerman and Chaplin, 2013)

The similarity of games to machines is clearly established in his comment. Digital games provide an excellent example of how the machinic and the ludic exist in a state of interplay. The ludic elements such as a situation of artificial conflict, aim for a quantifiable outcome (such as winning, losing and scoring points) and the very essential but largely unanalysable element of fun, which is characteristic of play in general,¹⁴ are very much part of video games as they are of non-digital games:

whether one compares the *FIFA* video games and football, or electronic *Solitaire* and its non-electronic version, these characteristics remain.

While the ludicity of video games is uncontested, it must also be noted that the ludic itself is a broad category within which there is much diversity. This has prompted game-scholars to provide divergent definitions. One major point of difference between games lies in the degree to which they are governed by rules. The second problem, now increasingly obvious with the arrival of video games, is that some games seem to engage with other apparently non-ludic aspects of life, such as storytelling or business, and this overlap blurs the definitive boundaries of what the ludic is. For example, a game like *The Sims* allows for plenty of freeform emergent action and yet is limited by the game's affordances. Also, such emergent actions and freeform structure coupled with narrative possibilities have far-reaching effects in the world of games. As Will Wright, the creator of *The Sims*, observes:

People started playing it [*The Sims*], and they'd be verbalising the story as they played it. They were reducing it to a linear story – so we put up a web page for them to upload these stories, and we ended up with hundreds of thousands of them. Players became performers.

The game became a storytelling tool.

(Taylor, 2007, original emphasis)

These issues have always been present in game scholarship: video games simply bring them to the forefront by embodying a heightened level of these problems within themselves. According to Zimmerman's manifesto, in the Ludic Century, 'increasingly, the ways that people spend their leisure time and consume art, design, and entertainment will be games – or experiences very much like games' (Zimmerman and Chaplin, 2013).

Re-reading the ludic: Johan Huizinga, Roger Caillois and the 'magic circle'

What Zimmerman says is linked to the most famous early definitions of play such as those of the Dutch historian, Johan Huizinga in his *Homo Ludens* (1971) and Roger Caillois's *Man, Play and Games* (2001), where Caillois modifies Huizinga's definition. Huizinga essentially studies play in general, linking it to Western conceptions of culture, which as he describes it, is *sub specie ludi*. His definition of play is summed up below:

Summing up the formal characteristics of play, we might call it a free activity standing quite consciously outside 'ordinary' life as being

‘not serious’, but at the same time absorbing the player intensely and utterly. It is an activity connected with no material interest, and no profit can be gained by it. It proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner. It promotes the formation of social groupings which tend to surround themselves with secrecy and to stress their difference from the common world by disguise or other means.

(Huizinga, 1971, p. 32)

The implications of Huizinga’s definition call for a fuller analysis especially with regard to their influence on and differences with subsequent studies of games.

Huizinga’s definition makes some very important points, which have governed game criticism for quite some time. Similar to Salen and Zimmerman’s definition quoted earlier,¹⁵ for Huizinga, play is a free, rule-bound and absorbing activity that occurs in a pre-circumscribed space and time, and also lacks any material interest. Huizinga calls this rule-bound ludic space the ‘magic circle’. Caillois modifies Huizinga’s conception by saying that games (especially gambling games) also connect with material interest but then he adds that nevertheless, play is unproductive in the sense it creates nothing new and merely redistributes existing resources amongst the players.

One of Caillois’s major ideas is, however, his notion of classifying play as *ludus* and *paidia*, which greatly influences current debates on the nature of play and games. He describes them as:

At one extreme an almost indivisible principle, common to diversion, turbulence, free improvisation, and carefree gaiety is dominant. It manifests a kind of uncontrolled fantasy that can be designated as *paidia*. At the opposite extreme [...] there is a growing tendency to bind it with arbitrary imperative, and purposely tedious conventions. [...] This latter principle is completely impractical even though it requires an ever greater amount of effort, patience, skill, or ingenuity. I call this second component *ludus*.

(Caillois, 2001, p. 13)

This classification raises many questions. Caillois categorically says that ‘games are not ruled and make-believe. Rather, they are ruled *or* make-believe’ (Caillois, p. 9). This then implies clear watertight categories of *ludus* games and *paidia* games. In propounding the rule-bound character of games, many recent scholars of game studies have accepted

the exclusivity of Caillois' categories. Eskelinen for example, states that 'there's also an inherent division into *paidia* and *ludus*, similar to the distinction between play and game' (Eskelinen, 2001). There is thus a tendency to equate *paidia* with play (as a freeform activity that is based on make-believe) and *ludus* with games (rule-bound with distinct goals).

Caillois also divides games into four categories based on the nature of their play. He calls these *agon* (competitive games, most games fall under this category), *alea* (games of chance), mimicry and *ilinx* (vertigo games, such as roller-coasters). He further outlines the possible and impossible combinations between these types, especially those between *agon-ilinx* and mimicry-*alea*. According to Caillois, 'Rules and vertigo are decidedly incompatible. Simulation and chance are no more susceptible to mixing' (Caillois, p. 73). Such a definition of games, however, turns out to be restrictive and tends to ignore their inherent complexity. Even Eskelinen acknowledges the possible overlap between the categories: 'it should be easy to imagine a scene dominated by competitive orientation containing embedded elements of chance, role-play and vertigo, especially if the latter is taken to mean shocking or perceptually challenging action' (Eskelinen, 2001). Therefore, with the developments in computer game technology, the conception of *paidia* and *ludus* as mutually exclusive forms is found to be increasingly problematic. This is similar to the claims that the play-world is separate from the *real* world or that play is essentially unproductive.

It is important to note that Huizinga's original definition does not distinguish between game and play (between *ludus* and *paidia*): for him, 'all play has its rules' (Huizinga, p. 11), and this applies to both 'make-believe' systems and rule-bound ludic systems like chess. Further, he claims that play and culture are actually 'interwoven with each other' (Huizinga, p. 5). However, some problems still remain in Huizinga's formulation. As Bogost points out, the hermetic borders of the 'magic circle' that apparently separates the play world from the real world do not hold because the game world and the real world spill over into each other (Bogost, 2008, pp. 134–135). A further examination of Huizinga's argument shows that he does not discount the possibility of the 'spilling over' that Bogost describes. According to him:

A play-community generally tends to become permanent even after the game is over [...] it has been shown again and again how difficult it is to draw the line between, on the one hand, permanent social groupings – particularly in archaic cultures with their extremely

important, solemn indeed sacred customs – and the sphere of play on the other.

(Huizinga, p. 31)

The magic circle, therefore, is not so hermetic after all. The players retain and recognise their relationship within the play-world in the world outside and there are many cases when the ludic and other all-pervading elements of human life come together, as Huizinga's example of the link between play and the sacred customs of ancient cultures illustrates so clearly.

Drawing on the main thesis of *Homo Ludens*, Hector Rodriguez further strengthens this point by claiming that:

Homo Ludens does not, however, express the thesis that playing is in every respect isolated from serious concerns. The boundary between the playful and the serious is certainly real and widely applied, but not sharply defined everywhere, and always subject to revision. In some cases, the borderline cannot be marked at all. Moreover, ethical questions about civility and fairness are often intimately connected with the act of playing. Huizinga asserts, for instance, that many forms of serious culture originated from ludic actions. Playfulness lies at the origin of art, religion, politics, philosophy, and the law.

(Rodriguez, 2006)

Notwithstanding this, some problems still remain in Huizinga's formulation. Both Huizinga and Caillois deem that play is unproductive and the economy it generates is distributed within the game-system, beyond which it does not affect the world. Huizinga sees play as gratuitous and although Caillois points out the economic exchange in gambling, he does so within the game system itself. Jacques Ehrmann argues in his essay, 'Homo Ludens Revisited', that:

They fail to see that the interior occupied by play can only be defined by the exterior of the world, and inversely that play viewed as an exterior is only comprehensible by and with the interior of the world; that together they participate in the same economy.

(Ehrmann, 1968)

It is this view of gratuitousness that prompts both of these early scholars to treat the play-world as a complement or a luxury.

Huizinga sees play as an 'accompaniment, a complement and even a part of life in general. [According to him] it adorns life' (Huizinga, p. 9).

Such a view implies that ultimately, play is a separate activity or sphere of activity that is separate from the real world though there are possibilities of exchange between the two. Further, while seeing it as a free activity in terms of freedom, there is also an implication of the other meaning of 'free' (as gratuitous). The last part of the quote, 'it adorns life', makes the play function seem decorative, although it is possible that Huizinga means it differently. Nevertheless, it does seem to lead to Caillois' view that play is a luxury and that 'the hungry man does not play' (Ehrmann 1968). Such a view is unsubstantiated and gives an incomplete and elitist definition of play. As Ehrmann comments in his essay,

This last statement designed to forestall any objection, nonetheless strikes us as highly contestable [...] if play has the capacity for symbolisation and ritualisation is consubstantial with culture, it cannot fail to be present wherever there is culture. We realise then that play cannot be defined as a luxury. Whether their stomachs are full or empty, men [sic] play because they are men.

(Ehrmann, 1968)

Indeed, the issue of gratuitousness (and the implied notion of unproductiveness) seems to contradict Huizinga's own position on the link between play and poetic creativity.¹⁶

However, it seems that Huizinga takes a very utilitarian view of productivity and does not deem artistic creativity as being productive. What he has to say in his chapter 'Play-Forms in Art' makes it clearer: 'Play, we said, lies outside the reasonableness of practical life; has nothing to do with necessity or utility, duty or truth. All this is equally true of music' (Huizinga, p. 158). This seems to be in direct opposition to modern cultural and artistic views, especially since ludic references abound in both the humanities and the social sciences. Ferdinand de Saussure's reference to the chess analogy to describe *langue* and *parole*, Freud's fort-da game, Wittgenstein's language games and Derrida's concept of play (*jeu*) are famous examples.

Video games illustrate the ludic element in human culture, as pointed out in the above examples, even more explicitly. Electronic ludic systems like *The Sims* can be used to simulate real-world activities, MMORPGs can form communities that reflect and affect real-life scenarios and some recent games are now being used to comment on political situations or ideologies.¹⁷ Therefore, play not only influences¹⁸ but also intrinsically informs our understanding of reality and culture. A striking example of this blurring of play and reality is the ARG (Alternate Reality Game) called *The Beast*, which started as a promotional game for the film

A.I. Artificial Intelligence and as a web of clues throughout datasphere is a classic case of an overlap of real-life experience and game-experience. According to a News.com report on ARGs,

Alternate Reality Games (ARGs) tell stories through narrative elements that are distributed across various platforms. These game variables are carefully concealed from players until appropriate moments determined by the game designer(s). [...] Instead of requiring the player to enter a fictional game world, ARG designers attempt to enmesh the game within the fabric of the player's real world by harnessing as many media technologies and interfaces as possible. By doing so, ARGs expand the frame for the game beyond the computer monitor or television screen, effectively making the entire world the 'game board'.

(ARGology.org, 2010)

Another example where play and reality meet is the recent Serious Gaming movement, which clearly combines the two elements of play and reality in what would have seemed a paradoxical combination for the early commentators. The example of the persuasive games cited in the previous chapter also fall within this league. The Serious Games manifesto has clear-cut goals, which reform our ideas about ludicity, the non-ludic world and value. It clearly states its aims, thus:

The Serious Games Initiative is focused on uses for games in exploring management and leadership challenges facing the public sector. Part of its overall charter is to help forge productive links between the electronic game industry and projects involving the use of games in education, training, health, and public policy.

(Cruz-Cunha, 2012, p. 669)

Even earlier scholarship takes into account the difficulty of separating play and reality: Ehrmann makes it very clear that the interaction between play and reality is far more complex and interesting than either Huizinga or Caillois have acknowledged.

Ehrmann's use of the word 'consustantial' is important, here: according to the *OED*, the word primarily means 'of one and the same substance or essence; the same in substance' ('consustantiation, n.,' n.d.). The etymology and the secondary meaning are theological and are defined as follows: 'of the three Persons in the Godhead; esp. of the Son as being "one in substance" with the Father [and] also said of Christ's

humanity in relation to man' (Ibid.). Ehrmann's description, therefore, by extending the analogy of the ludic and the sacred,¹⁹ comes very close to an accurate description of the complex relationship between play and reality (and culture) by describing them as being consubstantial instead of complementary. This idea will form the basis of the more complex framework within which play, especially with respect to video games, will now be considered.

Play in the noncentred circle

Brian Sutton-Smith, writing in 1997, describes games as being characterised by ambiguity. In a comparative outline of the various notions of ludicity, Sutton-Smith refers to the work of Derrida as being the 'most radical account of the role of the ludic turn in modern thought' (Sutton-Smith, 1997, p. 144). He begins by discussing Derrida's concept with respect to the play of signifiers in a text. Sutton-Smith sees this as a text being at play and notes that in the broad sense of play, 'the mind, speech and writing are always at play' (Sutton-Smith, p. 144). Such an idea has already been encountered briefly in the analysis of (w)reading in the previous chapter.

This Derridean conception provides a convincing framework within which to observe how the so-called watertight separation of the two aspects of ludicity gives way under the process of *jeu*, the term that describes the Derridean process of play. The Derridean definition of *jeu* needs to be clarified, first:

Play is the disruption of presence. The presence of an element is always a signifying and substitutive reference inscribed in a system of differences and the movement of a chain. Play is always play of absence and presence, but if it is to be thought radically, play must be conceived of before the alternative of presence and absence. Being must be conceived as presence or absence on the basis of the possibility of play and not the other way around.

(Derrida, 1980, p. 369)

Such a model of play is described only by understanding that there is 'something missing from it: a center which arrests and grounds the play of substitutions [...] this movement of play, permitted by the lack or absence of a center or origin, is the movement of supplementarity' (Derrida, 1980, p. 365). The entire analysis that precedes this fits such a description very well.

The binaries of rule-bound and make-believe games, *ludus* and *paidia* and the playful versus the real have all been found wanting. Such clear and total separations are constantly exceeded and subverted by the nature of play itself. It seems that play can only be understood by using its own structural terms. Derrida illustrates how other binary relationships, such as nature and culture or reading and writing, need to be seen as being defined by play. Therefore, this model is easily applicable to the so-called binarisms identified in the understanding of play itself: play is itself always *in-play*.

The two key elements in this model, as also noted elsewhere, are that there is an 'interplay' of presence and absence (or the 'in-between' ludic space which is the origin of presence and absence) and that this movement is characterised by the lack or absence of a centre or origin. Care must be taken, however, in not oversimplifying the concept of play as one that simply dissolves or obliterates the distinction between two binaries, for example, nature and culture. Nor should it be assumed that the centre is done away with or destroyed. These issues need a more detailed explanation before the analysis can be applied directly to the binarisms involved in current conceptions of the ludic.

When responding to Claude Levi-Strauss's attempt, in the *Raw and the Cooked* (Levi-Strauss, 1983), to separate nature from culture, Derrida maintains that despite the attempts to seek centred structures, 'in this Structuralist moment, the concepts of chance and discontinuity are indispensable' (Derrida, 1980, p. 368). On the other hand, he observes that 'this standpoint does not prevent Levi-Strauss from recognising [...] the continuous toil of factual transformation' (Ibid.). Considering these two contrary aspects of the Structuralist position, Derrida sees the process in which both are decentred as being fundamentally different from being a loss of the centre.

Instead of a positing a loss of the centre, or even, as readers like Sutton-Smith assume, 'a process in which no centre has a fixed meaning' (Sutton-Smith, p. 145), Derrida replaces the idea of the centre that lends structure with what he calls the 'noncentre'. This thinking forms the basis for deconstruction, which as Nicholas Royle observes, 'engages a thinking of the force of the non-centre' (Royle, 2003, p. 16). In such Derridean terms, it is evident that binaries such as play and reality or rule-bound play and make-believe maintain their identities and yet at the same time, they overlap and do not remain irreducible entities. The very irreducibility, itself, exists within the Derridean process of *différance* – a continual process of difference and deferral of meanings in

which the centre is pushed back repeatedly, leading to a thinking of a relationship based on noncentres. Such a noncentred structure is based on the play (*jeu*) of presence and absence between the entities involved and it naturally follows that these exist in a supplementary relationship, as already explained in the introduction.

The similarity of this model with the ludic structure described above is only too obvious. Game, play and 'reality' or the 'serious' exist in a supplementarity that does not privilege the centred structure of any of these entities. Play, does not lose its rule-bound structure and become totally random; similarly, neither is it totally rigid. In this context, it is necessary to reiterate the link between writing and play, as established in the previous chapter. There, *jeu* was responsible for the disruption of the boundaries between reading and writing and also having these exist as a 'single gesture but doubled' (Derrida, 1983, p. 69). The above has provided the basis for the understanding of (w)reading and its proximity to the act of playing. The latter will have further implications in the discussion of the relation between the ludic and narrative, in the following chapter. From the above analyses, however, what emerges clearly is how intrinsically play (*jeu*) informs our understanding of the processes of play itself.

In his recent study of videogames, Alexander Galloway takes up the same analysis. Galloway also observes the supplementarity that clearly operates in the realm of the ludic. He makes similar claims as above:

Using the logic of supplementarity, play reconstitutes the field, not to create a new wholeness but to enforce a sort of permanent state of nonwholeness, or 'nontotalisation'. Play is a sort of permanent agitation of the field, a generative motion filling in the structure itself, compensating for it, but also supplementing and sustaining it.

(Galloway, 2006, p. 26)

Galloway maintains that Derrida does not say what play *is*, so much as what it does. This is as true of play as an originary activity influencing non-ludic structures as it is for the ludic structures on which models like the 'magic circle' are based. Play itself is *in-play* with the categories that theorists have tried to classify it under, such as *ludus* and *paidia*, which undergo the same process as other binaries such as reading and writing. Galloway comments that 'play brings out for Derrida a certain sense of generative agitation or ambiguity, a way of joyfully moving forward without being restricted by the retrograde

structures of loss or absence' (Galloway, p. 28). The ambiguity that Galloway points to has already been identified by theorists such as Sutton-Smith and is characteristic of a 'noncentred' process. The latter part of Galloway's observation, however, needs to be questioned as it seems to be deviating from the Derridean account referred to above. The shifting conceptions of absence and presence are in-play; therefore, the idea of joyfully moving forward without being restricted by 'retrograde structures of loss or absence' (Ibid.) is misleading. Nevertheless, it is significant that video games research is finally moving towards an account of game and play, which is informed by supplementarity, even though the shift is gradual and more work needs to be done in understanding the relationship.

The earlier chapters have already illustrated how Derridean conceptions of supplementarity work in the constructions of ludicity, technicity and narrativity within video games and also originally in the earlier ludic forms. Play is thus not a complement of culture as claimed by earlier scholars: it exists in a supplementary relationship to elements of culture. In this respect, Ehrmann's rather loaded description of play and culture being 'consubstantial' and the analogy of the ludic process to the Christian concept of consubstantiality, mentioned earlier, can now be further developed, under the Derridean scheme. However, play and culture exist together, not as 'substances' but as notions whose existence is dependent on interplay. Similarly, the so-called binary terms, game and play (and *ludus* and *paidia*), coexist within a 'noncentric'²⁰ framework – extending the analogy with (w)reading, it is possible to describe this phenomenon by adding a new dimension to the meaning of a term commonly used to describe the playing experience, especially in video games. The term concerned, which has been variously defined by theorists, is 'gameplay'. The following section will aim to illustrate how this concept, when redefined in terms of a Derridean analysis, contributes significantly to the understanding of the ludic process not just in video games but in general.

Before moving on towards a detailed analysis of gameplay, it is important briefly to pursue another earlier commentary that is similar to Ehrmann's, as an introduction to the processes described as gameplay. Following the Derridean model (which, it can be argued, is also implicit in some of Huizinga's ideas), it can be seen that at the same moment, play can exist both as play and as a different element of culture (like art and law). Gregory Bateson's idea of play as metacommunication, referred to by earlier game studies scholars (Sutton-Smith, 1997, Salen and Zimmerman, 2003), fits well with the above analysis.

Bateson describes play as metacommunication in his essay, 'A Theory of Play and Fantasy'. He cites the instance of two monkeys playing or as he describes it, 'engaged in an interactive sequence of which the unit actions or signals were similar but not the same as those of combat' (Bateson, 2007, p. 122). Bateson claims that this series of signals carry the message that 'this is play' and states that this is an instance of metacommunication. He goes on to say that 'play is a phenomenon in which the actions of "play" are related to, or denote, other actions of "not play"' (Bateson, p. 123). This is again reminiscent of the Derridean noncentric model described above though in Bateson, despite the co-presence of play and non-play, they are still separate entities. Later on in the essay, however, there is more of a shift towards supplementarity: especially in Bateson's claim that every action 'in which the proposal to change the rules is implicit, is itself part of the ongoing game' (Bateson, p. 130). The changing of rules does not, therefore, belong to the external realm of 'non-play'; rather, it is originarily involved in the play process itself.

Bateson's model lends itself to further development within the framework of supplementarity. Within this conceptual framework, play acts in the space between presence and absence, or the signals of the metacommunication and the absence of that which these signals denote. The signals, it should be noted, are untrue in a certain sense but not totally; therefore, there is no total dissolution of the boundaries between the make-believe and the real but there is a clear indication that the two entities exist *in-play* within a framework of non-centredness. Both the play and the non-play elements, therefore do not exist as complete irreducible entities. Instead, each is constantly added to by the other which acts as a 'supplement'.

Metacommunication, therefore, involves a supplementary relationship between play and non-play. Salen and Zimmerman provide a good illustration:

In Spin the Bottle, the ability of the player to recognise that a kiss within the frame of the game at once represents but also does not mean the same thing as a kiss in the real world is an instance of metacommunication.

(Salen and Zimmerman, p. 371)

In this case, the same thing exists simultaneously in the 'real' (or rather 'non-play') world as well as in the play world. This can be inferred as a complex situation where again the 'non-play' and 'play' are in play.²¹

Gameplay and its elements: Rules, play, context and choice

It is because of their versatility and multifacetedness that video games resist any easy definitions of them as irreducible entities and instead further open up the path to extending analyses, such as those initiated by Derridean and Batesonian concepts, of the supplementarity that characterises the ludic process. In current gaming parlance, gameplay has become a popular neologism, visible on almost all gaming websites. Between the times span of less than five years, dictionaries have also started including the word and there is now much more confidence in defining it than the fuzziness that existed earlier. At first glance, the very term seems an affront to supporters of the Game versus Play distinction since it is a portmanteau of both. The Google Ngram shows the word first being used in the 1980s and its usage sharply rising in the mid-2000s. The Macmillan Dictionary's definition is deceptively simple: 'the story and structure of a computer game and the way it is played' ('gameplay,' 2015). The Oxford Dictionary is more exclusive in its parameters: 'The features of a computer game, such as its plot and the way it is played, as distinct from the graphics and sound effects' ('gameplay,' 2010). The game industry, however, seems less sure about defining gameplay. The 'Glossary' of *Postmortems from Game Developer* lists gameplay as a 'vague word denoting what players do in a game' (Grossman, 2003, p. 317). Writing in 2003, Andrew Rollings and Ernest Adams admit that gameplay is 'extremely difficult to define' but go on to describe it as 'one or more causally linked series of challenges in a simulated environment' (Rollings and Adams, 2003, p. 201). Here, they are responding to game designer Sid Meier's description of gameplay as a 'series of interesting choices'. It is clear, therefore, that from the early days of game studies until the present, the understanding of gameplay has not been an easy and uniform one.

Celia Pearce's simple yet succinct definition of the gaming process captures the multiplicity that characterises gameplay: 'a game is a structured framework for spontaneous play' (Pearce, 2002a, p. 113). Gameplay combines spontaneous play existing in supplementarity with the structured framework of game rules in a relationship that is quite contrary to Caillois's game versus play and ruled versus freeform binaries. A similar analogy is, arguably, applicable to the relationship between the various other elements that gameplay is said to be constituted of.

Given its versatility in term of game mechanics as well as playing experience, Activision's *Rome: Total War*²² a cult title in the RTS (real-time strategy) genre with an overall rating of 9.1 (out of

10) on Gamespot.com, is an obvious choice for a close-reading of how gameplay develops. The action in *Rome* is described as follows:

[There] are essentially two distinctly different types of gameplay [...] There's the overarching turn-based campaign in which you conquer cities and provinces, make improvements, and move armies around the map as you expand your empire, and then there are the real-time battles in which you use tactics and maneuvers to crush your enemy in combat.

(Ocampo, 2004)

Considering the various different modes (and genres) of playing within a single title, the varied range of actions possible and the multiplicity of the aspects covered in the game, it is no surprise, therefore, that the gameplay, with the exceptional score of 9.1 out of 10, is a key contributory factor in determining the overall rating for the game.

As most commentators agree, gameplay is about the interaction of the game and player. Juul comments that gameplay is not about the rules, the game-tree (branching choices) or the game fiction but about the 'way in which it is played' (Juul, 2005, p. 83). Even the 'way in which it is played' consists of the rules, choices and the game fiction in a supplementary relationship in Derridean terms and game-fiction is, arguably, more important than Juul seems to assume. The following section will try to locate the primal position of game-fiction within the experience of gameplay, often seen as the vital and all-pervading way to describe the gaming experience by Ludologists, Narratologists and by most gamers in general.

Game fiction(s)

Returning to a discussion of the story element in games, the player can be seen to be faced with a similar situation as Calvino's traveller encounters in the Castle of Crossed Destinies: the unfolding of stories during the playing out of a game. As the 'crossed destinies' of games and storytelling are understood, the context of the game becomes crucial.

Geoff King and Tanya Krzywinska maintain that 'if gameplay is often to the fore, it might be argued that this is only possible as a result of the existence of the contexts – in broad and more specific, crude or subtle – within which it makes any sense' (King and Krzywinska, 2006, p. 275). Consider the context in *Rome*:

You play as one of three powerful Roman families – the Julii, the Bruti, or the Scipii – attempting to increase the size and glory of Rome and

shore up your faction's power and influence. [...] The Julii must deal with the Gauls and Germania to the north in a difficult, landlocked campaign. The Bruti are required to deal with the remnants of the Greek city-states and expand the empire to the southeast. And the Scipii are tasked with subduing Carthage, Rome's great nemesis to the southwest.

(Ocampo, 2004)

The in-game artificial intelligence provides help through the AI agents Victoria (who advises the player on civic and political matters in the turn-based part) and a Roman centurion (who is the advisor on martial strategy in the real-time battles). Such advice and the medium of presentation try to be very true to historical circumstances especially when it comes to the maps, the environment and the armies of the various factions. The pre-game screen that always loads with a silhouetted animation of Roman warriors in battle together with a quotation on war from an eminent historical personage lends a sense of drama to the game. Similarly, in the pre-battle cutscene (which incidentally reflects the correct units participating in the battle) the Roman general's exhortation (which varies in tone depending on the status of his army) and his army's reaction (cheering, taunting or silent depending on the mood of the battle) are very convincing and attempt an authentic simulation of the historical battles.

Admittedly, the game plays upon the sense of make-believe but as the earlier discussion reflects, this is how *play* is created between the ruled and the make-believe elements. The context itself exists in *play* with the rules and the technical affordances and in itself it combines the art, the in-game music with the narrative and these exist in an interplay with the outside world (that is, *Rome: Total War* forums discussing Roman history, in-game strategies, personal instances of gameplay and even planning *Rome: Total War* parties).²³ Besides the context of the game, another factor, one that will be discussed at length in subsequent chapters, is also crucial in understanding gameplay. Meier's definition of gameplay as 'a series of interesting choices' is of great relevance here.

Although very sketchy in itself, Meier's definition addresses a key point. For him, choices exist in series and are 'interesting'. Game choices form various complex structures, some of which are described as game-trees in combinatorial game theory. Despite the arborescent connotation of the word, a game-tree does not necessarily have to be an arborescent structure and even if so, then this is usually for representational convenience because it tends to favour monoplanar

structures. Rather, in the context of the previous analyses, the series of choices is rhizomatic and multiple as the analysis in the following chapters will illustrate in further detail. Meier's other point about the choices being 'interesting' is more difficult to define. Perhaps what he means is 'interesting' in the sense of 'preferred' because it must be remembered that players sometimes do make choices which they themselves know of as less interesting than certain others that they might have made.

Playing Rome, for example, requires a tremendous amount of strategic planning and resource management. The game takes almost two days to complete and the extremely complicated game tree reflects the complexity of choices that need to be made in order to play the game. Warren Spector in his 'post-mortem' of the cult game *Deus Ex* comments, 'Deus Ex asks players to determine how they will solve game problems and forces them to deal with the consequences of their choices' (Spector, 2006). Consider recent open-world games such as *Far Cry 4* (Ubisoft Montreal, 2014) or *Red Dead Redemption* (Rockstar San Diego, 2010) where, given the largeness of the game-world, it appears that the choices available to the player are almost limitless. This is perhaps another reason why traditional analyses of both games and narratives find it difficult to account for games as storytelling media.

Revisiting the game versus story debate

In the Ludology–Narratology debate described in Chapter 1, Aarseth responds to Murray's comment that 'all games tell stories' by stating:

Games will be games and gamers will be gamers. Storytelling, on the other hand, still seems eminently suited to sequential formats such as books, films and e-mails, and might not be in need of structural rejuvenation after all. If it ain't broke, why fix it?

(Aarseth, 2004)

Both Murray and Aarseth take up extreme positions that they staunchly defend as the centrepieces of their theoretical thinking. That, however, is also their problem – instead of recognising the supplementary relationship of the two, both the Ludologist and the Narratologist camps choose to view 'game' and 'storytelling' as separate and watertight categories that do not have possibilities of overlap. In the first chapter, the problems with such polarised positions and how later commentators have addressed these have already been highlighted. Such problems do

not, however, arise with the emergence of video games; they might have come more to the forefront but they are certainly not new.

Ten years before the Ludology–Narratology debate, Robert R. Wilson comments that games are essentially different from stories because while the former are rule-bound, the latter are at best defined by conventions: ‘If rules are, as I have argued, abstract, easy to formulate, descriptive as well as prescriptive, predictive and inflexible, then it is difficult to see where they are to be found in literature and how they would work’ (Wilson, 1986). Wilson’s primary premise is that rules are inflexible and axiomatic while conventions are not. Part of his problem is similar to that of the Ludologists: he assumes that any argument linking games with storytelling aims to make one the *subset* of the other. The assumption is that the game is ‘embedded in the narrative’ and therefore it changes into narrative and *loses* its ludic nature. He comments that ‘millions of children and many university students have read and understood *Through the Looking Glass* without knowing more about chess than that it is played with fancy pieces’ (Ibid.) with the implication that games are unconnected with any attempt to tell stories.

In a similar vein as but much earlier than the Ludological argument made by Juul that there is a ‘clear-cut split between the fiction and the rules of a game [...] and] no matter how the pieces are shaped, the rules, gameplay, and strategies remain identical’ (Juul, 2005, p. 57), Wilson also claims that the shape of the chess pieces are unconnected to the rules of the game. Maintaining that rules never change whereas the shape of the pieces may vary, Wilson argues for the primacy of the rule-bound element and, therefore, of the gameplay being independent of any narrative context. He illustrates this with a striking example from Satyajit Ray’s film, *The Chess Players* (Ray, 1977):

This principle, universally evident in game-playing, is superbly illustrated in Satyajit Ray’s 1978 film, *The Chess Players*, when the two obsessed players discover that they can play with vegetables as well as with their usual ivory pieces after the unhappy wife of one steals the chesspieces.

(Wilson, 1986)

Just as with the Ludologists, there is an intrinsic problem within Wilson’s schema. The difference between rules and conventions is a difficult one to determine and has rather fuzzy borders.

There are numerous video games where the rules and indeed the whole game system together with its affordances can be modified using

external tools. This might lead to the production of an entirely different game or create an altered version of the same game. Even non-digital games, as in the board-based role-playing games, the rules are flexible and are determined during play by the game-master. The *Player's Handbook* for *Dungeons and Dragons* is constantly updated and depends extensively on player inputs: as the D&D website states, 'next year, we'll also have surveys to get a sense of where the game has settled and what might need our scrutiny' (Mearis, 2014). The player input often is instrumental in changing the rule-base of games. Further, there are obvious commercial reasons for the shift in the rules and this is a case of the ludic system 'plugging into' the commercial assemblage.²⁴ The area of ludic activity, therefore, incorporates far more than Wilson covers and his strict demarcation between rules and conventions does not really hold.

Within the generic category also exists a wide range of differences. A video game genre like the first-person shooter varies from the earlier shoot 'em up games like *Wolfenstein* or *Doom* to more narrative-oriented and technically sophisticated games like *Half-Life 2* (Valve Corporation, 2004) or *S.T.A.L.K.E.R.: Shadow of Chernobyl*. The GameSpot review of *S.T.A.L.K.E.R.* illustrates this well: 'At its heart, *S.T.A.L.K.E.R.* is a first-person survival game that blends action with role-playing' (Ocampo, 2007a). Examples such as *S.T.A.L.K.E.R.* show how it is possible to have a huge diversity within any particular rule-bound genre. The flexibility of rules is more clearly visible in such cases, especially when a number of generic conventions meet within the gameplay. In many cases, it is possible to infer the rules or affordances for a particular game without knowing them beforehand, based on the experience of having played similar games. The rules therefore are more like the conventions that Wilson characterises literary genres with: they are neither precise nor totally to be understood by reading the game manual.²⁵

Not all games outline their rules at the outset. Rules, especially in narrative digital games, can be extremely difficult to delineate. As mentioned earlier, though these games come with manuals and rulebooks, the formal rules are often inferred after playing the game and in many cases through player input. In the case of multiplayer games, the playing community forms part of the shifting rule-base. Often, when the rules are not explicitly written down, they are revealed to the players through the gameplay: either because the game leads to their discovery at certain points or because of sheer serendipity.

It is a common fallacy within the game-story debate to identify one of the entities as being subsumed by the other or being equated with

the other. As Eskelinen puts it, not without some vehemence, games are 'without exception colonised from the fields of literary, theatre, drama and film studies. Games are seen as interactive narratives, procedural stories or remediated cinema' (Eskelinen, 2001). Wilson expresses the same sentiment in his criticism of positions that see the ludic and the narrative working together in *Through the Looking Glass* (Carroll, 1999).

Again, Wilson's assertion about *Through the Looking Glass* seems a bit too extreme. To claim that most of the novel's readers think of Chess merely as a game played with fancy pieces is to accept a considerable level of ignorance about an extremely popular game like chess. Carroll's chess-problem, laid out at the beginning of the novel, needs no introduction. The whole plot of *Looking Glass* is based on the chess game described as 'white (pawn) to play and win in eleven moves' (Carroll, 1999, p. 136). Martin Gardner, in his *Annotated Alice*, demonstrates how Carroll lays out his tale in terms of a playable chess game, though of course with some interesting variations (Carroll, 1999, p. 139). In fact, Gardner mentions that there were many attempts to work out a better sequence of chess moves to fit the narrative as well as the rules of the game and he cites an example from the *British Chess Magazine* of 1910. Wilson, however, contends that

The chess-problem is an abstract pattern that Carroll employs, but, once embedded in the narrative, it cannot be formulated as a series of chess rules particularly actualised in time [...] but only incorporated into the total apprehension of the text.

(Wilson, 1986)

The problem again lies with the fact that Wilson assumes that the game is 'embedded in the narrative' and therefore it changes into narrative and loses its ludic nature. What is ignored here is the fact that both the game and the narrative are parts of the gameplay and in being so, inform each other *intrinsically* and not extrinsically. As an actualised instance of a combination of rules, Alice's chess game represents a story as well as a mesh of potentialities (like the variations mentioned by Gardner) that can themselves be actualised as stories.

Reading games: The ludic and its history of storytelling

There is a similar critical omission in his assessment of Ray's *The Chess Players*. Both in the original story by Munshi Premchand and in Ray's film, the chess game is always described as *larai* or battle and the private

quotidian battle between the chessboard armies of the two Lucknow aristocrats Mirza and Mir is symbolic of the bloodless battle between the East India Company and Nawab Wajid Ali Shah of Lucknow. As the movie ends, the British troops imprison and exile the ruler of Lucknow at the same moment as Mirza checkmates Mir: the chess match, here, is not just any narrative – here, it reflects history. Even if, as in the above example, the chess-pieces are represented by vegetables, they do not lose their functions and their narrative contexts (they are still the symbolically coloured white and black armies): *pace* Wilson, this example further illustrates the intrinsic connection of rules and fiction. As an image of military and political events, the game is still being used to tell a story. This is because the game itself has a narrative element to it and because the stories that it tells have an intrinsic ludic dimension.

Neither Wilson nor the Ludologist scholars seem to be taking into account the deep connection with context that we find in the history of these games. Commenting on the Indian origins of chess, Sir William Jones describes the game of *Chaturanga* as being ‘played by four persons representing as many princes, two allied armies combating on both sides’ (Jones, 1883); he goes on to point out that the chess pieces – the elephant, the horse, the foot-soldier and the boat (in some versions, the chariot) – represent the four divisions of the armies in contemporary India. In Jones’s description, the players seem to be playing out a narrative of a battle and the context of this predecessor of modern-day chess is very important for anyone trying to understand the game. Another key example is the game of Snakes and Ladders. Originally called *Gyan Chaupar*, this game was introduced in Europe around 1895. According to Andrew Topsfield, the game was a part of Jain culture and its ‘theme was no less than the spiritual quest for liberation from the bondage of karma and the hindrances of the passions. The player’s pieces would progress, according to the throw of dice [...] from states of illusion, worldly vices or hells in the lower squares of the board to ever higher realms of consciousness’ (Topsfield, 2007). The Tibetan ‘Game of Liberation’ is another example of the Snakes and Ladders games where the gameplay and salvation narratives connect deeply. As Jens Schlieter comments, ‘the goal of the game is to leave the suffering of *samsara*, which is to reach nirvana, depicted in the game as square No. 104’ (Schlieter, 2012). In fact, in some Hindu accounts, the gods ‘Shiva and Parvati are shown as playing the Cosmic Game which maintains the Universe (and which can destroy and re-create it)’ – the concept of such a narrative, of course, contains within it every other narrative in the universe.

Playing books: The ludic history of storytelling

Similar to the game of dice played by the Indian gods, in Ingmar's Bergman's film *The Seventh Seal* (Bergman, 1958), the protagonist is seen playing chess with Death – a game that will determine the life and death of him and those around him. Describing yet another scenario where a game encompasses all the possible events in life (and, therefore, all possible stories as well), Herman Hesse writes about the Glass Bead Game of his novel:

This same eternal idea, which for us has been embodied in the Glass Bead Game, has underlain every movement of Mind toward the ideal goal of a *universitatis litterarum*, every Platonic academy, every league of an intellectual elite, every rapprochement between the exact and the more liberal disciplines, every effort toward reconciliation between science and art or science and religion.

(Hesse, 2002, p. 16)

This description of the game opens up the idea of gameplay far beyond the dimensions of any magic circle and even, ultimately, beyond life. Such a game played by linking ideas is, according to Theodore Ziolkowski, 'of course purely a symbol of the human imagination and emphatically not a patentable "Monopoly" of the mind' (Hesse, 2002).

Indeed, from the analysis of the Deleuzoguattarian rhizome-book in Chapter 2, it seems that the Glass Bead Game can be described as the ultimate rhizomatic text – one that aims at a total representation of the intellectual content of the universe and 'plugs into' every possible assemblage. If so, then it goes far beyond even what present-day video games can hope to achieve, because as pointed out earlier, though video games show rhizomatic characteristics to some degree they are *not* in themselves the ideal. The Glass Bead Game, however, *is* the ideal: as game-designer Charles Cameron describes, it is 'something approaching a "Holy Grail" for game designers' (Cameron, 1997). The unattainable nature of the Glass Bead Game makes it an ideal that is impossible to represent because it is absolutely smooth and rhizomic, somewhat like the Cosmic Game of the gods, discussed above, or the Deleuzian 'Divine Game' which will be discussed in the context of the telic possibilities of games in Chapter 6. Hesse's novel while pointing to a ludic ideal, reveals many aspects of the ludic that otherwise tend to be ignored: the narrative element is one such key aspect of the ludic.

Yasunari Kawabata's *The Master of Go* (2006) is another instance where the storytelling and gameplay are difficult to separate. Both the books

are about similar games (Go is a game of Chinese origin played with black and white beads) but they have very diverse themes. Kawabata's novel, referred to above, is a semi-fictional chronicle about a real match of Go between the celebrated but aging Master Honimbo Shusai and his younger challenger Minoru Kitane. The Master loses to Kitane (Otake in the novel) but the game he creates is likened to a work of art. As the novel describes it:

The Master had put the match together as a work of art. It was as if the work, likened to a painting, were smeared black at the moment of heightened tension. That play of black upon white, white upon black has the intent and takes the forms of creative art. It has in it a flow of the spirit and a harmony as of music.

(Kawabata, 2006, p. 188)

While the match (the actualised gameplay) itself is a work of art, the reportage of it is also an artistic narrative: the abstract moves in the game gain narrative significance in the Master's life and as critics claim also reflect the history of Japan in the 1940s, the time of writing.

The relationship of *Through the Looking Glass* and chess has already been commented on. Both the *Alice* books incorporate elements from games – whether it is chess, cards or croquet. As Kathleen Blake comments in her study of Carroll's books and games, the games in *Alice* seem difficult to place – they seem to be games but they do not conform to the basic rule-bound characteristics. Blake, of course, also notes that:

Wonderland croquet and cards and Looking-Glass chess remain recognisable as games because enough terms and rules are in evidence to suggest that if just a few more could be ascertained, they must make up comfortable logical systems (and novels).

(Blake, 1974, p. 105)

The constantly changing environments and characters as well as the many subtexts in the novels keep defying coeval conventions of narrative and even established ideas of gameplay. The *Alice* books, in effect, create a whole range of new possibilities within the limitations posed by the printed medium. Alice's narrative corresponds to the game she plays; so what would happen if she played a different game? There is an implication that the story is just one actualisation of many different possible narratives. As far as the ludic aspect is concerned, the rules of the game are also mutable: hence, critics like Wilson find it difficult to see the ludic nature of the text because it clearly does not correspond

to their notion of rules as being inflexible entities. All of this, however, is closer to video games as we find them today. Indeed, there is even a fairly popular video game called *American McGee's Alice* (Rogue Entertainment, 2000) that gives a bizarre twist to the narratives in Carroll's books but nevertheless points out how originally ludic these books themselves are.

The ludic connection to storytelling has been expressed in even more obvious ways: Calvino's novels, short stories by Borges (such as 'The Garden of Forking Paths' or 'The Lottery of Babylon') and Cortazar's *Hopscotch* are among some frequently cited examples, already mentioned in Chapter 3. Cortazar, in his introductory note to *Hopscotch*, states that 'In its own way, this book consists of many books, but two books above all' (Cortazar, 1987). He speaks of many books within one: the schemes for two main readings are supplied by the author but true to its name the novel can be read, hopscotch-fashion, in as many ways as the reader constructs the sequence.

Another, albeit less known, example is B.S. Johnson's *The Unfortunates* (Johnson, 1999). Will Buckley, in his intriguingly titled review 'A Literary Ball Game' writes,

The Unfortunates is a collection of meandering thoughts on the death of his friend, himself, writing, football, architecture and football reporting. It is published in a box containing 27 separate chapters: one is marked first, one last, the other twenty-five can be shuffled around and read in whichever order the reader wishes.

(Buckley, 1999)

The novel's structure supposedly aims to highlight the randomness of the nature of cancer (of which Johnson's friend had died). Johnson's text and Marc Saporta's similar 'book in a box', *Composition No.1* (Saporta, 2011), are literally multiple narratives as the pages can be read in any possible order. Johnson's book is about football reporting and with its modification of the codex form, it becomes a very ludic medium of storytelling. Many other literary texts are characteristically playful. One could mention the texts that have multiple endings, and therefore, play with the form of storytelling such as John Fowles's *The French Lieutenant's Woman* (Fowles, 2004), which has three endings, Charles Dickens's *Great Expectations* (Dickens, 2000), whose original ending was changed on the suggestion of Edward Bulwyer-Lytton, and Pavic's *The Dictionary of the Khazars* (Pavic, 2012), which comes in a 'male' and a 'female' edition where the difference is one critical passage and where

the author's introduction states that 'each reader will put together the book for himself, as in a game of dominoes or car' (Pavic, 2012). Add to this, the many choose-your-adventure books and hypertext narratives that were mentioned in the previous chapter.

Wilson's objections to the possibility of games telling stories are, therefore, clearly problematic. In a much less cited essay, Cailliois, too, links the ludic with storytelling. He claims that the detective novel is 'not a tale but a game' and while the novel, according to him, is freeing itself from rules, detective fiction keeps inventing stricter ones. Both Wilson and Cailliois, entering the discussion from opposite poles, nevertheless, are clear on one thing: storytelling and gameplay are to be understood as distinct and discrete. Cailliois obviously assumes that literary genres are not rule-bound; however, literary theorists such as Tzevetan Todorov or Umberto Eco have cited the example of detective fiction in assessing the rule-bound structures of narratives in general. Similar to the problems posed by the theories of Wilson and Cailliois, the Ludologists struggle with the game-story binary because they too do not engage with the supplementary relationship of the ludic and the literary. Greg Costikyan in analysing *Hopscotch*, thinks it to be 'the minimalist story-game hybrid: It's a branching narrative with one branch' (Costikyan, 2007). Costikyan's statement that 'from *Hopscotch* we move up the spectrum to hypertext fiction' (Costikyan, 2007) is also not accurate. As shown in Chapter 3, hypertext fiction is, often, more linear than some printed books and hence, the move from Cortazar's novel to hypertext fiction may not necessarily be 'up the spectrum', when one considers the multiplicity of readings that Cortazar envisages.

Speaking from a non-Ludologist perspective, Pearce comments, that 'it's important to realise that in many games, particularly pre-videogames, narrative operates on a much more abstract level than it does in other narrative media [...] Thus, a game can be deconstructed for its "pure" structure, as well as its narrative overlay or metastory' (Pearce, 2004). It is worth noting Pearce's use of the word 'deconstructed': although not explicitly saying so, her comment has obvious Derridean connotations. Her statements indicate that the structure of games and their narrative overlay are not separable as distinct and 'pure' essences but that any attempt to conceive of the two elements needs to consider the process of play between them. A game like chess, for example, may not really have a well-scripted narrative but its structure is certainly informed by a meta-story of two armies (black and white, with varying significances) engaged in strategic battle the connotations of which have been ingrained in the gameplay of generations of players,

sometimes too obvious even to be noticed. The relation between games and storytelling is not one between pure and fixed essences and illustrating the playful Derridean supplementarity between the categories of the narrative and the ludic, *Fahrenheit* (Quantic Dream, 2005) and *Heavy Rain* (Quantic Dream, 2010) developer David Cage comments 'that it's also possible to tell a story and play a game without sacrificing either the interactivity or the narrative' (Quantic Dream, 2005).

With the availability of more advanced technologies, video games have become more diverse in terms of the media used for context-creation. Games such as the *Max Payne*, *Half-Life* or *Mafia* series are more plot-based than others. Some like *Fahrenheit*, mentioned earlier, try to create the experience of interactive film. *Max Payne*, which is guided by a typical *noir* plot, reads/plays like a graphic novel, complete with generic cutscenes. The ludic action in Michael Mateas and Andrew Stern's *Faade* (Mateas and Stern, 2005), which they call a 'one-act interactive drama' tells its own story:

By the end of this intense one-act play you will have changed the course of Grace and Trip's lives – motivating you to re-play the drama to find out how your interaction could make things turn out differently the next time.

(Mateas and Stern, 2005)

Stern and Mateas use small units that they term 'story beats' to form the narrative in *Faade*: these are short segments of goal-driven and flexible interactivity that illustrate how ludic activities can exist as narrative.

Besides the ones described above, two major game-genres demand analysis, especially when we consider the narrative dimension of games. These are the MMORPGs and the *Sims* games. MMORPGs are technically sophisticated role-playing games, played on the Internet the world over. According to Pearce:

The MMORPG combines a meta-story, primarily in the form of a pre-designed story world and various plots within it, with a story system that allows players to evolve their own narratives within the game's story framework. The central play mechanic of the MMORPG is what I refer to as social storytelling, or collaborative fiction. The idea is that the story emerges as a direct result of social interaction.

(Pearce, 2004)

Character development, which was mostly rudimentary in non-digital games, has seen significant development in video games: in MMORPGs,

complex character relationships and traits can develop during gameplay as the game-actions are being performed. The story is played into existence by collaborating groups of players and forms a Deleuzoguattarian assemblage, as noted in Chapter 2, with the main narrative context, the mass of subsidiary narratives in the fan forums and the individual and collective gameplays. The other important genre to consider for its narrative capabilities is Will Wright's *The Sims* series, which Pearce aptly calls 'a narrative Lego' (Pearce, 2004). In *The Sims* it is possible to build your own characters, let them own property and then have them interact with other characters. The world of *The Sims* is a self-contained environment and the characters in it even speak their own language, Simish. It is also possible to share the stories/games crafted within the gameplays with other players. In a recent development on the freeform and emergent structure of *The Sims*, Wright's newest game, *Spore* (Maxis, 2008), however, is about much more: the official trailer describes it as 'an epic journey that takes you from the origin and evolution of life through the development of civilisation and technology and eventually all the way into the deepest reaches of outer space' (Softpedia, 2008). Wright comments, 'I didn't want to make players feel like Luke Skywalker or Frodo Baggins. I wanted them to be like George Lucas or J.R.R. Tolkien' (Siemens and Schreibman, 2013). With a leading game-designer like Wright stating this, the trend for future video games is not difficult to guess: the link between gameplay and the crafting of narratives is becoming increasingly pronounced.

Another game, which is of crucial importance in this discussion, is the comparatively recent title *The Stanley Parable* (Wreden, 2013). In this game, the player plays out the story of Stanley whose job was to push buttons on his computer exactly as he was ordered to. One day when the orders don't come anymore, he ventures out to look for his co-workers and the player enters Stanley's story, taking control of the protagonist. However, as the narrator tells you what Stanley (or you) did in this part of the story, you don't have to follow the narration and the frustrated narrator even restarts the game to try and force you to play the story his way. The game's official description is intriguing: '*The Stanley Parable* is an exploration of story, games, and choice. Except the story doesn't matter, it might not even be a game, and if you ever actually do have a choice, well let me know how you did it' (The Stanley Parable.com, n.d.). It is clear, here, that none of the elements hitherto privileged by commentators are central to the game. Replacing centres there is the supplement instead. Since the story that the narrator is trying to tell constantly gets subverted by the player's gameplay (and the concomitant narrative that it gives rise to) and the gameplay too gets subverted

by the narrator, one is only left with the challenge that the game throws at the player: 'if you ever actually do have a choice, let me know how you did it' (The Stanley Parable.com, n.d.).

The game's title is equally intriguing. As a parable, one expects it to be 'a simple story illustrating a moral lesson' ('parable,' 2011); however, the lesson is clearly anything but simple. It is not clear even whether there *is* a lesson. Nevertheless, the title does justice to the etymology of 'parable'. The Greek παραβολή which means 'a comparison' and come from two words 'para' and 'bole' that might also mean 'throwing aside'. In itself, *The Stanley Parable* is a placing side by side and also a throwing aside. The elements of storytelling, play (and game), choice and indeed any other aspect of gameplay are each in themselves not the centre. Any attempt at understanding them in relation to each other (placing them side by side), is automatically an implicit act of violence (a throwing aside) – in this sense, the 'parable' is one of 'that dangerous supplement', as Derrida calls it. Just as he sees writing as the 'supplement par excellence' that displaces the originary and is simultaneously originarily at work with speech, the same can be argued for the storytelling element in games and indeed, the playful element vis-à-vis the rule-bound characteristics of the ludic itself. Video games such as *The Stanley Parable* do not introduce these notions as new; they merely remediate the supplementarity that has always existed between the ludic and the narrative.

This relationship is therefore neither the clash between games and narratives as it had been described in earlier game criticism, nor is it one of any of the elements being the subset of another. From *Snakes and Ladders* to *The Stanley Parable*, games have been telling stories and stories too have been playful. Video games make this supplementary relationship obvious in many ways and video game stories plug into many assemblages. While this chapter has been about reading games and playing books; the next one focuses on the problems of reading games as texts that constantly keep changing their shapes.

5

Shapeshifting Stories: Reading Video Game Stories through Paratexts

Reading the ephemeral text

Will it ever be possible to ‘read’ games as the previous chapter seems to suggest? How does one read a text that keeps changing and indeed, what *is* the text of a video game that is being played again and again by many players? In *Literary Gaming*, Astrid Ensslin, writing as recently as 2014, takes on the analysis of what she calls ‘hybrid literary-ludic artefacts’ (Ensslin, 2014, p. 38). In her conclusion, she points to possible projects, one of which is ‘to examine literary gaming from the user’s perspective, applying methods of empirical reader-response, audience, and player’ and also to look at ‘the creators of literary-ludic artefacts and studying their creative agendas and processes.’ As seen in the previous chapter, the analysis of storytelling in video games needs to reflect the originary supplementarity between the literary and the ludic; as such this book extends its scope beyond any specific category that can be called ‘hybrid literary-ludic artefacts’. Ensslin’s conclusion, however, points at some key interventions that are necessary in the field. The story that unfolds in the experience of playing a video game varies from player to player, of course depending on the game itself. This is the challenge that *The Stanley Parable* throws at its players/readers and the Prince of Persia in *The Prince of Persia: The Sands of Time* reiterates in his attempt to negate the player’s death, ‘No no no, that’s not how it happened – do you want to hear my story?’ The complex multitelic experience described here will be addressed in the following chapter; this one will attempt to understand whether the ephemeral text, which the player plays out and changes with each gameplay, can be analysed at all.

It is here that a discussion of paratexts is needed. The so-called 'disappearing' game narrative may be configurative but it is also experiential and although the actual instance of the game might not be available again, the narrative is nevertheless recorded in diverse ways such as player diaries, After Action Reports, 'Let's Play' video recordings and a series of related sources such as reviews, previews, message-board posts, screenshots and trailers. These are referred to here onwards as the paratexts. Mia Consalvo's book, *Cheating: Gaining Advantage in Videogames* (Consalvo, 2009), was instrumental in bringing the relevance of paratextual material in video games to the forefront and the topic has seen extensive discussion since.

By the standards determined from earlier notions of storytelling, video games might seem an anomaly given the experiential and at the same time, ephemeral nature of the game-narrative. To dismiss the video game-narrative thus is, however, to ignore an essential element in the experience of the video game-story: the paratext. It will be argued here that the paratext is not the 'new' story but that it always was intrinsically part of storytelling. Speaking in a similar vein, Digital media theorist, Peter Lunenfeld, argues that the 'backstory [...] is fast becoming almost as important as the original thing itself' (Lunenfeld, 2000, p. 11). Using the example of video game paratext, the latest entrant into the dialogues around textuality and narratives, this chapter will attempt to position video games within an understanding of literature and in doing so, will re-examine the idea of the literary itself in terms of how texts that are characterised by such multiplicity can be better comprehended.

Consalvo and Lunenfeld both derive their concept of 'paratext' from Gerard Genette. Genette describes the 'number of verbal and other productions' such as the author's name, the preface and illustrations that 'surround or extend' a book as the 'paratext': 'accordingly, the paratext is what enables a text to become a book and to be offered as such to its readers and, more generally, to the public. More than a boundary or a sealed border the paratext is a *threshold*' (Genette, 1997a, p. 1, original emphasis). Among later examples of the concept in video game criticism, Genette's 'Structuralist insistence that there be an interior and exterior to the text' has been disagreed with; likewise, his definition of the text as verbal statements has been seen to indicate that he intended his concept of paratexts for books only and therefore, questions have been raised as to whether his concept also works for digital media. Genette, however, seems well aware of other media beyond the printed book and although he restricts his own comments to the paratexts of the printed book, in *Palimpsests* (Genette, 1997) he refers

to the 'transtextuality, or the textual transcendence of the text, which I have already defined roughly as all that sets the text in a relationship, whether obvious or concealed, with other texts' (Genette, 1997, p. 1).

While it is true that Genette's extensive categorisations of transtextuality and the paratext could be viewed as restrictive and therefore, somewhat off-putting in terms of current discourses on textuality, his assertion that 'we must not view the five types of transtextuality as separate and absolute categories without any reciprocal contact or overlapping' makes it clear that his concept certainly considers intermedial relationships within its scope. Jonathan Gray, writing on the paratexts of modern media ranging from films to video games, acknowledges Genette's position that 'we can only approach texts *through* paratexts' (Gray, 2010, p. 25). Gray illustrates this with an apt example: 'for instance, an ad telling us of a film's success in Cannes or Sundance would prepare us for a markedly different film than would, say, an ad that boasts endorsement from Britney Spears' (Gray, p. 25). He goes on to explain how paratexts acclimatise us to a certain text by suggesting reading strategies. Ellen McCracken applies the Genettian analysis to paratexts in electronic books stating that '[n]ew paratexts sometimes move beyond Genette's precise formulations but continue to function in the spirit of his analysis' (McCracken, 2013). In video game criticism, the concept of paratext has become popular in a wide range of discourses. GameSpot writer Tomcat believes 'it's strikingly easy to transpose this notion of the paratext from novels onto video games' (tomcat, 2013) and points out that the heads-up display (HUD) that are so intrinsic to playing the games are actually paratexts. According to Clara Fernández-Vara, 'if we consider games texts, then we can also understand them better by analysing what Gerard Genette calls *paratexts* – texts that surround the main text being analysed, which transform and condition how the audience interprets the main text' (Fernández-Vara, 2014, p. 25). Whether approaching the issue from a non-academic perspective or from an academic one, both Tomcat and Fernandez-Vara are agreed on the fact that video games can be likened to texts that tell stories.

Writing in a vein similar to Hayles's media-specific analysis discussed earlier, Ryan clearly sees video games as a storytelling medium and argues that instead of judging their narrative potential by the benchmarks of older media, they 'must learn instead how to customize narrative patterns to the properties of the medium' (Ryan, 2006). It is only after such recognition of the storytelling potential of video games as well as its media-specific properties that more extensive analyses of video game narratives, such as those by Steven Jones, Ensslin and

Fernandez-Vara to name a few, became possible. Writing in 2007, Henry Jenkins pointed out that 'the encyclopedic ambitions of transmedia texts often result in what might be seen as gaps or excesses in the unfolding of the story: that is, they introduce potential plots which can not be fully told or extra details which hint at more than can be revealed' (Jenkins, 2007). Jenkins's comment moves the discussion around the game-text and storytelling in the direction of paratextuality in the sense that the understanding of the game is linked to other media connected to the game.

The issue that one needs to be aware of is the ephemeral nature of the game and the fact that there may be multiple endings of the story in the different instances of play. Especially in sandbox-style games where the player is free to roam across a vast game-world and undertake side missions that can be completed at the same time as the main mission, the player experience in each iteration of the game will be quite varied. For example, in games such as *Fallout 3* (2008), *Red Dead Redemption* (Rockstar San Diego, 2010) and *Skyrim* (Bethesda Game Studios, 2011), given the large game spaces that players can explore, the number of non-player characters (NPCs) with whom the player can interact and other actions not related to the main story that the player can perform, the story(ies) in video games can only be perceived as a changing and constantly shape-shifting entity. Even in games with a more rigid, 'monorail' narrative where the entire sequence of actions is scripted quite restrictively, the player's experience of the game, constituted by his or her skill, emotional reactions, imagination and prior engagement with similar games, can vary greatly from instance to instance and from player to player. The game narrative is, therefore, not rigid and readable in any one way. The video game-story, by the very virtue of the fact that it has to be written into existence by the player (although there is, of course, a backstory that has been pre-coded by the game's developers) is more *scriptible* (writerly, or admitting more reconfigurations and multiple readings) rather than *lisible* (readerly or more open to single readings) to use Barthes's terminology. Therefore, it is not possible to obtain a static text for video games that can be analysed in the same way as printed narratives and cinema. As such, to analyse the video game-story, one needs to consider both the material (such as the CD or DVD, the code, maps, manuals and other things that are packaged with the game) and the experiential aspects (obtainable from player journals, reviews and commentaries). Both of these aspects are paratextual; indeed, to construct any textuality for video games, the paratextual needs to be considered first, as commentators such as Fernandez-Vara have remarked.

Walkthroughs, AARs and Let's Plays

Paratextual analyses of video games have hitherto been interested in material such as cheat-codes, heads-up displays on the game screen, character inventories and menus. Not much has been said about the stories that are built up around a game or even the recorded instances of games that are popular among a section of enthusiasts. The comparatively new phenomenon of game wikis has also not been commented on. The analysis of game paratexts that comes closest to the function of describing the events in the game is that of walkthroughs or the stepwise guides that tell the (often frustrated) player how to get past challenges and move from one level to the next. Another academic project involving the paratext is the *Well Played Journal* that describes itself as 'a forum for in-depth close readings of video games that parse out the various meanings to be found in the experience of playing a game' (*Well Played Journal*, 2011). The journal describes its title as follows:

Well played is to games as well read is to books. So, a person who reads books a lot is 'well read' and a person who plays games a lot is 'well played'. On the other hand, well played as in well done. So, a hand of poker can be 'well played' by a person, and a game can be 'well played' by the development team. [...] Contributors are encouraged to look at video games through both senses of 'well played'. So, with well played as in well read, contributors are looking closely at the experience of playing a game. And with well played as in well done, contributors are looking at a game in terms of how well it is designed and developed.

(*Well Played Journal*, 2011)

In such a description of play, the acts of reading and doing are simultaneous processes. In the journal, the close-reading of the game (also sometimes called 'close-playing') and the experiential aspect are presented. The contributors write about their personal experiences with the game and attempt a critique. Game designer, Clint Hocking, commenting on *BioShock* (2K Boston and 2K Australia, 2007), says, 'the game literally made me feel a cold detachment from the fate of the Little Sisters, who I assumed could not be saved' (Hocking, 2010, p. 256) and then remarks that 'in the game's fiction on the other hand, I do not have the freedom to choose between helping Atlas or not' (Hocking, p. 256). Hocking differentiates this response of his from a game review while admitting that 'with the language of the game being as limited as it is, understanding what I am reading is hard, and trying to articulate it back

to people in a useful way is a full order of magnitude harder' (Hocking, 2010, p. 258). The description of the player's experience while at the same time maintaining a critical distance is not easy but this is probably as close as one can get to the 'text' of the game.

Moving from a conscious academic attempt at recording play experiences to the quotidian gaming practices of players, one notes how the walkthrough attempts to define story-pathways through the game. The walkthrough has been defined as 'detailed guides to how a player should play a game sequence to find all of the hidden bonuses and surprises, how to avoid certain death, and how to advance past difficult puzzles or trouble spots to best play and win the game' (Consalvo, 2003, pp. 327–328). Daniel Ashton and James Newman see the walkthrough's function as being threefold:

First, walkthroughs can be approached as a means of recording and codifying playing styles, thereby legitimising specific approaches or strategies. [...]

Second, walkthroughs as textual codifications of gameplay potential can encourage new styles of engagement with authors and performers by outlining opportunities for play, and illuminating strategies and techniques previously unknown to the reader. [...]

Third, we suggest that the prefigurative potential of walkthroughs may be seen as having a regulatory quality and, therefore, represents a key mechanism for shaping the way videogames are played.

(Newman and Ashton, 2010)

Effectively, then, walkthroughs serve as a record, a code of playing styles (similar to the generic expectations that are connected to reading) and by extension, as a mechanism for shaping the practices of play and design. However, walkthroughs are not written expressly to tell the story or to freeze a certain instance of gameplay in time. They are about rules, subverting rules and usually about taking the best pathway to completing a game. In a walkthrough, failure cannot be an end in itself; in the actualised experience of playing a video game, this is commonplace. The walkthrough also has a regulatory quality, which may be good for designing gameplay but which definitely takes away some of the fun of the open-ended exploration that video games represent. Nevertheless, Ashton and Newman's second point about the new styles of engagement points to a degree of openness whereby with the new strategies there will be new walkthroughs and therefore, new iterations of gameplay to be

analysed. Despite their limitations in that they are about the successful pathways in video games, they open up the possibilities of researching other paratextual material that come close to the storytelling function in video games.

Besides walkthroughs, one could also consider game guides (often published with supplementary material and endorsed by the game companies) as well as game reviews that are published in both the mainstream media and online. Again, these are concerned with the game as a text but more so with a general overview of the game and specifically, with the completion of the game. Often, as Garry Crawford et al. point out 'the unavoidable consequence of playing a goal-oriented walkthrough [...] is the devaluation of socially oriented play' (Crawford et al., 2013, p. 149) and the walkthroughs that allow the player to speed through the game often make the basic narrative tools of the game, such as reading the quest descriptions, unnecessary. Rene Glas (Glas, 2013) points out that whereas strategy guides serve as an introduction to the game by stressing on the narrative elements, walkthroughs can sometimes detract from the narrative experiences. Both Glas and Crawford et al. have in mind a *World of Warcraft* (Blizzard Entertainment, 2004) walkthrough called 'Joana's Walkthrough'. Game Guides such as the *IGN Assassin's Creed 4: Black Flag Wiki Guide* contain not only the walkthroughs for the main game and the DLC (downloadable content) but also cheats, details about the side missions, instructions on hunting and harpooning (the game lets the player do these in specific locations), descriptions of weapons and a slew of other things related to the game. The guide provides the narrative context and also informs the reader about the locale:

Assassin's Creed 4 takes place in 1715 in the Caribbean, featuring new locations [and] stars a new protagonist, pirate and Assassin named Edward Kenway, grandfather of Connor and father of Haytham Kenway of *Assassin's Creed 3*. [...] *Assassin's Creed IV: Black Flag* is set in the Caribbean on multiple islands including playable areas in Kingston, Havana and Nassau. The Caribbean ocean is an explorable region via Kenway's ship *Jackdaw*. Smaller islands and locations can be visited, and underwater locations can be explored for the first time in the *Assassin's Creed* series.

(IGN, 2015)

If the walkthrough and the game guide are ways to present the narrative aspect of video games, other paratextual forms work in more concerted

ways to record, present and develop on the narrative experience. One of the most obvious examples would be books that are written with the games' storylines as their plots. Oliver Bowden's *Assassin's Creed* book series features the plots from the popular video game titles such as *Assassin's Creed 2* (Ubisoft Montreal, 2009) and *Assassin's Creed: Revelations* (Ubisoft Montreal, 2011) but also adds new stories to the series that are not part of the video games such as *Assassin's Creed: The Secret Crusade* (Bowden, 2011). Other book series based on video games also often add to the stories found in the games themselves; the *Halo* novels written by Joseph Staten and Eric Nylund as well as the *Halo* graphic novel (Lewis et al., 2010) are cases in point. However, the restrictive and prescriptive limitations to the game-narrative as found in the walkthrough and the imaginative adaptations and modifications to the game-narrative as found in the book series both are a remove away from the narrative experience of video games themselves. The experience itself might vary depending on the nature of the game but ultimately, it is a different experience in a different medium than either the walkthrough or the book series. At this point, two other kinds of game paratext need to be considered: similar in nature, the After Action Report and the Let's Play have not received as much scholarly attention yet. It could be argued that a close reading of these forms will be of major importance to the establishment of a framework for analysing the video game narrative.

The After Action Report (AAR here onwards) is a term taken from military jargon and is defined as 'a detailed critical summary or analysis of a past event (such as a military action) made for the purposes of re-assessing decisions and considering possible alternatives for future reference' (After Action Report, 2015). The term has been appropriated in video game culture recently: 'AARs are a fun way to read about a game and provide interesting details and examples of gameplay that reviews often don't. They also can be very funny, entertaining and even enlightening!' (After Action Reporter, 2015). Michael Cook, writing in *The Escapist* magazine, comments: 'For the uninitiated, it works exactly as it sounds – you play a game, and you tell its story afterwards to anyone willing to listen. It's particularly popular among the more meticulous and strategic gaming communities, where the method of play is more unique to you' (Cook, 2009). Cook is referring to the blogs of 'Jimius', an AAR writer whose work was featured on the games blog *Rock, Paper, Shotgun* and was the website of the month in the *EDGE Magazine*. Cook also comments that some of the AARs 'read like the blog of a TV history

channel, mixing game accounts with footage and images from the real wars and eras they are describing, creating a surreal retelling of some quite famous and, in some cases, quite recent periods in global history' (Cook, 2009). An entry from the 'House of Jimius' is illustrative:

204BC – Roma Victor

Quintus II finally reaches the front, having abandoned his infantry for extra speed, but all he gets to do is hunt down a Brutian family member that's just hanging around. Galerius goes to the boot of Italy and sieges Croton, while Lentulus hits Tarentum on the heel. Meanwhile, a scipian [sic] fleet carrying 2000 troops is sunk in the Tyrrhennian sea. Takes about fifteen separate attacks to sink a single ship, but still. I did it.

(jiiiiim, 2008)

Jimius, whose real name is Mike Prescott, says that '“House of Jimius” was based on *Rome: Total War* (2004) and was a chronicling of a grand campaign, from city state to Europe-spanning behemoth' (Prescott, 2011). Prescott presents his AAR accounts with detailed screenshots from the relevant sections of the game displaying the seriousness with which this new paratextual form is treated by its practitioners. In an interview dated 1June 2011, he states:

What you write has to reflect what happens, the events described must be an accurate portrayal, otherwise there's no point, go off and write some fanfic. Sure, come up with the fluff that connects the dots the game presents, but don't let that overwhelm it. I've seen some massive, sprawling AARs that divorce themselves from the game being played far too much to be interesting, that devolve into florid prose and twiddly stuff that is just filler and distracts from the point of the thing. [...] It has to be clear what you, the player, have done and how the gameworld has responded, you never want to come away from reading a diary with a lack of understanding over what just happened. This can be difficult to put across in text and image form so you have to be imaginative in how you get it across without being overly boring.

(Prescott, 2011)

Prescott's blog is not the only such attempt to share narratives of the playing experience. AAR writers develop a range of styles that can

be anything from reflective to downright funny. The 'Command Ops Christmas AAR' begins:

If I had more time, and if the Germans weren't still pressuring 1st battalion, 16th Infantry Regiment in Schoppen, I might have set them up in a defensive line from Oberweywertz to Waimes (with B and C Companies of the 26th Infantry Regiment and the 18th Infantry headquarters adding some length), but their odd advanced position will have to do for now.

(After Action Reporter, 2015)

This is quite different from more humorous attempts at AAR writing such as *Charles Dickens – Football Manager* (rjcotton, 2010), which is a report of the games in *Football Manager* by no less than the author Charles Dickens. AARs are quite common for strategy games such as *Empire: Total War* (The Creative Assembly, 2009) and the game forum, 'Total War Centre', even has a monthly AAR contest as well as an index of completed AARs featuring over 25 titles. Varied as their styles and scope can be, AAR writers nevertheless explore the very depths of the game mechanics and Ben Abrahams's *Permanent Death – The Complete Saga* (Abraham's, 2009) is a case in point. Abrahams explores the mechanic of in-game death and decides to play *Far Cry 2* (Ubisoft Montreal, 2008), a fairly long open-world game, without reloading the game even a single time.

Death in games is often very...temporary. I want to find out what happens to me as a player if I make my video game death much more permanent. This is the story of one game of *Far Cry 2* – one single narrative that one way or the other will end in my death. Whether it is at the hands of my enemies, the harsh environment or my own ineptitude, I am not going to survive the telling of this tale.

The rules: Normal difficulty; fortunes DLC installed. When I die, that's it. Game over.

(Abrahams, 2009)

Abrahams brings out the key characteristic of the AAR: his narrative is built around an exploration of a key characteristic of video games – the multitelic narrative that can be reloaded and replayed at will. Unlike the walkthrough, though, Abrahams is interested in telling a story and his story is not that of how a game can be completed most quickly. Prescott identifies all the key elements of the AAR in his comment:

With The Amateur I was playing in-character which does help with that. That is, you can't just play the game and write the AAR afterwards, you need to have played it in a certain mindset and reported on it accordingly, whether that's a sneering disdain for the game, some naive optimism in one aspect, or whatever. Having something personal that a reading audience can latch onto is important.

(Prescott, 2011)

The personal touch and the faithfulness to the gameplay are essential to the conceptualisation of the AAR. The *After Action Reporter*, an online repository for AARs, has as its tagline, 'Why play when you can read?' but clearly both reading and playing are intrinsic to each other in the AAR.

Another paratextual form that has been largely neglected in academic discussions is the Let's Play. The *Let's Play Archive* defines it as 'LPs show a video game being played while the player talks about what they're doing in commentary with video, screenshots or both' (Let's Play Archive, 2015). This is like the AAR except that LPs often use video. Though now quite widespread in gaming communities, the AAR and LP still occupy a grey zone in the discourses of these communities. For example, a forum post expresses the confusion regarding their position in relation to games:

In my humble opinion I feel that AAR's are stories, I agree with Sisko on that, but I feel that they will eventually need to be cataloged and put into their own subsection. They aren't always directly stories of fan fiction, some of them are just the equivalents of lets plays in a forum post format.

(JarlWolf, 2012)

Another website attempts to subdivide them into 'analytical' or ones which mention the game mechanics and 'literary' or those that use the game as an inspiration for their own narratives and therefore, are similar to fanfiction. As commentators have pointed out Let's Play 'is by no means a marginal phenomenon, as user numbers clearly show [...]: the most prominent Let's Player worldwide, PewDiePie, has more than 32 million subscribers on YouTube, and his daily uploaded videos are watched by four to six million people' (Radde-Antweiler et al., 2014). Other Let's Players such as TobyGames, Markplier and Gronkh also have over a million followers and some of the Let's Plays even

receive corporate sponsorship (in the sense, they are financed through commercial advertisements) and are means of monetization (Postigo, 2014).

The academic interest in Let's Play is fairly recent but is growing steadily. At a conference in 2011, Carolyn Jong made the following case for the *Let's Play Archive*:

A Let's Play (LP) is a digitally documented playthrough of a videogame and usually consists of videos or screenshots of the game accompanied by commentary from the player. LPs range from serious and informative to parodic and playful. In each case, they require a significant and sustained investment beyond the playing of the game. The Let's Play Archive was established in 2007 with the intent that LPs would live on forever – an attestation to their value, and their vulnerability. While LPs blur the distinction between virtual and physical experience, connecting a 'real' voice with a virtual representation, the archive points to the inextricable link between the personal and the collective.

(Jong, 2011)

Eminent commentators such as James Newman have also pointed at the importance of Let's Plays in terms of preservation: 'the capturing of games in and at play could and, I would contend, *should* be the core objective of game preservation' (Newman, 2012, p. 155, original emphasis). Newman also goes on to stress how Let's Plays help in getting 'a clear sense of the range of potential playing [...] and, importantly, gain insight into the performances, observations and techniques of others' (Newman, 2013, p. 62). Commentators are now increasingly aware of the potential of Let's Plays as platforms for studying the videogame texts as well as the players of such texts. For example, Kerstin Radde-Antweiler, Michael Walzmathe and Xenia Zeiler study Let's Play as means to determine how games influence the 'individual construction of religious identity' (Radde-Antweiler et al., 2014, p. 10). The archival purpose of Let's Plays is crucial: as Newman states, here the archive is also an archive of the experience of interacting with a text. Moreover, like the AARs, the personal story is shared with the larger community and plugs into the collective assemblage of stories.

Just as the story in video games is difficult to categorise using traditional parameters, the classification of the AAR and the Let's Play as storytelling genres faces a similar problem: both of these narrative phenomena can be seen as occupying multiple planes of existence

that make it difficult to put them into a clearly-defined structure. The story in video games becomes accessible in its many iterations through paratextual material such as the AARs but the question remains as to how this relates to the wider set of narratives, both oral and written, which exist in earlier media. Or to put it simply, if video games have narratives and if indeed, their paratexts are the 'new' story, then where does one place them in the narrative canon?

Video game paratexts: The 'new' story?

The 'newness' in question has already been argued against in the earlier discussion on Genette and also of storytelling in video games. Also, the deconstruction of the reading/writing binaries and the reading/playing binaries has already been made since the early days of poststructuralist criticism as has been pointed out previously. As early as 1967, Barthes's 'The Death of the Author' (Barthes, 1977) makes the case for the reader as the co-creator of the narrative and around the same time the Reader-Response critics make the case that literature exists meaningfully in the mind of the reader and that the literary work is the catalyst for the possibility of literary meaning. The previous chapter pointed out how Derrida has commented on the playfulness of the text and how even the difference between concepts such as reading and playing are actually *in play*. Although there are still scholars who disagree on the narrative potential of video games, by and large, it is evident that the issues raised by post-structuralist theories of textuality connect to how video game narratives are perceived today. As evidenced earlier, many commentators on paratexts of video games also explain that they wish to engage in a post-structuralist reading of Genette's original concept. Despite the similarity to current concepts of textuality, video games are still seen as difficult to describe within studies of narrative. Where films and graphic novels are now placed on university literature courses with relative ease, video games have not yet found their place within received notions of the narrative and the literary. It could be argued that it is their multiplicity that poses a problem for the commonly understood norms of literary studies. The point now is to find such a literary framework for texts characterised by such multiplicity, whether it is because of their multiple endings or because they plug into, as it were, many media and to many planes of storytelling at the same time.

The philosophy of such literature can be found in the works of Maurice Blanchot. In his first novel, *Thomas the Obscure*, the writer-philosopher says about his protagonist,

He perceived all the strangeness there was in being observed by a word as if by a living thing, and not simply by one word, but by all the words that were in that word, by all those that went with it and in turn contained other words, like a possession of angels opening out into the infinite to the very eye of the absolute.

(Haase and Large, 2001, p. 33)

The description above indicates the multiplicity within which the written word is being perceived. It seems almost descriptive of the literary assemblage where many words plug into each other. Blanchotian literary conceptions go even further. Before seeking a place in literature for the ephemeral text(s) of digital games, one needs to ask a basic question: what is the space of literature itself? Blanchot's answer to this question is complex and needs to be quoted in full: 'On the one hand, in the work, it is what the work realises, how it affirms itself, the place where the work must "allow no luminous evidence except of existing"' (Blanchot, 1989, p. 44). For Blanchot, therefore, literature *per se* occupies a void or vacuum and its space can be described as the space of that which it realises (or rather, actualises). Therefore, it is the space of the various literary readings and iterations of the text when the text itself cannot be located. In his essay, 'The Disappearance of Literature' (1959), he states that 'the essence of literature is precisely to escape any essential determination, any assertion that stabilizes it or even realizes it: it is never already there, it always has to be rediscovered or reinvented' (Blanchot, 2002, p. 121). As he comments on the castle in Kafka's *The Castle* (Kafka, 1998), 'the figure of the castle, rather than being the unity of the work, an answer to the question "What does the work mean?"', is its dispersal and the experience of the absence of meaning' (Haase and Large, 2001, p. 35). The video game-text, too, is not obtainable in its *essence* but only in its played instances and, as the earlier sections of this chapter have already established, these played instances can be accessed and analysed through the paratextual records such as Let's Play and After Action Reports.

In attempting to describe such a literary phenomenon the concept of 'minor literature' described in Chapter 2 will be useful. Like Blanchot, Deleuze and Guattari too use Kafka's novels as examples for their notion of the literary. For Deleuze and Guattari, all great literature is 'minor' and therefore, cannot be a single univocal entity but rather an assemblage of all the possible iterations of the story and the many elements into which the narrative 'plugs in'. How video games link with the concept of 'minor literature' has already been described; looking through the lens

of video game paratexts one can see further ways in which such a framework applies to the video game-narrative. The stories in the paratexts are still a very little-known phenomenon and despite the popularity of the recent *Halo* and *Assassin's Creed* novels, the narrative potential of video games and their paratexts go largely unrecognized. In this sense, they are indeed a minority within literary studies; however, they are also the rediscoverable texts that Blanchot sees as the space of literature. To unpack the significance of 'minor literature', Colebrook elucidates the concept by applying it to Shakespeare himself:

Literature, when it fully extends its power of being literature, is always minoritarian. Minor literature is great literature, not necessarily the literature of minorities, although this can be the case. [...] Shakespeare can be considered a 'minor' author precisely because his works do not offer a unified image of man, or even a unified image of Shakespeare. [...] Of course, when Shakespeare becomes an industry (of tourism, culture and academia) he becomes a major author: we seek to find the real Shakespeare, the origin of his ideas and the true sense of his works. He becomes minor, again, only if we recognise the potential in his work to be read as if we did not know who Shakespeare was.

(Colebrook, 2001, p. 105)

In literary terms, Bogue points out how Deleuze provides a reading of Carmelo Bene's adaptation of Shakespeare's *Richard III* where although the lines are taken from Shakespeare, the action strips 'Shakespeare's history play of its conventional markers of power [to] expose the links between Richard's treachery and the women around him' (Bogue, 2003, p. 6). The effect is to acknowledge the multiplicity in which Shakespeare can be experienced. Seen within such a different framework of literature, where the multiplicity of meanings figures importantly, the After Action Report, the Let's Play and other paratexts find a fitting position as does the ephemeral computer game narrative that is played out in each instance of gameplay.

The literary machine or the writing machine is an assemblage, therefore, that displaces the narrative beyond the usual and anticipated modes of meaning-making. As discussed above, the game-narrative is also such an assemblage that plugs into various systems of meaning-making, different kinds of media assemblages, the imagination and experience assemblage of the player and also paratextual assemblages. The paratextual assemblages in video games, in turn, connect to a wide

network of narratives, rules and media-specific experiences. Similar in their characteristics to the Deleuzoguattarian conceptions of minor literature, video game paratexts are multiple, political and a collective enunciation. Like the video game narrative itself, the AAR tells multiple stories and the subject, even if it speaks from the position of the same protagonist, is always different – indeed a collective enunciation. It is the multiplicity as opposed to the individual communication that makes the AAR a political text in the sense Deleuze and Guattari see it. Sometimes, the political connection becomes more obvious and takes on its commonly understood meaning as in the political intrigues in the narrative of *Far Cry 2* or this AAR of *Empire: Total War* where the player tries to resolve an unexpected political mess:

So I've taken most of Europe as Sweden and but I keep having money issues from exempting tax from lots of conquered cities and eventually its [sic] still not enough to fund my huge army and stop rebellions. I've rebuilt most of the junk in those cities that gets destroyed during a siege or takeover but they keep rioting an [sic] rebellion and eventually my large army is forced to stay behind and kill the rebels.

(Captainsnake, 2009)

The engagement that this AAR shows is one with various assemblages: the game assemblage consisting of the rules and affordances of the game; a history assemblage, consisting of historical narratives of Sweden (the game allows the player to create 'historical' events); the software and hardware assemblages and the players' experiences and imagination are some of the examples of the 'plugging-in' that occurs here. The game narrative itself cannot be analysed as it lasts only as long as the game is being played and is available when each action in the game is performed or played out. The way forward in attempting any analysis of the game's story is then, to access the game narrative via the paratextual elements of the assemblage. The AAR, plugging into as it does both the game rules and the narrative experiences of players, is in itself an assemblage but it is one that 'plugs into' the assemblage of the video game narrative.

The concept of minor literature helps put the notion of storytelling in video games into context and allows, through a critical analysis of the AARs, an entry point into comprehending the multiplicity of the video game narrative itself. Conversely, the AAR and the more ephemeral game-narrative themselves necessitate a notion of literature that can accommodate narratives characterised by multiplicity.

Deleuze and Guattari see Kafka and Joyce (to which Colebrook also adds Shakespeare) as exemplars of minor literature – where the lines of flight take the narrative towards the unexpected and the multiple. The older narrative forms, however, have examples such as Cortazar's *Hopscotch* or Calvino's *The Castle of Crossed Destinies* that are even closer to the AARs in the way in which they portray multiplicity. Such novels that come with multiple endings, reading-order or a hint that the reading process can be different in each iteration of the narrative already come close to the multiplicity that is characteristic of game-narratives.

In the light of discussions in literary studies around multiplicity and narratives that emerge out of the unanticipated and the affective zones of experience, the stories that video games tell are not 'new'. Neither can one call the paratext, such as the AAR, a story in itself because it exists as an assemblage with the video game itself. For any of those critics who claim that video games cannot tell stories or those who are unsure about where to place them, what the AARs and other paratexts have to say about literary conventions is quite clear. With the emergence of newer narrative media, some of the intrinsic qualities of narratives are increasingly coming to the forefront. By dismissing or neglecting narrative forms that seem anomalous in the more traditional understanding of literature, the multiplicity that characterises narratives *per se* has been overlooked. The idea of the 'story' has intrinsically always (and already) included the paratext. From Genette's groundwork identifying the paratext as key to the reading and Derrida's logic that 'it paradoxically frames and at the same time constitutes the text for its readers' (Allen, 2000, p. 100) narrative theory already recognised the link between the paratext and the story; consequently, it is the multiplicity of the paratext that now needs to be accommodated within the present literary consciousness.

Deleuze and Guattari's concept of minor literature, which also incorporates within it the Deleuzian idea of 'lines of flight', has as its core concern the multiplicity of texts. As Constantin Boundas acknowledges, 'Deleuze and Guattari's "minor deconstructive" approaches to language are more timidly invoked in the context of our local discussions, and the timidity begins to lose its initial innocence' (Deleuze, 1993) so given the post-structuralist stress (from Blanchot onwards) on viewing literary works as a multiplicity rather than as discrete essences is more obviously a necessity given the coming of new narrative forms such as video games. To better understand the multiplicity, comprising paratexts such as After Action Reports, Let's Plays and walkthroughs, within which such literary frameworks operate, the Deleuzoguattarian concept of

'minor literature' is especially relevant. Any literature and language that shows the potential of not remaining limited to its obvious boundaries of meaning is, for Deleuze and Guattari, in the realm of the minor. In his essay, 'One Manifesto Less', Deleuze declares that becoming-minoritarian is 'a goal that concerns everyone' (Deleuze, 1993, p. 221). Through the computer game's disappearing text, the notion of textuality as a given is itself brought under scrutiny. Instead of attempting to 'fix' texts, one is aware that texts are in a state of becoming and that they can only be approached rather than established. As means of telling the story, therefore, the role of the paratext is much greater than has been recognised so far.

As a form of minor literature, then, the video game-story has addressed its minority by opening up ways to recognise that all great literature, that is, literature that can grow and adapt, is minor. In fact, instead of asking 'Is the paratext becoming the new story?', analysing the AARs and Let's Plays makes it seem equally valid to ask 'Is the story the new paratext?' Given the very different understanding of the space that literature occupies and of the shape-shifting form of the text, critical analyses of narratives need to address issues in addition to those that have traditionally been taught in classrooms. The next section of this book, therefore, concentrates on a detailed commentary on the multiplicity of endings (*telos*), choice (or agency) and the deep involvement (often equated with 'immersion') that emerge as key factors in literary analyses, once narrative media such as video games and their paratexts are taken into account.

Section III

Story

6

Ab(Sense) of an Ending: Telos and Time in Video Game Narratives

Game over: When does the story stop?

The plots of the video game narrative(s) are a great deal more complicated than the mesh of stories created in Calvino's *The Castle of Crossed Destinies*. The structural constraints seen in the codex form are present in a lesser degree: unlike the apparently linear plots of earlier narrative media, the story-space in digital games is seemingly endless or multitelic. For some commentators, this poses major problems in conceiving of them as narratives. Often, unlike in older media, the game-text's ending does not correspond to the spatial and the temporal limits of the game. Time operates in a complicated manner in the game-text and the replayability of the text gives rise to different narratives; yet, as any gamer knows, the 'different' narratives may be extremely repetitive with scarcely any variant feature to mark them out. A number of studies on 'reading' (or (w)reading) video games refer to their multiple endings as a unique feature but none attempt in-depth analysis. However, as this peculiar nature of the endings is a significant factor in compounding the problem with 'reading' digital game-texts as a narrative medium, a discussion of this is now long overdue.

This chapter will analyse the telic possibilities of game-texts and in the process explore the link between the latter and other forms of texts. It will concentrate on the key problem of difference and repetition and will move on to address various related positions in game studies, especially Juul's work on time in games and Bogost's concept of game events as 'unit operations'. Increasingly, game studies scholars are looking beyond the narrow domain of the Ludology–Narratology debate and beginning to draw on key concepts from various other disciplines. Bogost's *Unit Operations* (Bogost, 2008), which draws upon the current theoretical concepts of Deleuze and Alain Badiou, is a case in

point. Although Bogost does not directly discuss the telic characteristics of game-texts, his discussion of game events as being discrete 'unit operations' is linked to Badiou's response to the ideas on difference and repetition in Deleuze. However, while agreeing that Bogost's argument operates on a much more theoretically sophisticated level in terms of video game criticism, this chapter will also illustrate certain distinct disadvantages involved in following Badiou's response, especially in relation to the way in which notions of time work within video games and how they influence the *telos* in game-texts. It will, therefore, develop on the Deleuzoguattarian framework of analysis that was introduced in the opening chapters. Such an analysis of the *telos* in the video game-assemblage will also open up the possibilities of exploring the multitelic nature of other forms of narrative media, like stories in the codex form.

Endings have always been a major element of interest in the world of stories. Scheherazade famously preserves her life by postponing the end of her story and weaving within it a mesh of stories. Shakespeare's endings have long baffled generations of scholars. Sometimes, later Shakespearean productions have even changed the endings: for example, Nahum Tate's nineteenth-century *King Lear*, which had a happy ending in which Cordelia is married to Edgar, in stark contrast to Shakespeare's original conclusion. More recently, especially in works like Calvino's *The Castle of Crossed Destinies* or Alain Robbe-Grillet's novels, the literary narrative contains many endings and repetitions because of which conceptions of temporality and *telos* are altered and confused. The problem of endings in these works points clearly to the fact that narrative endings have always had the potential of multiplicity, whether on the level of text, continuation of story or interpretation.

The multiplicity of endings in the game-texts is not a unique media-specific feature and is already present in earlier narrative media. Although narratives in game-texts may employ different technologies, they are essentially not *new*. A major claim that the advocates of this so-called 'newness' make is that of replayability. For commentators like Juul or Lindley, the repetition characteristic to video games is largely incompatible with narrative. Juul states that 'Literary qualities [...] actually make videogames less repeatable' (Juul, 1999) while Lindley claims that the repetitive structure of videogames undermines any strong sense of narrative development' (Lindley, 2002). However, these claims are based on older conceptions of narrative progression such as the linear structure of Aristotelian drama; they cannot be justified under more recent conceptions of narrativity, as examples throughout this chapter will illustrate.

The question of endings in literary criticism

Literary criticism has become increasingly responsive to the issue of *telos* in the narrative and there have been various attempts by eminent scholars to address them. In his classic study, *The Sense of an Ending* (Kermode, 2000), Frank Kermode extensively analyses the telic element in the *nouveau roman* of Alain Robbe-Grillet. Earlier critical positions like Narratology also have similar concerns; Genette refers to the same texts by Robbe-Grillet with regard to the processes of repetition that and difference that occur in story-events. In his reading of a Robbe-Grillet novel, Kermode comments:

Les Gommes is writing with an eraser. The story ends where it began, within the immediate perceptual field of the narrator. It is always *not* doing things which we reasonably assume novels ought to do: connect, diversify, explain, make concords, facilitate extrapolations. Certainly there is no temporality, no successiveness.

(Kermode, 2000, p. 21)

Kermode's observation that 'there is no temporality, no successiveness' in *Les Gommes* (Robbe-Grillet, 1966) opens up an understanding of textuality that is very different from the more traditional conventions. He states that in Robbe-Grillet there is 'an attempt at a more or less Copernican change in the relation between the paradigm and text' (Kermode, p. 23). From what he sees in Robbe-Grillet, however, he cannot help observing a similar principle in operation in earlier novels: he points to examples such as Albert Camus's *The Plague* (Camus, 1991) and Fyodor Dostoyevsky's *The Idiot* (Dostoevsky, 2003). He notes that Camus's novel is 'susceptible to multiple readings [...] it even contains the opening of a rival novel' (Kermode, p. 22).

In these novels, there is the sense that endings happen at multiple moments. In a theological parallel, involving the dual meaning of 'crisis' as both judgment (finality) and separation (postponement of the finality), he discusses how in both St John and St Paul there is the tendency to conceive of the End as happening every moment. The immanent ending described by St John and St Paul is also a characteristic of fiction. In saying this, Kermode comes very close to describing a much later fictional phenomenon that illustrates the issue to a far greater degree than Robbe-Grillet's novels: the narrative structure of video games. As narratives, digital game-texts seem to have an entirely different register and hence traditional literary criticism is hesitant to consider them

as being of the same ilk as other forms of narratives. The multiplicity of endings in the game-texts that tends to baffle critics and make them see games as being different from narratives is actually discussed in detail in literary criticism itself. Even though narratives in game-texts may employ different technologies and though they present the story in various different ways, they are essentially not new as is often claimed by new media critics. One of the criteria of the so-called newness is that games are replayable. This is in no way opposed to the printed narratives that Kermode describes: 'in Robbe-Grillet's novel the same character is murdered four times over' (Kermode, p. 21).

Genette also shows a similar mechanism at work using Narratological terms. Like Kermode, he points to Robbe-Grillet as a very obvious example of repetition as well as other examples as follows:

We may remember, for instance, a recurrent episode like the death of the centipede in *La Jalousie*. On the other hand, the same event can be told several times not only with stylistic variations, as is generally the case in Robbe-Grillet, but also with variations in 'point-of-view', as in *Rashomon* or *The Sound and the Fury*. The epistolary novel of the eighteenth century was already familiar with contrasts of this type.
(Genette, 1983, p. 115)

Here, the same event is represented many times and as Rimmon-Kenan comments, this occurs 'sometimes with, sometimes without changes of narrator, focaliser, duration, narrative subject, style' (Rimmon-Kenan, 2002, p. 58). Genette describes three key processes of repetition: the first, which he calls 'iterative', is the process of telling once what happened many times. He, however, also introduces a category where 'scenes [are] presented [...] as iterative, whereas their richness and precision of detail ensure that no reader can seriously believe that they occur and reoccur in that manner, several times, without variation' (Genette, 1983, p. 121). He calls this the 'pseudo-iterative'. His last category is that of the singular or the narrating n times what happens n times. In most of these cases, the retelling of events is characterised by repetition as well as difference. Thus Genette's points above reinforce the challenge to claims that narrative and repetition are incompatible.

Genette's and Kermode's comments clearly indicate that repetition and multiplicity have always coexisted within the very notion of narrativity. The narrative in the game-text, characterised by variance occurring within a process of repetition, is therefore not a new phenomenon. What is different, however, is the manner in which the

variance and repetition can occur and the degree to which immanence can be experienced. Compared to the earlier narrative media cited by Kermode and Genette, digital games have a more complex telic structure, characterised by multiplicity and repetition. Despite his stress on the immanent quality of endings in fiction, Kermode is nevertheless constrained to traditional temporal structures, as will be shown in the analysis of game time, later in this chapter. Moreover, in the multitelic structure of the printed narrative that Kermode describes, much is left for the reader to recreate using the imagination; in video games, however, the story can be literally replayed by loading a game from a saved point. The save and reload function brings up the issue of difference and repetition in the game-narrative; the complexity of this exceeds the categories described by Genette. The save and reload consists of the retelling of the same event in different gameplay instances but at the same time, these are not the same events but new events in new situations because the outcome changes each time. In the Genettian sense, this would be singulative (saying *n* times what happens *n* times). These events can also simultaneously be iterative, albeit in a very different way from Genette's examples: this can happen when the players refer to the same outcome in multiple attempts; for example, in a statement like 'I kept dying every time I went past that door' (in the sense of describing once what happened *n* times). In Genette, it is possible to have functions like the 'pseudo-iterative' that combine some of these types. Video game narratives, however, do not just combine these characteristics: they *are* simultaneously all of these things at once in any instance or series of instances of gameplay. The moment one presses the reload button in the game, an already complex multiplicity of events is further complicated by associations of more events, which are repetitions and yet different; at once one and many.

At once one and many: Complex temporalities in video games and earlier texts

To come anywhere near plotting such a structure, one would have to include all the events, running back and forth and laterally along the timeline – an almost impossible task. A different framework is, therefore, required to study the further complexities of the text that older conceptions of literary theory lack the apparatus to tackle.

Some of these games are quite conscious of this aspect. *Sands of Time* allows the player to rewind the events of the game within the context of the game. Should the player fail in his attempt, the Prince's voice tells us,

‘No, this is not how it happened’ making the entire gameplay instance seem like a bad flashback of many flashbacks. In an added nuance to the game, the Prince’s response is subtly different each time and the story develops by subverting, reversing or restarting the progression of events. Therefore, it can be said that the endings as well as the beginnings of the game are immanent and that they often overlap when the narrative is considered along various planes. The theme of *Sands of Time* is time and as the young prince tells us in the ‘beginning’ of the game, he thought that time was like a river but now he has found out that it is like the sea.²⁶ Time does not have a unidirectional progression according to the game. With the Dagger of Time that the Prince finds in the treasury of an Indian Maharajah, he can travel back in time and reverse his actions. His first discovery of the powers of the dagger is quite illustrative:

THE PRINCE

Unaware of the stone gargoyle plunging toward him, he notices a switch on the dagger’s hilt. He presses it. SAND spills from the dagger onto the floor.

At the last second, the Prince looks up to see the gargoyle about to crush him! His eyes widen with the terror of certain death. But just then –

REWIND!

The gargoyle springs back up, reversing its trajectory, and lands in its original position.

THE PRINCE

blinks, baffled as to what just happened.

As he is staring up at the gargoyle, it teeters, just as it did before, and starts to fall a second time.

This time, forewarned, the Prince jumps back out of the way. The gargoyle crashes harmlessly next to him.

(jordanmechner.com, 2015)

Every step inside the Maharajah’s crumbling palace ruins is fraught with danger – with spikes emerging from the floor and swinging blades – so the endings are not only immanent, they are constantly imminent. Once the player finishes the game (after many ends, rewinds and repetitions, presumably), the game shows the Prince at the bedside of the

sleeping Princess Farah, who was shown as dead in the last section of the gameplay: the end of the story is another beginning. As Atkins claims in his recent essay, *Sands of Time* is perfectly self-aware:

In drawing attention to issues of temporality in games, however, it [*Sands of Time*] highlighted its own structure as a videogame even as it might appear to have attempted to conceal the artificiality of this key aspect of the practice of videogame play through providing an internal justification for temporal manipulation through the Dagger of Time.

(Atkins, 2007, p. 243)

Besides the rewind function provided through the Dagger of Time, the player is also allowed random glimpses of possible futures through the proleptic 'vision' mode that is present within the game. The latter, intriguingly, is accessible from the same place (a translucent golden hourglass-like figure) as the save-game function: the vision mode is essentially a flash-forward showing one potential future while the save game function is a node from which innumerable possible futures can result or which allows a return to various saved instances of pasts. Gameplay, thus, exists in the realm of the virtual.²⁷ The 'sands of time' can also be used to control the speed with which events occur within games: the ending of the game-text is therefore delayed or hastened, as the case may be. Of course, the player's interaction (and skill) is also key to this deferment or hastening. Further, the selection of difficulty levels makes it more or less difficult (and often, therefore, taking more or less time) to complete all the levels of a game. The increasing number of obstacles in higher difficulty settings can also influence the narrative. Unless the player kills the monstrous antagonists and destroys them by obtaining their 'sands of time' using the Dagger of Time (which, in a beautifully animated sequence, sucks them in), they re-spawn and attack yet again.

A further complication arises with the 'sequels' to *Sands of Time*.²⁸ *Prince of Persia: The Warrior Within* (Ubisoft Montreal, 2004) and *Two Thrones* (Ubisoft Montreal, 2005) both link their plots to the *Sands of Time* story: for example, in *Two Thrones*, Princess Farah reappears but she does not remember the Prince. The action in all three games is supposed to be happening in different replays of the same story involving the same characters but not only does the time-frame vary, there is also a considerable shift in spatial terms: from India to a mysterious Island of Time and then to Babylon. This is precisely the reason why, basing their

conclusions on more traditional conceptions of narrative structure, the Ludologists find it difficult to conceive of a 'plot' in video games. The 'plot' of *Sands of Time* does not lend itself to a straightforward transcription because the narrative contained within the game-system is a multilayered temporal mesh. Story systems created in digital games are indeed quite different; yet, judging from the tale(s) that the Prince keeps telling us through the gameplay, it cannot be denied that they are still stories, albeit one(s) that point to a different convention of storytelling.

In critical circles, games are considered as very different and even trivial, when compared to 'serious' cultural products, because of their replayability and multiplicity. Gonzalo Frasca states this view quite clearly:

Whatever you do in a game is trivial, because you can always play again and do exactly the opposite. [...] the player] is free to explore any 'what if' scenario without taking any real chance. The problem is that usually 'serious' cultural products are essentially based in the impossibility of doing such a thing in real life.

(Frasca, 2000)

Frasca goes on to comment that although death is reversible in video games, it is a convention that the medium employs, but on the other hand, he also observes that from the perspective of real life, this reversibility can be seen as something that 'trivialises the "sacred" value of life' (Ibid.). Frasca's statement about what defines 'serious' cultural products is controversial as there are many instances in so-called 'serious' literature and films that constantly point to the possibility of the multiple within texts, as the earlier analysis of Kermode and Genette has illustrated. Kieslowski's *Blind Chance* (Kieslowski, 1987), Kurosawa's *Rashomon* (Kurosawa, 1951), Tom Tykwer's *Run Lola Run* (Tykwer, 1999) and Mike Figgis's *TimeCode* (Figgis, 2003) are some examples of films that consider the possibility of many 'what if' scenarios being actualised after rewinding time and restarting the action. In fiction, besides the examples from Robbe-Grillet or the others discussed above, there are numerous other examples such as the endings of *The French Lieutenant's Woman*, the two endings of *Great Expectations*, or Sherlock Holmes's miraculous revival after his purported death on the Reichenbach Falls. In the last example, Holmes was actually 'brought back' by the author due to the widespread public demand. Further, literary theories like reader-response theory see the text as changing with each reading dependent on readers or communities of readers and the

reader's imagination can create various 'what if' scenarios. To consider that the possibility of replay and re-enactment is trivial is therefore not a tenable conclusion. This is even clearer when one considers the very basis of Western literature: the Greek epics; the *Iliad* and *Odyssey* were composed in an oral bardic tradition that was equally reliant on using stock verbal formulae as well as layers of variations created in the instances of recitation. On comparing this to video games, the 'different conventions of storytelling' mentioned in the previous paragraph do not seem so different after all.

Nevertheless, the issue of difference from older media still remains a moot question. Even if commentators have moved away from earlier factious game criticism positions (such as Eskelinen's), issues of temporality and the multi-telic structure of game-texts still continue to be regarded as major factors differentiating game-texts from other narrative media. Atkins, commenting on *Sands of Time*, states that 'it brings to our attention [...] the degree to which videogame play offers a very different temporal experience than our other media' (Atkins, 2007, p. 251). This is a key point because, although it states that gameplay offers a 'very different temporal experience', it also qualifies the statement by saying that the difference is in *degree*.

For a comparison of the telic possibilities of games and older media based on their temporal structure, the nature of ludic time needs to be examined. Juul's essay, recognised as a key contribution on the subject, is an important entry-point. Juul maintains that games apply a different set of temporal parameters. According to him, the moment of gameplay, 'has a basic sense of happening *now*, when you play. Pressing a key influences the game world, which then logically (and intuitively) has to be happening in the same *now*' (Juul, 2006, p. 134, original emphasis). For Juul, narrative conveys a basic sense in which the events do not happen *now* and the plot itself imposes a chronology for the events to happen. The game, however, happens solely in the *now*.²⁹

There is a problem with this position when we apply it to a game like *Sands of Time*. This game is set somewhere in the ancient past and yet, because the player acts out the story, there is a sense of the events happening *now*. Further, the game consciously confuses the difference between the *now* and the *then*, within its temporal mesh. It is no coincidence that Jordan Mechner, creator of the first *Prince of Persia* game and member of the designer team of *Sands of Time*, acknowledges the influence of the 'nested stories' of *One Thousand and One Nights* in making the games: to return to Scheherazade again, her stories while happening in the *now* consists of other stories within the main story that

relate to each other. These may begin and end as separate stories but as soon as Scheherazade ends a story, another one starts, thereby postponing the end of the main story. Juul observes a difference between Scheherazade's situation and gameplay. For him, 'the continuing delaying of Scherazade's [sic] execution in *Thousand and One Nights* is a good example of this [the reader's desire of knowing the ending]. In the computer game, on the other hand, the ending is often well known, but it is one you try to *actualise* by your playing' (Juul, 1999). There is, however, a problem with this description. *Sands of Time* makes it amply clear that the end of a game is impossible to predict. Ideally, the player should reach the point where the Prince meets Princess Farah sleeping in her bedchamber, but that is not the end of the story: the Prince runs away and disappears into the jungle, leaving Farah bewildered about how he seemed to know all that he said. The game can therefore be replayed by treating this as one actualisation of the possible combinations of events but one that keeps alive the player's (or reader's) desire to reach the end by postponing the conclusion, much like Scheherazade's stories. A temporal map of either Scheherazade's tales or the Prince's adventures is not plottable owing to the complexity of the multi-level links. The conception of such a structure is not entirely new to narratives: a very famous literary example is found in Borges's short story, 'The Garden of the Forking Paths'.

The illustration of the problem of the non-linearity of time in digital games, therefore, does not come as something uniquely different. Book Ten of Augustine's *Confessions* discusses time as existing as an eternal present and states that all actions, whether in the future or in the past, actually occur in the 'right now': Juul's conception is therefore not really unique or limited to ludic time. Using later accounts from Christian theology, Kermode identifies three main orders of time: *chronos* or earthly time, occurring as successive events, *kairos* or God's time, consisting of moments beyond conceptions of reality and temporal sequence and *aion*, described as the 'time of a world of becoming' (Kermode, pp. 72–73). For Kermode, the novel exists in the time-order of the *aion* and incorporates a movement to and from the regions of *chronos* and *kairos*. Applying Juul's terminology, this oscillation could be seen as occurring between the chronological order of event time and the immanent 'right now' of play time – quite similar to the situation in video games.

It is evident, therefore, that temporality in digital games already has a string of antecedents in older narrative media and is part of a much larger discussion. However, like game studies, literary criticism is also

uneasy about some aspects of temporality. Although Kermode highlights the immanent endings and the temporal variation in the *nouveau roman*, he regards the 'real novel' as one with a beginning, middle and end and is uncomfortable with such novelists as William Burroughs because their prose is in 'random order'. Such a 'justification of the ideas of order' (Kermode, p. 124) is in contradiction to implications of immanence and marks the limitations of canonical criticism in analysing narrative endings. This is where a study of game-texts is called for.

In a computer game, the actions do not happen *once*, but both as one and many at the same time. Failure or death, in *Sands of Time*, has the Prince exclaiming that it is not how things happened but the player knows that it *is*. In one sense, the player's action is valid as a single gameplay session and in another it is a unit within a multiplicity. Amongst the different strands of the narrative mesh, some are not even available: they exist but are not available until played into existence. Finally, as any gamer knows, these narratives keep overlapping and there is both difference and repetition amongst the countless potential or actualised trajectories. As far as the potential narratives are concerned, it is next to impossible to determine their number or nature, even for the designers of the games themselves. Using cheats, mods and patches, gamers can easily exploit the technology and affect the creation of the narrative. Some of these even are unlockable or partially locked portions in the games – the controversial 'Hot Coffee' section in *GTA: San Andreas*, which was discovered and unlocked by Dutch modder Patrick Wildenborg, is a case in point. The player can also develop unprecedented playing strategies that can change the game narrative even without using external elements like mods or patches. As Aarseth comments about the multiplayer demo of *Return to Castle Wolfenstein*:

Someone discovered that by exploiting the fact that players were invulnerable for the first seconds after they were revived by a medic, one could 'fly' over the wall if one was revived next to a live grenade about to explode. Thus, by committing suicide, one could win the game in a novel way.

(Aarseth, 2003)

These and similar elements have caused a rethinking of game design concepts resulting in more player-centred design options, as argued by Laura Ermi and Frans Mäyrä (Ermi and Mäyrä, 2005).

Player-centred design, as in scenario-based pervasive games or in online multiplayer games (MMOs), opens up a larger range of

possibilities. Recent conceptions of game design describe the space of the game as ‘the space of possibility’. As Salen and Zimmerman state:

We call the space of future action implied by a game design the space of possibility. It is the space of all possible actions that might take place in a game, the space of all possible meanings which can emerge from a game design [...] as a game designer you can never directly craft the possible space of your game. You can only indirectly construct the space of possibility, through the rules you design.

(Salen and Zimmerman, 2003, p. 67)

Is it at all possible to analyse the ‘space of possibility’ which can neither be directly crafted, nor constructed? While the tools employed by literary criticism prove inadequate, the framework of Deleuzian multiplicity, introduced at the beginning of the thesis, emerges as being extremely well-suited to evaluating such multitelic and intangible systems of possible narratives. Treated as a Deleuzian multiplicity, the Prince’s narrative in *Sands of Time* and the narratives of other game-texts become more accessible to analysis.

Gameplay as a Deleuzian multiplicity

Before elaborating on multiplicity as the framework for understanding game-endings, a few clarifications would be in place. While Deleuze’s own conception of multiplicity is consistent throughout his works, there is, nevertheless, a varied range of responses from commentators. This analysis regards DeLanda’s reading of Deleuzian multiplicity as particularly relevant to its purposes. In fact, the contrast between DeLanda’s reading and those of other commentators, as presented subsequently, will aim to make important points about both video game-endings as well as Deleuzian multiplicity. DeLanda points out the importance of multiplicity as a Deleuzian concept ‘that stands out for longevity’ (DeLanda, 2002, p. 12). He describes the concept in terms of the ‘manifold’, which is a Deleuzian term as well as a mathematical concept developed to cover n -dimensional geometry. DeLanda’s definition is as follows:

A Deleuzian multiplicity takes as its first defining feature these two traits of a manifold: its variable number of dimensions and more importantly, the absence of a supplementary (higher) dimension imposing an extrinsic coordination, and hence, an extrinsically

defined unity [...] never has a supplementary dimension to that which transpires upon it. This alone makes it natural and immanent.

(Ibid.)

Although neither Deleuze nor DeLanda discuss video games as such, the idea of the variable number of dimensions not subordinated to an extrinsically defined unity aptly describes the variable pathways that game narratives usually take. According to DeLanda, 'the dimensions of a manifold are used to represent properties of a particular process or system, while the manifold itself becomes *the space of possible states* which the physical system can have' (DeLanda, 2002, p. 13).

It is important to note that the reference to the 'space of possibility' in DeLanda's description of the manifold and in Salen and Zimmerman's account of game design, noted earlier, is not coincidental. The processes in game design also need to be considered in the number of relevant ways in which they can change. DeLanda points out that according to some conceptions in physics and mathematics, the object's instantaneous state, no matter how complex, becomes a single point within an increasingly complex manifold space comprising all its degrees of freedom. Similarly in digital games, while it is possible to have single instances of gameplay, these exist within a manifold consisting of multiple levels of possibility.

According to such a model, objects retain their identities even though they are based in multiplicities. Each game has its own narrative and ludic identity. To return to *Sands of Time*, here, an instance of gameplay exists within the manifold of the title *Prince of Persia: The Sands of Time* and by extension, as the story claims, of all other *PoP* games. However, at the same time, the instance of gameplay is a single narrative object with its own identity. On its own, it can be told as a stand-alone story. The concept of singularity explains how objects retain their identity despite being within a multiplicity. A singularity is a special topological feature of manifolds that has a large influence on the behaviour of the trajectories and hence on the whole system. A large number of different trajectories, starting their evolution at very different places in the manifold, may end up in the same final state if they are within the singularity's sphere of influence. It is possible to allow for transitions between one form to the other when the trajectories break free of the influence of a singularity and come under that of another. DeLanda, therefore, describes multiplicity as being 'defined by distributions of singularities defining tendencies in a process; and by a series of critical transitions

which can take several such distributions embedded within one another and unfold them' (DeLanda, 2002, p. 20).

From the above, one can see how video games are better defined in terms of multiplicity rather than changeless units. Perhaps, a more detailed discussion of the nature of game endings as multiplicities will now be in place. Like the *Prince of Persia* games discussed above, the *Half-Life* franchise consists of the 'original' game, three sequels, a few expansion packs, numerous mods and at least two totally different games derived from the original game (*Counter-Strike* and *Escape from Woomera*). Further, other video games refer to the *Half-Life* story. *S.T.A.L.K.E.R.* contains an Easter Egg where the player finds Gordon Freeman's dead body and notes on his PDA tell us the game's version of how Freeman died. This is a multiplicity, if there ever was any. Before moving on to the variability of the narrative strands and of the possible endings, it is necessary to clarify the point about extrinsic unity. It might be argued that the game system and the basic design parameters form the extrinsic unity but to do so would be to ignore the various influences on the game, the sequels, the user-defined mods among other things, all of which may have different parameters of design and gameplay. For example, in a single gameplay instance of *Escape from Woomera* there are multiple parameters at play: the story itself is far removed from the science fiction of the *Half-Life* narrative, being based on the shocking living conditions in a former Australian immigration-detention centre, but without a working installation of *Half-Life*, the program does not run. Any effort to define the game in terms of an extrinsic unity therefore collapses. Regarding the endings themselves, the *Half-Life* universe presents a world of problems. Though the game is a first-person game featuring Gordon Freeman, the expansions allow the player to play as Barney Calhoun and Corporal Adrian Shephard, two other characters in the story. Further there is the bizarre (but in video games all too common) possibility that the player dies in *Half-Life* but goes on to play the sequels without completing the first game. The story takes a complex turn: somewhat like Borges's forking paths. The endings are variable and difficult to justify as following the unity of action and time. They make sense only when they are considered in terms of separate trajectories in a multiplicity that take their shape influenced by the singularities they fall under and the transitions they undergo. This is even more complex in the multiplayer offshoots of *Half-Life*, such as *Team Fortress* and *Counter-Strike*. The multiplayer game not only introduces other human players in the game but it also introduces other machines: the trajectories, therefore, develop under the influence of a

much larger number of singularities. As mentioned earlier, multiplayer games also open up more social aspects due to the interaction that is made possible between players and, therefore, reconfigure the multiplicity by plugging into other aspects of the video game-assemblage not discussed here. The present analysis will continue focusing on the problems in terms of single-player games but in the concepts developed here, it will create opportunities for further research on multiplayer game-structures.

In an earlier section, ludic time was located in the order of the *aion* between the sequential *chronos* and the eternal *kairos*. In *The Logic of Sense*, Deleuze attaches further layers of complexity to the concept of the *aion*: it is 'the past-future, which in an infinite subdivision of the abstract moment endlessly decomposes itself in both directions and forever sidesteps the present' (Deleuze, 1990, p. 89). However, computer game events do not just occur in the past-future; rather they occur in the 'right now', as noted earlier. DeLanda's explanation is helpful here. He introduces the idea of virtuality where the 'right now' is understood in terms of 'becoming' and not discrete instances of being. The idea of the present within a virtual multiplicity, therefore, does not contradict Deleuze's conception of the *aion* and even fits well with Kermode's description of it as the 'time of becoming'. As DeLanda states:

Unlike actual time, which is made exclusively out of presents (what is past and future relative to one time scale is still the living present of a cycle of greater duration) a pure becoming would imply a temporality which always *sidesteps the present*, since to exist in the present is to be, no longer to become. [...] And unlike actual time which is *asymmetric* relative to the direction of relative pasts and futures, a pure becoming would imply a temporality which is *perfectly symmetric* in this respect, the direction of the arrow of time emerging as a broken symmetry only as the virtual is actualised.

(DeLanda, 2000, p. 127)

Time in video games also behaves like DeLanda's description above. Each saved game (whether past or future relative to the event of gameplay) is temporally as valid as any other in the timescape of the game. Each is a new beginning and can have various different endings (depending on how many times it is replayed). Each gameplay instance is therefore an actualisation of the virtual multiplicity that digital-game time is, in general. This idea can be extended further within the instance of gameplay itself. Gameplay, constituted of a set of actions, happens in

the *now*; but the *now* is not yet the present in terms of being. Therefore, each action is actually in the state of becoming until it is performed and actualised (or as the continuous tense changes to the perfect). Deleuze's theory is therefore appropriate for describing multitelic entities like digital games. Importantly, his theory itself is intrinsically ludic in nature: to explain the working of the *aion*, he uses examples from ludic texts like Borges's 'Lottery of Babylon' and Lewis Carroll's novels and comments that 'the Aion is the ideal player of the game' (Deleuze, 1990, p. 64).

When we look at multiplicity especially within a virtual timescape, it is evident that a multiplicity allows divergent realisations of itself. Not all of these instances are realised instances, however. There are many futures and pasts that never happen or 'have never happened' when considered in relation with actualised instances (because they are 'asymmetrical' as discussed above). Deleuze addresses the issue of the unrealised and potential events in his concept of 'virtuality':

The virtual is not opposed to the real but to the actual. The virtual is fully real in so far as it is virtual. [...] Indeed, the virtual must be defined as strictly a part of the real object – as though the object had one part of itself in the virtual into which it plunged as though into an objective dimension. [...] The reality of the virtual consists of the differential elements and relations along with the singular points which correspond to them.

(Deleuze, 1995, p. 209)

This bears a clear resemblance to the many stories created within a computer game. Every instance of gameplay is after all part of a game-system. It follows the game rules, is represented by the game graphics and mechanics and also has the same basic narrative environment. So it can be pointed out that the game consists of a multiplicity of gameplay that corresponds to the singularities of the game-environment, the basic framework that permits certain kinds of progress and not certain others, and the designated beginning(s) and ending(s), while at the same time also following differential tracks of progress depending upon the interaction between the game and the player. Of the multiplicity that a digital game is, each played instance becomes an actualisation while the other possible instances remain part of the virtual.

There is, however, another part to the problem: in the realm of the virtual, how can the possible instances be differentiated (and therefore analysed) when their identity has not yet been actualised? This problem is summed up in the philosopher W. V. O. Quine's jocular criticism:

Take, for instance, the possible fat man in the doorway; and again, the possible bald man in the doorway. Are they the same possible man, or two possible men? How do we decide? [...] What sense can be found in talking of entities which cannot be meaningfully said to be identical with themselves and distinct from one another?

(Rescher, 1979, p. 177)

We, therefore, face the problem of defining differences and repetitions: is the computer game not retelling the same story all over again?

The above objection seems problematic because it is framed solely in terms of linguistic parameters. Instead, by considering games as multiplicities, it is possible to transcend the limitations that language-systems pose towards describing the problem. Games can instead be compared to scientific phase portraits that determine the structure of state spaces. In the phase portrait, according to Ronald Giere, the population of trajectories as a whole plays a role in shaping any particular actual history (DeLanda, 2000, p. 32). So it is not merely the actualised trajectory that should be studied to understand the state of a particular object, but the whole set of trajectories including the possible and non-actualised trajectories. DeLanda maintains that objections like Quine's arise only when possible worlds existing alongside actual worlds are postulated in terms of essences. The alternative provided by Deleuze is to 'avoid taking as a given fully formed individuals, or what amounts to the same thing, to always *account for the genesis of individuals* via a specific individuation process' (DeLanda, 2000, p. 37). In the instances of gameplay in video games, too, any particular instance is influenced by the possible others. For example, when players in *GTA: San Andreas* get to choose from multiple missions, or even to avoid missions, they are simply choosing to actualise one possibility, which is constantly influenced by others as the game progresses. Also chess players usually 'see' a few moves ahead and then select from amongst a series of potential moves. All of these potential moves determine the player's decision to actualise one of them. Gameplay exists as a *developmental process* – involving a multiplicity of possibilities and not as a transcendent essence. To counter Quine's objection, it can be said that the possible is inextricably intertwined with the identity of the actual, as can be clearly illustrated through instances of gameplay. As Bogost comments, '*GTA* crafts the game experience in terms of a set of relations between possible actions and their consequences [...]. This is where the player must frame his next action in relation to a web of motivations, fears, and preconceptions, both within and without the game' (Bogost, 2008, p. 155).

In *Unit Operations*, Bogost agrees that the structure of games is a multiplicity and tries to understand it by drawing upon Deleuze and Guattari's ideas to analyse the freeform structure in *Grand Theft Auto*. According to him,

Deleuze and Guattari's project focuses on removing boundaries, in rejecting the idea that boundaries create meaning. Instead, meaning is always provisional, in a state of openness. Freedom in GTA is thus much more like the freedom of the desiring machine [from Deleuze and Guattari] than that of Kantian reason.

(Bogost, p. 156)

However, he disagrees with Deleuze and Guattari when it comes to describing the nature of the multiplicity in video games. According to him, games exist as unit operations that he defines as a 'configurative system, an arrangement of discrete, interlocking units of expressive meaning' (Bogost, p. ix). Unit operations are discrete and hence different from systems operations which are more holistic mechanisms. Although different, these are not in binary opposition, as Bogost clarifies. He adds that systems operations sacrifice openness for certainty and argues that complexity's macroscopic vision is myopic. According to him, it ignores the importance of the individual within a network, focusing solely on generative structures, instead. He feels that in Deleuzian multiplicity, the constituent rhizomic and nomadic structures tend to move far away from considering individual instances of gameplay. As he states it:

The fundamental difference between nomadism and unit analysis comes to the fore: nomad thought resists thinking of the world in discrete components, devouring individual decision into an amorphous whole. This obstacle stands in the way of nomadism's embrace of unit operations, despite the apparent similarity of their attempt to disrupt unities of meaning. Deleuze and Guattari endorse assemblages that make individuated changes in constant progression. These assemblages create and destroy broader contexts and structures, but they always return their allegiance to the flow.

(Bogost, p. 142)

Bogost's reading of Deleuze and Guattari recognises their insistence on individuated changes as happening in terms of a continual process ('progression' would perhaps not be a suitable word, especially if

it denotes a unidirectional movement). However, he disagrees with the idea that instances of gameplay occur as part of an assemblage and instead chooses to view the instances of gameplay as discrete units. Therefore, in his attempt to see gameplay as being constituted of separate and unrepeatable units, Bogost tries to situate his analysis in a different account of multiplicity.

For him, Badiou's version of multiplicity is the best framework for redressing the problem. Badiou applies set theory to ontology and treats the set as a collection of elements selected from a universal set containing infinite elements. The various sets formed are multiplicities by nature. In a process, which he calls the 'count as one' (*compte-pour-un*), every multiplicity is instantiated and treated as a complete whole. In Badiou's reading, Deleuze's insistence on continuity leads to an eternal sameness. The issue of difference and repetition is raised yet again and, in Badiou's scheme, applying Deleuzian ideas in understanding video games will imply an assumption that all instances of gameplay are one and the same. If this were so, then digital game narratives would certainly not support a Deleuzian analysis. Before arriving at such a conclusion, however, a more in-depth evaluation of Badiou's position is necessary.

Badiou's main problem with Deleuze is regarding the virtual. For him the virtual cannot exist alongside the actual and therefore Deleuze's formulation is a 'heroic effort [...] incapable of succeeding' (Badiou, 1999, p. 45). He states quite clearly that 'contrary to Deleuze, therefore, I think that the "event dice throws" are all absolutely distinct – not formally (on the contrary, the form of all events is the same) but ontologically [...] No count can group the events, no virtual subjects them to the One' (p. 46). However, Badiou, in concerning himself with the concept of the One in Deleuze, seems to ignore the idea of immanence that is a key element in Deleuzian thought. As Todd May observes, 'Badiou separates his discussion of time from his discussion of the virtual and the actual. This, I believe, is a mistake, since it is primarily from the viewpoint of time that the virtual and the actual can be considered' (May, 2004, p. 74). As May clarifies:

This conception of time allows Deleuze to conceive difference in both its virtual and actual aspects without resort to any sort of transcendence. The past coexists with the present in a single time; it is not ontologically transcendent to it. This coexistence is in some sense ontologically One (there is one time) and in some sense *not* ontologically One (the past is, by virtue of being a virtual difference in kind,

ontologically distinct from the present, which is difference in degree)
 [...] it is a thought of difference and unity, the Many and the One.
 (May, p. 76)

May's comment is in consonance with the analyses of Deleuzian ideas about the *aion* and virtual multiplicity, earlier in this chapter. It also relates well to DeLanda's use of the concept of the singularities and individual trajectories, which are constantly influenced by the others of their kind in the multiple system.

In analysing the problem of difference and repetition, either within the possible or the actualised instances of gameplay, Deleuze again provides a useful point of entry:

Repetition is no longer a repetition of successive elements of external parts, but of totalities which coexist on different levels or degrees. Difference is no longer drawn *from* an elementary repetition but is *between* the levels or degrees of a repetition which is total and totalising every time; it is displaced and disguised from one level to another, each level including its own singularities or privileged points.
 (Deleuze, 1995, p. 358)

He also goes on to say that repetition includes difference, and in one and the same movement. For game-narratives, this is important because it resembles the unique phenomenon where separate (and different) narrative instances evolve out of the same binding narrative framework. The basic narrative framework is repeated in different levels (and instances of gameplay) but is also displaced and differentiated because each actualisation follows its own singularity and has its own unique outcome. The story is the same but is played out on a different level, each time. This is similar to Deleuze's comparison of the multiple levels of repetition to metempsychosis. He says that:

Since each is a passing present, one life may *replay* another at a different level, as if the philosopher and the pig, the criminal and the saint, *played out* the past at different levels of a gigantic cone. This is what we call metempsychosis.

(Deleuze, 1995, p. 105, emphasis mine)

This shows a striking resemblance to digital games, especially those like *Fahrenheit* where the player can play the murderer and the detective in different instances of gameplay. Even in general, the fact that the player

in the digital game has many lives and is 'reborn', as it were, finds a close parallel in Deleuze's idea of difference and repetition. Finally, Deleuze's use of 'replay' and 'played out' is hardly accidental, considering his consistent use of the ludic metaphor to illustrate key ideas about virtuality, multiplicity and the order of time. This indicates how notions of the ludic and the multiple are necessarily informed by each other.

For Deleuze, the dice game (again, one should note the ludic metaphor) that signifies events, consists of different 'throws' that are formally distinct but ontologically the same. Deleuze also refers to the 'Divine Game' that he describes as 'the most difficult game to understand, impossible to deal with in the world of representation' (Deleuze, 1995, p. 353). The computer game is hardly like the Deleuzian 'Divine Game' because it cannot be entirely smooth and rhizomic. Nevertheless, Deleuze's concept is more apposite in thinking about gameplay than Badiou's assertion that the event dice throws are 'absolutely distinct' in terms of their coming to existence. We must remember that often the many 'different' games are the outcomes of a single saved game and share a single origin. It is, therefore, problematic to imagine ontologically distinct sets of events emerging from the game. Even the narratives that emerge are actually one narrative. When playing a game like *Sands of Time*, which is quite tightly scripted in terms of its plot, we still do not play exactly as instructed in walkthroughs. And even the walkthroughs differ – as do the fates of the players, while in the game. One wrong move might blow the player's *avatar* to smithereens and within a few seconds of having started, she must press the F5 key to load the save again. If therefore, one is to analyse video games in terms of 'unit operations', it would be necessary for those unit operations to be separate but to allow the possibility of crossing over into each other.

On considering the virtual aspect of the multiplicities, the inadequacies of applying Badiou's model to digital games become more obvious. Consequentially, Bogost's argument that Deleuze and Guattari's nomad space does not locate the significance in the gaps between the states is also not relevant. The instances of gameplay are never disjointed and hence it is not necessary to account for any 'gaps'. Contrary to Bogost's claim, Deleuze and Guattari do recognise the significance of individual events: in terms of virtuality, as noted previously, and even in terms of the nomadic space. Even Bogost agrees that 'Deleuze and Guattari do offer occasional allowances for gaps or pauses in the nomad's progress. The nomad, they argue, "has a territory; he follows customary paths; he goes from one point to another; he is not ignorant of points"' (Bogost, 2008, p. 144). This is especially clear when he acknowledges as the 'most

fungible practical guideline' of *A Thousand Plateaus*, the passages and combinations in the operations of smoothness and striation and how the 'punctuations between deterritorialisations and reterritorialisations appear to come closest to demarcating the individual "units" of a flow' (Ibid.). Bogost raises another issue: he maintains that the 'local operations' that occur during the transitions do not allow for preordination or deliberation. However, within the virtual multiplicity, the changes of state occurring under the influence of singularities do not preclude the possibility of deliberate action. Rather they also account for the ever-important aleatory factors (especially in emergent games) in addition to deliberate actions. Finally, Bogost also concedes that unit operations are not in binary opposition with system-operations: 'unit-operational structures might also reaffirm systematicity. [...] systems are fluctuating assemblages of unit-operational components rather than overarching regulators' (Bogost, 2008, p. 4). By defining 'unit operations' as constitutive of assemblages, a connection with another Deleuzoguattarian idea is made implicit.

The latter point is illustrated well in games like *GTA: San Andreas*. As Bogost comments 'GTA does not just provide several different styles of gameplay, it also allows free-form transitions between those play styles' (Bogost, 2008, p. 155). *GTA* allows players to move within a game space called *San Andreas*: either to roam the 'city' as they please or to play the game's missions. On selecting a mission they (and therefore the gameplay) enter a singularity that defines the actions and affordances during the length of the mission. Spatially, however, the transition is not clear-cut since the player is free to visit the same places within the mission. Temporally, too, it is very fluid because of all the possibilities with the saves and reloads. *GTA* exhibits the characteristics of an assemblage because it allows various trajectories of possible narratives to flow into one another in the freeform transitions that Bogost mentions. Within the assemblage of the game-machine, the events therefore exist in a state of becoming until they are actualised within a mission or some other particular ludic situation.

Is the game ever over?

In many ways, therefore, Bogost's conception finds itself similar to Deleuzian ideas. To represent the functioning of the game system the 'unit operation' needs to situate itself within the virtual and the 'units' then need to exist in a state of becoming. When actualised, each 'unit' will have its own *telos* but also take part in a common *telos* (a very literal

example being the 'Game Over' or exit screen). Finally, within the space of possibility the telic exists both as the divergent as well as the tautological. It is this situation that helps in describing how the computer game narrative can be never-ending in that the Prince of Persia keeps on returning to his story but at the same time it does end (at least until it is not played again) when he leaves Princess Farah, bewildered by his time-travel tales, and disappears into the jungle. Within the multiple space of the computer game, the *telos*, thus, is not lost: it merely changes, turning into beginnings and different repetitions. Nor is it something phenomenally new: it operates in similar ways in other media though in the digital game-world it is more clearly outlined. In fact, the theoretical apparatus used for the analysis is equally applicable to other kinds of texts. It is possible to say that the reading of the multitelic digital game also influences our experience of other narrative media. On reaching the end, the reader is left with the Prince's voice saying, 'No no . . . that's not how it happened'.

7

Playing in the Zone of Becoming I: Agency and Becoming in Video Games

The problem of attributing agency in video games

When the Prince of Persia turns the clock back yet again and recreates his narrative, who is the author of this story? Is it the player acting as (w)reader, both reading and scripting the story, or is it the game designer who shapes the outline of the plot and the spaces of possibility? Finally, what about the Prince himself – as the embodiment of the artificially intelligent processes and the algorithmic environment of the game? The multiple narrative strands in the rhizomatic structure of video games raise yet another key question in the analysis of video games as narratives. How is it possible to explain the creation of these multiple narratives? Can the process of (w)reading these narrative actualisations into existence be likened to authorship? Even if it is, then such a process is quite different from the commonly held conception of the text as a product of the author's imagination. In video games, as stated previously, the process of narrative construction involves the machine and the player besides the game designers themselves. A straightforward explanation of gameplay as authorship cannot suffice to comprehend the situation in its full complexity.

Attempts have already been made by game theorists to explain the process and in one of its earliest explanations, Murray famously claims that the '[interactor's experience] is not authorship but agency' (Murray, 1997, p. 153). The pioneering work in this area by Murray has been further developed by herself as well as by many other commentators in the last decade and 'agency' has gained prominence as a fundamental concept in game studies. However, whether the choices in video games can be considered in terms of agency is a moot question because conceptions

of agency tend to be essentially human-centred; although it accounts for the game-designers and the players, it ignores the machine's potential for influencing the choices in the game.

The topic of agency is, of course, not exclusive to video game studies; it has been a longstanding issue of debate in philosophy, theology and the other liberal arts, and a fuller understanding of agency in game studies therefore needs to relate to the debates in these other areas. Video games, however, shed new light on the issue of agency in terms of their constant interactivity, technicity and their multitelic structure that create the possibility for choice. Indeed, it is not possible to understand ludic agency without considering the analyses of the abovementioned factors. The factors that influence analyses of ludic agency have been the subject of much debate. In fact, in Chapter 6, I quote Bogost as claiming that the Deleuzian idea of multiplicity is inapplicable to video games on the grounds that it precludes preordination and deliberation, two key elements in the discourse on agency. There are two reasons for citing this example. On the one hand, it shows how vital eminent game studies commentators such as Bogost consider the link between agency and the other characteristic elements of video games such as multiplicity. On the other hand, as illustrated earlier, Bogost's objection needs to be viewed in comparison with a more nuanced consideration of Deleuzian philosophy and ludic agency.

This chapter aims to broaden the base of these analyses by first exposing their problems and then showing that their range extends much farther than is presently understood. In this chapter, agency in video games will thus be no more understood as a unique characteristic of a new media but rather in terms of a larger discourse through a comparison with similar processes in other media. Finally, it is also vital to understand that agency in video games cannot be considered separate from the process of engagement (or involvement) as will be enlarged on in the following chapter. Galloway's account of video games in terms of the Deleuzian concept of the action-image is useful in understanding ludic agency in terms of its very basis: the action in computer gameplay. Despite Bogost's contention, the Deleuzian framework retains its usefulness in the analysis of agency and using concepts related to the action-image it reveals how the processes of agency and engagement integrate within the Deleuzian concept of 'becoming', already introduced in Chapter 2 as a key theme in reading video games. The process of 'becoming' will be analysed in connection to the discussion of the action-image as initiated by Galloway and will be examined in detail through the application of this analysis to the computer game

S.T.A.L.K.E.R.: Shadow of Chernobyl and Andrey Tarkovsky's film *Stalker*. Before reading ludic agency in terms of 'becoming', however, an introduction to the process of agency and the various ways in which it has been understood so far is necessary.

The medium of the game allows players to make choices that affect their fortunes: there is indeed a sense of control afforded to the player that leads to the impression of willed action. However, this impression is not entirely correct: control, if at all present, is limited and it is not solely the player who has a playing function within the computer game – the game plays itself and also the player. For the purposes of the present analysis, that is, the way in which games can be (w)read as literature-machines and of how the originary ludic element in all literature-machines affects the (w)reading process, the phenomenon of the bipartite action between the player and the machinic game-text needs to be analysed. In the very origins of the multitelic narratives, the element of choice plays a vital role. The choices made by the player can be well thought out strategies, as in strategy-based war games like *Empire: Total War* where the player constructs a larger strategy that affects the micro-level decisions within the game or, for example, in a role-playing game like *Fable*, where the player chooses certain character traits over others and acquires, for instance, more magic skills over fighting skills: all of these being decisions that are of signal importance to the way the game constructs its narratives. There are obviously other types of choices such as the micro-level moment-to-moment decisions like choosing one weapon over another or attacking one target before another within an intense situation of instantaneous combat; sometimes, these choices are not as obvious since they occur within a whole set of playing attributes described as the 'gameplay gestalt' by Lindley. However, whatever the nature of these choices may be, it is evident that they are never either unlimited or clearly defined. The machinic apparatus of the game also acts upon the player thus raising questions as to the validity of the term 'agency' – the choices exercised by the player are at the same time choices as well as non-choices. A better term to employ in this case would be 'action' since in itself this term does not restrict its meaning solely to the *human* capacity to make choices.

Game studies is becoming increasingly conscious of the importance of an action-based approach. Galloway, in his recent book, states almost axiomatically that 'if photographs are images, and films are moving pictures, then *video games are actions*. Let this be word one for video game theory' (Galloway, 2006, p. 2). Galloway's point is of utmost importance in the context of thinking through major questions about gameplay

concerning (w)reading and concomitant issues about authorship as well as interactivity and the role of choice in constructing narratives. Before exploring the full implications of Galloway's statement, however, it will be necessary to study the previous accounts of the processes of authorship and choice as described in terms of agency in video games.

The illusion of agency: A summary of recent analyses

The earliest analyses of video games, pointed out that the authorship of game-narratives is procedural. In Mateas and Stern's terms, 'procedural' refers to the machine-like nature of computers and the complex causal processes that they embody (Mateas and Stern, 2005). The element of authorship is, therefore, significantly influenced by machinic processes. As Steve Dietz comments, 'Procedural authorship [...] moves the author's traditional role over, so to speak, and without the reader/interactor, there is nothing authored except possibility. Simply put, procedural authorship makes the rules, which the reader en(inter)acts' (Dietz, 1999). Dietz's 'reader/interactor' has already been described earlier as (w)reader in the previous chapters. The rule-based element that forms an aspect of the procedural authorship falls more in the domain of the game-designers who design the multiple space of gameplay as a space of possibility. Possibility, however, is not entirely the game-designers' domain; the interaction between players and the game algorithm (whether by following rules or by subverting or modifying them using cheats and mods) also crafts possibility.

Murray's own conception of procedural authorship is that of creating 'not just a set of scenes but a world of possibilities' (Murray, 1997, p. 153). As already stated in the introductory section, Murray separates procedural authorship from the experience of the interactor, which she describes as agency. For Murray, agency is the experience of participation in a pre-scripted narrative framework of procedural possibilities: at best, it is a derivative form of authorship. As critic Cindy Poremba (Poremba, 2006) describes it, Murray's notion is that of agency as being 'embedded' in the procedural structure of the game. It must be noted, however, that the separation between procedural authorship and agency in Murray's model is contradicted by her own observation that in procedural systems that allow narrative construction, such as MUDs, the interactive experience is characterised by an unlimited creativity.

Contrary to Murray's model, the best way to describe authorship is not in terms of a primary all-encompassing authorship in which

derivative instances are embedded; rather, authorship needs to be seen as an ongoing process of interaction between the game and the player. Before attempting a detailed analysis, it is necessary to examine Murray's notion of agency, which, in relation to her analysis of authorship, has been contested by recent commentators in a major shift towards a more informed understanding of ludic action.

Commenting on the exercise of agency, Murray describes it as 'the satisfying power to take meaningful action and see the results of our decisions and choices' (Murray, 1997, p. 126). This kind of agency is akin to the humanist arguments that describe actions and choices as being anthropocentric. Here, action is meaningful and it is the result of *our* choices. She attempts to locate 'true' agency within the structure of the labyrinth, which she describes as a *via media* between the linear story and the boundless Deleuzoguattarian rhizome. However, the idea of experiencing 'true' agency in navigating the labyrinth is based on many problematic assumptions. Murray's subject is an absolute agent exercising boundless free will as he or she navigates through a passive environment. The other element in defining this conception of agency is termed constructivism by Murray. She says that the 'constructivist pleasure is the highest form of narrative agency the medium allows, the ability to build things that display autonomous behaviour' (Murray, 1997, p. 149). The previous section has already discussed this aspect of agency in connection to her views on authorship and this section will analyse further aspects of constructivism and its implications. Both the exploratory and the constructive elements inform Murray's human-centred notion of agency: this is further reflected in her statements like 'we are always the protagonists of the symbolic action' or 'I encounter a confusing world and figure it out' or 'I encounter a world in pieces and assemble it into a coherent whole' (Murray, 1997, p. 142, my emphasis). According to her account, agency is the 'thrill of exerting power over enticing and plastic materials' (Murray, 1997, p. 153). Even a decade later, despite changes in focus, some of Murray's ideas are of primary importance among game researchers: 'it is more important to provide the player with the ability to take a single, meaningful action than a dozen trivial ones' (Tanenbaum and Tanenbaum, 2009, p. 8). The authors, here, are arguing for a primacy of definitions of agency as meaning over those of agency as freedom. Meaning, mastery and the exertion of power remain the vocabulary within which agency continues to be understood.

Under such a constructivist scheme, the human player is the sole factor that can cause things to happen within a totally plastic and pliable

environment. However, even within themselves, Murray's statements contain some problematic implications that are strong enough to upset the anthropocentric standpoint that they were supposed to posit. She points out that the constructivist pleasure, or the 'highest form of narrative agency in videogames', is characterised by the ability to build things that display autonomous behaviour. The autonomously acting elements, however, limit the agency of the (human) player: they impose constraints on the player's action and in turn, these machinic elements are also involved in the construction of other elements. Consider, for example, a scenario in *Age of Empires*: in the game it is possible for the player to build farms and to rebuild them when their resources are exhausted, but at the same time, it is also possible to make the game AI re-sow crops every time a farm runs out of resources even without the (human) player's intervention or knowledge. The computer AI controlled opponent in the game also does not need to be 'constructed' by the player and its actions constantly affect the choices that the (human) player can make during the gameplay. The machine is itself a player and therefore the 'enticing and plastic materials' that Murray speaks of are not characteristics of the computer game system; they imply a passivity that is not true of video games. On these grounds, Murray's attempt to locate 'true agency', within the labyrinthine structure of video games, encounters a fundamental problem. Even in the legend of Theseus and the Minotaur, which Murray refers to as an example of traversing a labyrinth through acts of deliberation, the labyrinth is not just about working out a route through a complex but passive space, because the Minotaur lurks somewhere within it. The computer game, too, is no simple maze or puzzle to be worked out: increasing levels of artificially intelligent responses and randomisation of events distinctly interfere with a solely human-centred notion of agency.

Despite having such a notion of agency, Murray nevertheless notes that 'electronic environments have similar formulas and rules for structuring participation. For instance, when users are merely asked to respond to a menu with a predictable begin/quit choice, they are performing a kind of response to the "call" of the machine' (Murray, 1997, p. 127). In saying this, it is impossible not to acknowledge, at least implicitly, the role of machinic action in any conception of agency within video games. Quite surprisingly, however, Murray does not investigate the idea of the 'call of the machine' in her analysis: thus leaving a major gap on which later critics have commented.

Murray's conceptions of agency have provoked much critical response. The above analysis of procedural authorship clearly shows that

the action in video games occurs in a process of interaction between player and machine rather than being located as embedded agency. Further, contrary to Murray's anthropocentric model, the player as the protagonist or subject is not homogenous and absolute; neither is the participation in a game just a wearing of a mask or a journey into the holodeck, as will be shown subsequently, here, and in the following chapter. In fact, how much of the playing-subject is human and how much machine is a moot question. Considering these issues, a theory of an anthropocentric and embedded agency is insufficient in explaining the process of action in video games. Recent commentators, therefore, argue against this model and also take into account the issue that Murray calls attention to but does not pursue: the 'call of the machine'. Critics like Atkins and Krzywinska express their scepticism about earlier conceptions of agency and Atkins briefly refers to these as the 'illusion of individual agency' (Atkins, 2007, p. 73): a phrase that will be significant in the subsequent sections of this chapter. A more sustained criticism, however, has been made by critics, such as Poremba and Susana Tosca who approach the problem from different perspectives. It will be instructive to identify these approaches first because they create the base for creating the model of ludic action in the subsequent sections.

Poremba quite clearly argues against the earlier conception of 'embedded agency' which is how she identifies the model proposed by Murray and followed by theorists like Klastrop. Commenting on *GTA III*, Poremba concludes that its agency is 'difficult to attribute [and can be seen as] lying somewhere in a nebulous region between player, designer and system' (Poremba, 2006, p. 199). Although an issue such as agency, which has always been hotly debated in other contexts, obviously attracts a lot of controversy, recent game studies criticism generally is in consensus with the description above. The so-called nebulous region has, of course, attracted much critical attention and this chapter will also attempt to locate and explore the zone of ludic action and agency.

Poremba's account is representative and thorough. She argues for a model of agency that will account for the game designer's agency, player agency and the emergent and artificially intelligent system's agency. Besides making conscious choices to explore, configure, experience and react with the guided environment of the game system, the player often subverts this environment by using external tools (additions or modifications to the game's code) or by exploiting latent possibilities in the game's code (as in the 'hot coffee' cheat in *GTA: San Andreas*) or in its logic (the 'hooker cheat' in *GTA III*, as mentioned by Poremba). In all the

cases mentioned above, player agency is possible only in response to the 'call of the machine'. The modification and subversion of gameplay certainly falls under the category of constructivism described by Murray but in that case it is necessary to realise that this is a machinic constructivism. An awareness of the machinic affordances is not only required for modifying and subverting gameplay; it is essential for the process of play itself. As Wright, Boria and Breidenback, in their analysis of creative player actions in online FPS video games, make it clear, 'Playing is not simply mindless movement through a virtual landscape, but rather movement with a reflexive awareness of the game's features and their possible modifications' (Wright et al., 2002). Poremba supports their conclusion in her essay on agency in *GTA III* and maintains that this is indicative of the fact that agency in games needs to be seen in terms of newer models which move the analysis beyond the limitations inherent in the notion of embedded agency. She also states that player agency and designer agency are not discrete binaries but rather they exist as interdependent categories. According to her,

Game designers have expressed pleasure in players' creative actions – even ones that clearly go against design intention and extend the boundaries of the game. Conversely from a player perspective, gameplay is often about determining what the game designer wants (i.e. how to play the game) rather than a constant drive for increasing agency.

(Poremba, 2006, p. 208)

This assertion illustrates a clear shift in the understanding of procedural authorship from Murray's separation of the design perspective and the gameplay to a more supplementary relationship between the two. In fact, although she does not mention it, Poremba's account clearly illustrates a Derridean supplementarity between the various situations in which agency might be possible within a game. The phrase 'situations in' has been purposely chosen over 'types of' as a reminder that this description does not aim to divide agency into separate types with different 'ordered centres'. The various elements associated with agency – the player, the designer and the machine – are not distinct entities. In fact, Poremba's analysis reveals that they cannot be characterised as originary and derivative as Murray's model does. Poremba states that 'further work needs to be done to explore new models of agency that accommodate a more complex relationship between game designer, player and the game itself' (Ibid.). While the issue could not have been better expressed, the

term 'agency' still poses problems especially because of its connection with human-centred choice and the problems of reconciling this with the bipartite process of action in video games.

Commentators such as Atkins suggest that the experience of agency is illusory; the chief reason for this is a reaction to Murray's notion of agency as free choice. Susana Tosca examines this issue in detail through a critical analysis of the *Blade Runner* game (Westwood Studios, 1997). *Blade Runner* is an interactive adventure game – one of the last of its kind; although it wasn't commercially as successful as its FPS rivals such as *Quake 2* (id Software, 1997) and *Half-Life* (Valve Corporation, 1998), it still has a considerable fan-following and figures in many game studies analyses. It requires the player to play as Ray McCoy, a blade runner employed to 'retire' replicants; McCoy is similar to Deckard, the protagonist in Ridley Scott's film (Scott, 1982) and Philip K. Dick's novel (Dick, 1996). The issue of whether to have sympathy for the replicants or to kill them, a major philosophical question in both the book and the film, is incorporated into the game as player choice. The game has 13 different 'official' endings that depend on what chain of actions the player follows in the game. Player choice is, therefore, responsible for determining the player's character within the game as well as the fate of the various characters. This is how it looks from the player's point of view but that, however, is not the only perspective. Louis Castle, the designer of *Blade Runner*, in an interview with Pearce, describes how this works from the point of view of the game:

If you play the game as if you are a replicant, then the game treats you as a replicant. If you play the game as if you were a *Blade Runner* human, it treats you like you're a human. So people perceive that at some point they've made a *choice* that puts them on one track or the other, which isn't the case at all. It's based on how you play the game, whether you hunt the replicants, whether you kill them, whether you let them go. Those things give us clues as to what you think you are – and at any given point, you can switch over. You can go halfway through the game and go 'Oh, my gosh, I'm really not a human after all, I'm a replicant.' And just turn mid-stream and start saving the replicants. And that's okay. The game lets you do that.

(Pearce, 2002b)

In the above comment, the way the game constructs the playing subject is important. Castle's language, especially his usage of phrases like 'the

game treats you' or 'the game lets you do that' clearly indicates that the game is also an actor or a player. For the (human) player, the choices she makes may seem all important – they may even seem to reflect the player's character. For the game's logic or algorithm, the case is different. Here the response is input-based, as Castle states.

The subject is determined by the actualisation of technical choices. Tosca makes a similar point in the following comment:

Each action matters towards the end and that we contribute to the evolving story as we go. Trying to guess which actions those are, and how they lead to each conclusion, is a sort of narrative reverse engineering where, in my opinion, the pleasure of the game lies. And once we know, of course, we can always exert our free will and choose another path.

(Tosca, 2005, p. 103)

Tosca's statement is important because it highlights a dichotomy. First, there is the idea of each action contributing to the evolving story. This is part of the process of configuring and interacting with the game's algorithm. Hence agency seems to involve both the player and the game algorithms together with their technical affordances. Tosca's idea of the process of back calculation or as she calls it 'narrative reverse engineering' is also in consonance with this kind of agency in that such activity still involves the game's logic as an equal partner in the process. However, when she speaks of exerting free will to choose another path, it seems as if she is arriving at the same conclusions as the earlier conceptions of embedded and anthropocentric agency.

Tosca's qualifying comment in a later statement shows a contrary position: '*Blade Runner* creates a digital suspension of disbelief that players are willingly drawn into through the excitement of the different moral choices, *where trusting our implanted memories will bring us the illusion of free will*' (Tosca, 2005, p. 103, added emphasis). This is a statement that needs careful attention: the memories that allow the player to reverse engineer or, in simpler words, to reconstruct a narrative actualisation, are not just human memories. They are also a part of the machinic memory in that they are steps in the algorithm that the game follows. In the example of *Sands of Time* in Chapter 6, the saved games were attributed as the Prince's (and therefore the player's) memories. The 'free will', in this context, is an illusion simply because the choices made by the player are not entirely free but rather bound to the affordances of the machine algorithm.

Once the player returns to the point of deviation in a game that is being replayed (for example, from a saved game), he or she encounters a series of choices and has the opportunity to exercise choice yet again. Beneath the apparent vital nature of the player's emotional choice, which the game convincingly portrays, lie the game choices and these are primal in determining the path of actualisation. The player perceives moral choices and memory whereas the game algorithm contains its algorithmic choices and pathways. The two coincide when, as Tosca says, there is a 'suspension of disbelief'. The suspension of disbelief, intrinsically related (in the nature of the *supplement*) to agency, will merit a separate analysis in Chapter 8.

The present discussion will return to the question of memory. Not surprisingly, Tosca uses the phrase 'implanted memories', a concept that is all too familiar from *Blade Runner* texts, to describe the experience of memory in video games. Those familiar with the *Blade Runner* movie will remember the famous scene where Deckard (Harrison Ford) administers the Voight-Kampff test to Rachael (Sean Young). At the end of the test, it is revealed that Rachael, unknown to herself, is really a replicant. She does not know that some of her memories are not real: they are 'implants' from Tyrell's 16-year-old niece. While the player's memories are literally not 'implants' as in Dick's novel or Ridley Scott's film adaptation, they are reconstructions of a series of in-game choices: they are as much memories as part of game algorithm. Hence, after *accessing* these to replay a game sequence, the player willingly becomes part of game system and executes another algorithm.

For the player, to choose not to kill replicants may be a moral choice, but it is also a choice informed by the machinic attributes of the game and its specific algorithm. For example, the player in *Doom* does not have the choice not to kill the monsters that appear in the game. It is of course possible to subvert the original game using cheats and mods but as noted earlier, to do even this involves restrictions in the game program.

Tosca's conception emerges as more complex than mere non-agency. The 'illusion of agency' most certainly includes and allows for choice. Here, choice is, however, a decentred phenomenon: it is not the prerogative of either the (human) player or the machine algorithm. These entities themselves occur as supplements to the other, as already observed in earlier chapters. The element of choice therefore occurs within the (human) player-machine algorithm complex. Given this supplementarity within which choice operates in video games, it is

possible to relate this to the earlier examples of supplementarity between writing and reading or game and play where the elements in the relationship are all *in-play*. Even in conceptualising agency and choice in video games, it is possible to see them as being *in-play*. This notion has significant implications in the way the phrase ‘illusion of agency’ can be read. By ‘illusion of agency’ something different is to be inferred. The use of the word ‘illusion’ here is perhaps fortuitous but it serves the purpose marvellously. The etymology of ‘illusion’ (as derived from ‘illude’, which can mean ‘make sport of’, albeit used pejoratively) contains the Latin root *ludere* or ‘to play’ (‘illusion,’ n.d.). It is possible to read the term differently from what was perhaps the intended meaning: one can read ‘illusion of agency’ as the ‘making ludic of agency’ and this reflects the process of interaction and response between the (human) player and the game algorithm. In the case of video games, it is important to remember that the game is also an artificially intelligent machinic algorithm. The possibility of choosing the action in video games is therefore always related to the ‘call of the machine’.

From agency to becoming: A Deleuzian understanding of choice in video games

Recent commentators, such as Gordon Calleja and Susanne Eichner, writing in 2011 and 2013 respectively, highlight complexities within which agency can be seen to function. Calleja speaks of a ‘subjective experience of inhabiting a virtual environment facilitated by the potential to act meaningfully within it while being present to others’ (Calleja, 2007, p. 257). Instead of the individual being the only factor, the ‘others’ also figure in his definition and his approach will contribute significantly towards the fuller understanding of agency and involvement in the following chapter. In a similar vein, Eichner sees agency as being located in multiple aspects (which for her, are the personal, the collective and the creative). She, however, seems to think of agency as being separate from action:

Most basically, action and agency have to be recognized as distinct from each other, with action referring to the actual process of acting and agency to the general ability to perform these actions [... while] within agency lies the potential to transform, and to form a creative capacity that depends on individual and socio – cultural resources.

(Eichner, 2014, p. 219)

The watertight distinction that Eichner makes between agency and action is problematic as is the stress of creating meaning and a sense of mastery. Much of this book has already addressed the problem with ascribing one overarching meaning to the plural and multiple experience of playing and (w)reading video games. The notion of mastery, once again, is limiting as it seems to assume that one of the elements in the video game experience takes control of and is privileged over the others. While Eichner's argument seems to echo some of the old standpoints that it sets out to challenge, it is nevertheless important that both she and Calleja take into account the importance of the potential together with the actual. Taken together, and not separately or mutually exclusively, a more nuanced of 'agency' is now possible.

The altered conception of agency, as described here onwards, marks a major shift from the earlier human-centred concept of free will to a relationship between the player and the machine that can be more clearly understood in terms of a bipartite process of action. Commentators such as Galloway have already started thinking about the bipartite process as being a supplementary one. For him,

One may start by distinguishing two basic types of action in videogames; machinic actions and operator actions [...] Of course, the division is entirely artificial – both the machine and the operator work together. [...] The two types of action are ontologically the same.

(Galloway, 2006, p. 5)

Galloway quite rightly identifies the importance of studying the action in video games as a more accurate way of analysing gameplay. While maintaining the importance of an action-based approach for game studies, Galloway notes that there is no clear division between machine and operator actions. This account also illustrates the supplementary relationship described above. In the first chapter of his book, *Gaming: Essays in Algorithmic Culture*, Galloway launches directly into a discussion of action, in digital games as being performed 'step by step [and] move by move' (Ibid.) by operator and machine. As the base foundation of his analysis, he reads games in terms of the 'action-image' as described by Deleuze. However, he does not engage with the concept of video game action within a Deleuzian framework in any detail. The importance of the concept makes it merit further analysis and it will be seen in this and the following chapter that the process of involvement of the player and

the ludic action that characterises gameplay finds its best explanation when analysed within a Deleuzian framework.

The analysis of ludic action, within a Deleuzian framework, however, may be opposed by various commentators. As mentioned earlier, Bogost's objection to such an analysis was that the 'local operations' within such a 'nomadic' structure would deny any factor of deliberation in digital games. For him, it is difficult to locate agency in the workings of the Deleuzian manifold since he sees the multiplicity as being characterised essentially by the element of the aleatory. Such a reading of Deleuze is open to contestation.

Bogost, however, is not alone in his objection. Hayles, quoting Mark Hansen, notes that 'Deleuze and Guattari are much more thoroughgoing in their deconstruction of the liberal humanist subject and of "subjectification" in general. As Mark Hansen comments, "D+G do not shift the locus of agency [...] but dissolve the role of agency altogether"' (Hayles, 2001, p. 157). She, however, adds that 'they too recuperate agency at crucial points [...] they warn the reader against giving up agency altogether' (Ibid.). Hayles agrees with Hansen that Deleuze and Guattari *wish to deny agency* but she maintains that they cannot avoid it because '[t]hrough their performative language, they exercise agency even as they deny it [...] Deleuze and Guattari cannot avoid inscribing into language, the agency implicit in their performance of desire' (Hayles, 2001, p. 158). While she is right in stating that Deleuzoguattarian theory does take into account the exercise of agency, her assertion regarding its intention to deny agency is controversial. Hayles's argument is drawn from her reading of *A Thousand Plateaus* where Deleuze and Guattari do not directly address issues of agency. Such a reading misses the more direct analyses of agency and subjectivity in Deleuze's earlier works, such as his treatises on Hume and Spinoza, which also play a key role in shaping the main body of his work including the texts where he collaborated with Guattari. Aurelia Armstrong, commenting on Deleuze's modification of the Spinozist conception of agency states that in Deleuzian (and indeed, Deleuzoguattarian) thought, quite differently from earlier notions, 'agency is conceived of as a movement, which evades the definition of the individual in terms of forms and functions and the delimitations of its capacities, whether such a definition is biological, psychiatric or political' (Armstrong, 1997, p. 55). Armstrong further maintains that the 'growth of agency is shown to consist in a *becoming-active*, in the increase and enhancement of "individual" powers through their combination with the powers of other, compatible individuals and things' (Armstrong, 1997, p. 50). This is obviously quite different from

liberal humanist notions in which agency is situated as the free choice of the individual; it is also equally different from the totally aleatory scheme of events.

In the analysis of temporality in Chapter 6, the Deleuzian idea of the manifold was compared to phase portraits of molecular movements where the population of trajectories as a whole influences the course of any action. Agency should be seen as an analogous and related experience. In an emergent structure, agency can only be thought of in terms of the options for acting within a framework of the constraints imposed by the actions of connected elements. Further, the concept of 'becoming', which runs as a key theme throughout the whole thesis, is equally important in speaking of agency. True, agency is action but it is actually the 'becoming-active'; in this process, the individual's subjectivity is experienced in a complex manner due to the actions performed by her within the system. 'Becoming' has already been introduced in Chapter 2 as the 'zone of indiscernibility'³⁰ occupied by the subject: the player in the computer game does not act as if free of her machinic persona and neither does she get totally absorbed in such a persona. Instead, as explained in the subsequent chapter, her experience can be described as a 'becoming'. In game studies, the concept that corresponds most to this is known as 'immersion'. The subsequent analysis will, however, indicate the problems in seeing this as being a separate phenomenon. Instead, both immersion and agency need to be viewed as merged concepts that constitute the core of the process of 'becoming'. As already discussed in the context of video games, an altered conception of agency is being put forward here: this conception is based on action and on movement or 'becoming', and it moves beyond the more traditional ways in which game studies and other analyses of machinic media conceive of agency.

However, it is obvious that despite their apparent differences with Deleuze, both Hayles and Hansen are in agreement regarding the two aspects of agency described in Deleuze. Total free will for the (human) player is not the case in video games because of the pervasive presence of the (machine) algorithm and because during gameplay, the machine can also be considered a player and the human player a part of a certain algorithmic sequence. The first issue would be the emergent patterns present in video games that preclude any totally determined act on the part of the human agent. Secondly, the human agent, in becoming part of the game experiences a complex subjectivity that any conclusion of pure agency would find difficult to envisage. Both of these issues are described in Deleuze's formulation of the action-image in the ideas of

action as actualisation and as resulting in a 'new mode of being' for the agent.

In fact, it might be argued that Deleuzian ideas of agency are not so different from Hayles's own, especially when seen in a broader Deleuzian context. Hayles maintains that 'if the posthuman implies distributed cognition, then it must imply distributed agency as well, for multiplying the sites at which cognising can take place also multiplies the entities who can count as agents' (Hayles, 2001, p. 147). Her position is similar to that of Poremba and Tosca, described above. It is also the point of entry to Galloway's application of the Deleuzian action-image to video games and to its extension to discussions of agency. Distributed agency is seen as resulting from distributed sites of cognition. This is similar to the Deleuzian explanation provided by Armstrong: agency can only be conceived of in connection with the actions of connected elements; hence, to use Hayles's term, it is 'distributed agency'. More needs to be said about distributed agency in the subsequent discourse on the action-image. From this analysis, it is possible to conclude that the Deleuzian framework used in this thesis does not support a denial of agency as some critics suppose; instead, it effectively brings together the different aspects of the discussions on agency and helps view the process within a more representative framework. Nevertheless, within this framework, the earlier approaches need to be sufficiently modified and some significant changes must be made. The first of these would be to replace the term 'agency' itself.

The analyses of the computer game narrative show that the process of gameplay is not deterministic from the point of view of either the human or the machine, but the use of the term 'agency' gives it that connotation, especially when considered in the light of its liberal humanist history. The subsequent analysis will, therefore, use a more representative term for the process and one that is well supported by the Deleuzian framework that provides adequate tools for studying the process; the concept in question is 'action'.

After having established the need for a Deleuzian analysis of action and choice in video games, it will now be possible to return to Galloway's use of the concept of 'action-image'. Galloway's bipartite and multisensory conception of action in video games, summed up earlier, needs more background. It must be mentioned, here, that the present analysis is concerned only with examining the implications of Galloway's concept in terms of its Deleuzian sources. The action-image is an important element in Deleuze's model of cinema and exists as integrated with the other concepts that inform this model.

Deleuze classifies cinema in terms of two types of 'images': movement-image and time-image. These two concepts are interlinked because, as Colebrook (2001, p. 35) also observes, movement does not take place as a 'joining up' of individual chronological steps but rather as a flow of *time* that is impossible to analyse in isolation from the process of movement itself. Under the Deleuzian model, the action-image forms part of the movement-image and is a way of understanding cinema through the flow of actions and perceptions. It is also intrinsically linked to the perception-image and affection-image, both of which are part of the movement-image. The operation of the action-image is described by Deleuze as being 'no longer elimination, selection or framing, but the incurring of the universe, which simultaneously causes the virtual action of things on us and our possible action on things' (Deleuze, 1986, p. 67). Deleuze's description develops on Galloway's formulation of bipartite action, mentioned earlier: the virtual action of the ludic machine on us and our *possible* action on it caused by the 'incurring of the universe'. This immediately brings up other considerations. The action is located in the virtual and the possible, which form the core elements of Deleuzian conceptions of multiplicity. Further, the process is an 'incurring of the universe', an intense process of involvement. In the framework of the action-image, the multiple and the intensive can be seen as intrinsic to the functioning of each other. The analysis of video game action will therefore find a fuller explanation within this apparatus. The process will be clearer only if the flow from perception to action is studied.

In the Deleuzian schema, perception is a fluid process that is related to the thing being perceived but formed in relation to another framing image. In cinema, Deleuze compares this to the 'shot-reverse shot' complementarity when it intersects with 'observer-observed' complementarity which he associates with the films of Jean Mitry. As Deleuze explains:

First of all we are shown someone watching, then what he sees. But we cannot even say that the first image is objective and the second, subjective. For what is seen in the first image, is already subjective, observing. And in the second image, the observed may be shown for itself, no less than for the observing character.

(Deleuze, 1986, p. 74)

In the case of video games, the gun in the FPS screen illustrates this very well: the player *is* the gun in one sense while in the sense supported by

the game logic, she *has* the gun: the perception has begun to shift from direct identification to the relation to a frame.

Most video games, nowadays, allow for and even necessitate very rapid shifts in camera-view, such as from the first-person to the third-person, for the purposes of gameplay. However, it is necessary to understand how the dual perception is related to the action in the computer game. The answer to this is to be seen in terms of the concept of 'incurving'. According to Deleuze, without the perception-image, the action-image is incomprehensible because the boundary between them is imperceptible. He provides a very vivid description of the transition: 'by incurving, the perceived things tender their unstable facet towards me, at the same time my delayed reaction, which has become action, has learnt to use them' (Deleuze, 1986, p. 67). To carry on with the gun metaphor, the player now presses the 'trigger' (which is a key or a mouse button outside the immediate frame of the game) and the action is carried out: she fires. The perception of the gameplay is obviously dual: seen from the frames of the game-world and the (human) player; no separation can, however, be made between the two because they exist in a process of 'incurving' and it is this very process which gives rise to the action in the game.

Deleuze's comment above, however, raises more questions. Why is the reaction delayed? The action, at least as experienced on the FPS screen, is instantaneous. Or is it? To analyse this, another state called the affection-image, which comes between the perception-image and the action image, needs to be considered. This is the locale of the 'incurving' that Deleuze speaks of and it is also where the reaction is 'delayed'. When the receptive facet *absorbs* a certain tendency instead of acting on it, the process of affection comes into play. In the locale of the affection-image, therefore, there are many tendencies or possible events waiting to be acted upon. Affection, then, is the zone of the possibilities. Deleuze's description of the movement from perception to action, earlier, is worth noting: the imperceptible shift from one to the other is described as a 'becoming'. From the above-mentioned relationship, then, the process of 'becoming' occurs within the zone of possibilities.

Following Henri Bergson, Deleuze describes the affection-image as a motor effort over an immovable sensible plate. The latter description is easy to misconstrue. Perhaps based on this, Galloway sees an analogue of the affection-image in what he calls the ambient acts in digital games. These are moments in games like *Shenmue* (Sega AM2, 1999) where minor movements, which leave the action unchanged, continue to take place onscreen even if the player leaves the game running and

goes away. There are certain problems with this position. Many games such as RTS games like *Rome: Total War* carry on *acting* and the algorithm actually causes meaningful changes to the state of the game, even when the game is left alone. More importantly, it must be realised that the affection-image does not just apply to certain special cases in games. As part of the movement-image and therefore inseparable from the action-image, affection is an intrinsic quality in digital games. The player does not need to walk away from the game for the affective to be in process. In fact, it is constantly in process in the in-between of the gameplay. This is the part where the actions of both the game and the (human) player are yet to be determined. Having clarified that the Deleuzian affection-image is generally and intrinsically applicable to analyses of gameplay rather than to particular instances, it will be important to study it in more detail.

For Deleuze, the affect 'expresses the possible without actualising it, while making it a complete mode'. Commenting on the affect as an entity, he describes the key features of the affection-image, as follows:

The affect is impersonal and is distinct from every individuated state of things: it is none the less *singular*, and can enter into singular combinations or conjunctions with other affects. The affect is indivisible and without parts; but the singular combinations that it forms with other affects form in turn an indivisible quality, which will only be divided by changing qualitatively (the 'dividual'). The affect is independent of all determinate space-time; but it is none the less created in a history which produces it as the expressed and the expression of a space or a rime, of an epoch or a milieu (this is why the affect is the 'new' and new affects are ceaselessly created, notably by the work of art) [...] In short, affects, quality-powers, can be grasped in two ways: either as actualised in a state of things, or as expressed by a face, a face-equivalent or a 'proposition'.

(Deleuze, 1986, p. 101)

The above quote is one of the most detailed descriptions of the affective element that Deleuze offers; nevertheless it needs further clarification since it involves a complex set of implications. The affect is described as indivisible and yet it can enter into 'singular' combinations with other affects; it will be revealed that although apparently so, it is not at all paradoxical especially when considered in terms of the description of Deleuzian multiplicities in Chapter 6. The 'singular' combinations can be seen as the combinations of singularities that exist within and as the manifold. The affect is independent of determinate space-time as

is the manifold but obviously, it is characterised by an actualisation of events from the complete mode of the possible mentioned above. Deleuze characterises affects as 'quality-powers', a complex entity composed as the 'state of things' which on expression becomes the 'quale' of an object or an expression of passion or action. Until it is expressed, the entity remains as affect and is describable under affection-image. Since Deleuze's concept of the affection-image was originally used by him to analyse cinema, he illustrates it through two types of examples from film. One of these is the close-up and the other is the 'any-space-whatever', his conception of the undetermined and fragmented space. Both of these represent intense situations showing a clear link to the intense process of involvement described above.

In the close-up, Deleuze comments, 'We find ourselves in front of an intensive face each time that the traits break free from the outline, begin to work on their own account, and form an autonomous series which tends towards a limit or crosses a threshold' (Deleuze, 1986, p. 91). He provides the example of the close-up of the priest's face in Sergei Eisenstein's film *The General Line* (Aleksandrov and Eisenstein, 1930) where the close-up shows the priest as man of God changing into the priest who is the exploiter of peasants, through a series of affective movements on an otherwise motionless face. The any-space-whatever is similar in its function:

It is not an abstract universal, in all times, in all places. It is a perfectly singular space, which has merely lost its homogeneity, that is, the principle of its metric relations or the connection of its own parts, so that the linkages can be made in an infinite number of ways. It is a space of virtual conjunction, grasped as a pure locus of the possible.

(Deleuze, 1986, p. 113)

As this analysis of the affective-image has already begun to show, the locus of the possible is directly related to Deleuze's understanding of multiplicity, as understood from the description of the space of possibility above and it is also the intense zone where actions are in-process. The any-space-whatever, for Deleuze, is the more subtle of the two manifestations of the affection-image and as it will be seen, from the game studies perspective, it is the more germane one. Therefore, it is necessary to describe this 'space' in some detail in view of the subsequent discussion. True to the character of the affection-image, the 'space-time' of the any-space-whatever is indeterminate and it is a pure potentiality. Deleuze finds a good example of this in Robert Bresson's *Pickpocket*

(Bresson, 1959) in the vast spaces depicted through rhythmic continuity shots that to Deleuze, correspond to the affects of the protagonist. The possibilities of the affect are, however, expressed only in their actualised form or the action-image.

Deleuze defines the action-image as consisting of a world where 'qualities and powers [...] are actualised directly in determinate geographical, historical and social space-times'. He states that

The milieu and its forces incurve on themselves, they act on the character, throw him a challenge, and constitute a situation in which he is caught. The character reacts in his turn (action properly speaking) so as to respond to the situation with other characters. He must acquire a new mode of being (*habitus*) or raise his mode of being to the demands of the milieu and of the situation. Out of this emerges a modified situation, a new situation. [...] The action in itself is a duel of forces, a series of duels: duel with the milieu, with the others, with itself. Finally the new situation which emerges from the action forms a couple with the initial situation. This is the set (*ensemble*) of the action-image, or at least its first form.

(Deleuze, 1986, p. 146)

Within the space of possibility, the action in digital games is also a series of duels: literal duels with other characters in the game-system, a struggle against the milieu's affordances and restrictions (for example, one can break boxes in *Half-Life* but not water pipes) and finally a struggle with the other identity(ies) that we take on in the game. Galloway compares this process with cybernetic feedback cycles; while such a comparison may work in some cases, it must be noted that the game is no closed system free of external influences as some models of cybernetic feedback are. The constantly actualised series of 'duels' is a more complex system because it is not merely the exchange of information between two fixed agents. Here, the agent itself is mutable in that it does not just modify itself but acquires a 'new mode of being', altogether. Further, the 'duel' is not only with the milieu – it is reflexive and turns on the subject itself. In Deleuze, the action always needs to be considered together with perception and affection and it is necessary for Deleuzian accounts of video games to study the whole process of how the action-image forms. If one seeks a comparison between the Deleuzian model and the conceptions of agency, examined earlier, the location of the action can be seen to have shifted from the agent or the subject to a space of possibility embodied by the affection-image.

The affection-image is the region of the possible and the zone of passing from one quality to another or the development of the expression of a power and any Deleuzian description of possibility necessarily includes a discourse on 'choice'. The criticism levelled against Deleuze claiming a denial of agency in his philosophy or the fact that he 'recuperates' agency at crucial junctures (an allegation that makes the element of agency seem almost opportunistic) has already been shown as misleading, especially when considered in terms of the analyses of Deleuzian agency by commentators like Armstrong. The Deleuzian idea of choice is different in that he believes that 'if I am conscious of choice, there are therefore already choices that I can no longer make, and modes of existence that I can no longer follow' (Deleuze, 1986, p. 114). In such a conception of choice, the multiple modes of existences still coexist. The network of choices is a region of indetermination: a zone where possibilities are actualised as choices. Whereas most accounts of agency consider the subject (or agent) to be a constant; even in his earlier works, like *Empiricism and Subjectivity* (Deleuze, 2001), Deleuze already links the subject to movement and 'becoming'. He says that 'the subject is defined by the movement through which it developed. [The] Subject is that which develops itself' (Deleuze, 2001, p. 12). The choices are linked to a subject that is in development and motion. Following such a description, the process of choice-creation and the actualisation of possibilities (in the action-image) is not explainable as agency but is more aptly described as a 'becoming'.

Colebrook observes that even conscious thought (which is often believed to be the chief force behind human agency) is not an immutable entity. As outlined in the above analysis, she states that it can be transformed by interaction with other elements. According to her,

Thinking [...] is a power of becoming *and* its becoming can be transformed by what is not thinkings own – the outside or the unthought. Thinking is not something 'we' do; thinking happens to us, thinking happens to us from without. There is a *necessity* to thinking, for the event of thought lies beyond the autonomy of choice. Thinking happens. At the same time, this necessity is also the affirmation of choice and freedom; we are not constrained by an order or pre-given end. True freedom lies in affirming the chance of events, not being deluded that we are 'masters' or that the world is nothing more than the limited perceptions we have of it.

(Colebrook, 2001, p. 38)

In Colebrook's analysis, the process in which 'becoming' is conceived implies a different definition of choice: choice does not need to be either human-centred or absolute. The event of thought is a 'becoming' and it occurs in the affective-region within which the actualisation of the event takes place. Instead of the carefully predetermined agency of conscious human thought, the action in the computer game develops as a result of the process of 'becoming' in the interaction of the 'thought' of both the human and the computer. Therefore, 'becoming' not only explains the development of the action in the computer game; simultaneously, the development of the subject is described. The two aspects of 'becoming' are combinatory and they help to describe the process of involvement between the player and gameplay. Before attempting to understand 'becoming' as involvement, however, it will be necessary to analyse how the action in video games is a 'becoming'.

In the cinematic affection-image, the close-up and the any-space-whatever seem to be alive with possible events about to take place – the events *are not yet* instantiated but are part of a continuous process of change. This affects identity, location and diegesis. Actions in digital games exist in such a process of 'becoming'. They occur on an instant-to-instant basis and in constant interaction between the human and machine. The resultant choices are made from a range of possibilities constrained by many influencing factors, be they algorithmic code or player predilection, mood or strategic plan. Finally, the elements of the system keep changing during gameplay as each one approaches the other. In the digital game, this happens in a zone analogous to the affection-image (exemplified in the intensive face of the close-up or the any-space-whatever) in cinema. The above analysis shows how conceptions of agency and engagement must take into account the interplay between the machine and the (human) player that occurs within an intensive space of moment-to-moment actualisations of events. The process of 'becoming' therefore both needs and supports the variations in gameplay and the multitelic possibilities analysed in Chapter 6 that form the space of possibility. The space of possibility in digital games can, therefore, be called the 'zone of becoming'. What follows is an exploration of how video game action is located in this 'zone'.

Entering the 'Zone': Choice, action and becoming in video games

This analysis will focus on a literal 'Zone': a place which is there and yet not there, where wishes come true and yet they do not and finally,

which the player is free to explore and interact with. The 'Zone' in question is the post-apocalyptic place (hence the quotation marks) in the computer game *S.T.A.L.K.E.R.: Shadow of Chernobyl* and in a film by Andrei Tarkovsky. A second blast at Chernobyl has caused serious radioactive reactions and mutations to life in the region. It has been cordoned off by the government but is nevertheless a favourite haunt of bounty-hunters looking for radioactive artefacts or for the legendary 'wish granter', which is supposed to make one's wishes come true. The concept of the Zone has been taken from *Roadside Picnic*, by Boris and Arkady Strugatsky and from Tarkovsky's film adaptation, *Stalker*. In the light of the above discussion, it will be intriguing to compare the affection-image in the film with that in the game so as to better understand the process of action in the two media. In the game, the player plays as a 'stalker' or an illegal explorer/artefact scavenger in the Zone, much like the protagonist of the film who also explores the Zone and takes people there as an illegal guide.

The Zone itself is an extremely intriguing part of the game. It is the locale of the game – the space in which the player moves, lives and survives. Unlike the almost unpopulated Zone of the film, it is beset with mutant animals, zombieified stalkers, stalker factions, scientists, traders, the regular Ukrainian army and the *Spetsnaz*. The landscape itself, however, is equally stark. The game is in colour but the colours are drab and, at times, the landscape verges on being sepia-tinted. The Zone constantly exhibits micro-movements and there are various 'anomalies', or areas of radioactive unpredictability, some of which the player becomes familiar with during the course of the game and others which remain unknown. The game has a built-in randomiser function that enhances its emergent properties and makes the anomalies and challenges appear in different places in different instances of gameplay.

For example, as I reached the level called Pripjat (which can be the penultimate stage of the game unless the player goes back to other visited areas) during a gameplay session, my *avatar* was attacked by a pack of mutant 'pseudodogs' and was killed after a brief fight; but in another session, on retracing the same moves these dogs were nowhere to be found and it was possible to move to a different section.

An online review makes an important point about the game. Its concluding comment seems to get to the soul of the game: 'For those that manage to survive the Zone, the most disappointing thing about the game may be that it may leave you hoping that there was more' (World 1–1, n.d.). The key point to note here is that the Zone will 'leave you hoping that there was more'. What the reviewer sees as a

'disappointing thing [...] hoping there was more' is actually more complex. The disappointment may arise because the game does not provide a feeling of completion: there is always more of what the reviewer calls 'unfulfilled promises'. The Zone is a zone of 'becoming' and as in an 'any-space-whatever', it is a locus of possibility.

The game has seven different 'official' endings of which in five of them the player encounters a mechanism called the 'wish-granter', reminiscent of the wish-fulfilment room in Tarkovsky's film. The wish that the player makes in front of the wish-granter is decided for the player by the game. A first impression might make this seem like a strange predestined world but there is more to consider. The wish that the player 'makes' depends on his or her reputation (built up as a cumulative of his or her actions) in the game. Therefore, this is not a denial of player action. Rather, it is the result of a series of choices that developed the character of the player within the game. Gameplay therefore results in a becoming-stalker and this 'becoming' is actualised from within a multiplicity of possibilities. The *telos* that a player reaches may vary in each instance of gameplay because each time it results in a different 'becoming' and therefore different characteristics both for the (human) player and the (machine) algorithm. The characters of the human and machine players, as discussed above, are not discrete and are always interdependent: hence, action is experienced as a complex of the interactive choices of both the human and machine components. In the 'wish-granter' endings of *S.T.A.L.K.E.R.*, the wish is made for the human by the machine but only as a result of the series of choices that the human has made when interacting with the algorithm. Characteristically, even the wish is fulfilled and yet not fulfilled: in one of the endings, the protagonist asks that the Zone disappear and everything around him suddenly grows lush and green when the camera turns towards him and reveals that he has gone blind. Besides, the 'wish-granter' endings the game has two other possible endings. In these, a further new level is revealed where the player encounters an element called the C-Consciousness. Here, it is possible either to become part of it or to destroy it and neither option provides a conclusive ending.

The Zone, therefore, exists as a space of possibility and whatever happens to the player in the Zone (there is always a high chance that he or she will not complete the game and will meet an end not described here) is an actualisation of the virtual possibilities. The same can be observed in Tarkovsky's film. Anna Powell, discussing Tarkovsky's *Stalker* in terms of Deleuzian cinema theory, comments on the 'overt stretching out of the affective interval between action and perception' (Powell, 2007,

p. 137) in the film. She goes on to say that 'as Zone and viewer, screen and brain intersect, we are the visitors on which it depends. Together, brain and screen make an unformed hiatus of waiting, with potential for unexpected change' (Powell, 2007, p. 139). In the film, there is a hint that different alternate states of existence are present within the Zone and a sudden shift from colour to sepia in a scene showing the protagonist lying in a different place from where he is shown earlier and later, seems to illustrate this. The game, too, shows sudden glimpses from what seems another existence – whether these are flashbacks or flash-forwards or alternate possibilities in the protagonist's story is not clarified. The similarities between the digital game and the Deleuzian analysis of film in terms of perception, affection and action become clearer through this comparison of the game and the film versions of the Zone. Powell's description of the Zone in the film is important. She comments that:

In the Zone, human norms are likewise suspended in the slowly moving medium of time and natural forces. Motion is intensive rather than extensive: swaying grasses, wild flowers stirred by wind and darting insects [...] the Zone is alive with the intensive, self-reflexive forces of the mind itself. A shot of the three men from behind suggests that the Zone, or a presence in it, watches them unawares, as 'the moment someone shows up, everything comes into motion'.

(Ibid.)

In the intensive motion of the Zone, the film provides a good example of the Deleuzian affection-image. The Zone in the film is a living entity, sentient yet motionless till the appearance of external stimuli. In a sense, it is the Bergsonian motor impulse upon a sensory plate that is in evidence here. The Zone is a region of potentialities and as defined in the previous chapter, it is therefore a mesh of possible events and planes of time.

When asked about what the Zone symbolises, Tarkovsky comments that the 'zone doesn't symbolise anything [...] the zone is a zone, it's life and as he makes his way across it a man may break down or he may come through' (Tarkovsky, 1989, p. 200). The situation described is like that in the computer game: in *S.T.A.L.K.E.R.*, the Zone plays a crucial part in the player's life or death – he or she may break down or come through and the end result is not agency but rather the duel implied in the action-image. The mesh of possible actions in the affection-image obviously has a complex temporal structure; this is equally applicable

to the computer game, as seen in the previous chapter where Deleuzian theory has effectively described the multiplicity of the events within the gameplay. Of course, the media-specific differences between the two media forms persist: Gameplay allows for a greater degree of multiplicity within its structure and arguably, also for a more heightened degree of engagement through the act of becoming-stalker. The action in the game is more of a sensory-motor phenomenon than it is in cinema. Nevertheless, the Deleuzian analysis of cinema in terms of perception, affection and action is in many ways extremely useful in understanding video game action. It is not surprising, therefore, that in her comparison of how digital media and film can engineer altered states, Powell mentions video games as media which 'modify the mainstream narrative templates [for example, those of films like Tarkovsky's *Stalker*, as described above] that have already incorporated them by the game's "assembling and reconfiguring" elements from compiled image sequences' (Powell, 2007, p. 180).

Earlier in this chapter, it was observed that Galloway makes the connection between games and Deleuzian cinema theory in his study of video games; Powell arrives at a similar connection but from her analysis of cinema in terms of Deleuzian film theory. It is important to note that despite starting from very different perspectives, the two approaches come to similar conclusions about video games. The usefulness of analysing video game action in terms of the Deleuzian framework of the 'zone of becoming' is, therefore, obvious: similarly, the implications of Deleuzian film theory become clearer through the analysis of video games.

Final comments: 'agency' as 'becoming'

Read in terms of Deleuzian theory, the conception of ludic agency is seen as a process of actualisation of events in the region of the affection-image through what is best described as the process of 'becoming'. *S.T.A.L.K.E.R.* is about 'becomings' and its action is defined by the process of 'becoming'. Indeed, it occurs within and as the micro-movements that were observed in the affection-image. Galloway is right in claiming that digital games are driven by action and his application of the Deleuzian concept of the action-image certainly opens up important avenues for researching the nature of action in digital games. Action is present in the interaction of human and machine as a choice actualised from the many possibilities in the locus of the affection-image, which mediates between perception and action. What Deleuze observes

in earlier narrative media like cinema, is equally if not more applicable to digital games. Without considering the space in which ludic action, in its multitelic and multitemporal dimensions, and the intensive engagement between the player and the machine through which it is conceived, any understanding of gameplay is left incomplete. True, the one word for games research may be action but it exists only as part and parcel of perception and affection. Action occurs within an intensive and ongoing process of the realignment of possibilities within the deep space of gameplay: or every time we click the mouse and 'fire' into game-space. Such an analysis also accounts for a further complexity that earlier conceptions of agency do not account for: the process of involvement and the resultant reconfiguration of the identities of the player and the game-system also form part of the process of 'becoming'. Video game critics are unanimous in their recognition of action as the primary element that needs to be analysed to facilitate an understanding of gameplay: from this study of action as 'becoming', it is evident that a discussion of agency alone is inadequate for understanding action and any analysis must take into account the process of involvement that is the other intrinsic part of 'becoming'. The next chapter will pursue this in more detail.

8

Playing in the Zone of Becoming II: 'Becoming' as Identity-Formation in Video Games

'Becoming': From action to engagement

The 'zone of becoming' in *S.T.A.L.K.E.R.*, is a space where the player literally and metaphorically gains another identity. The player enters the game as a Stalker who has been left for dead on the outskirts of the Zone, suffering from a complete memory loss. The progress in the gameplay therefore involves the development of the identity of the protagonist in the game's 'plot' (or the *avatar*) and simultaneously, also that of the player. Within the space of possibility, or the 'zone of becoming', the identity of the player-protagonist in the computer game changes as the possibilities within the affection-image are actualised as the action-image. Certain games like *Fable* (Big Blue Box, 2004) or *Black and White* (Lionhead Studios, 2001) lay this down in no ambiguous terms: what one *does* in the game determines what one *becomes*. This perception of a shift in identity is a symptom of 'becoming'. Following on from the earlier discussion on agency, this chapter shows how the identification occurs not only with the avatar but also with parts of the entire game-environment and the machine itself.

In the film *The Matrix* (Wachowski and Wachowski, 1999), Morpheus takes Neo inside an empty simulation program and tells him that his existence within the program is in the form of a 'residual self image' or the subconscious maintenance of one's projected physical appearance in the digital world. This seems to be influenced by the gameplay experience and is a literal plugging into the game. The video game experience, however, is not as seamless; perhaps a closer cinematic representation can be found in David Cronenberg's *Existenz* (Cronenberg, 1999), which heavily emphasises the organic nature of the gameplay

experience. Gamers are only too well aware that any such identification with in-game characters cannot be *total*.

So far two factors have been seen as vital for the construction of any gameplay: the space of possible events and the choices made during the course of gameplay. There is a third major factor that mediates between the first two. The closest corresponding terms for the latter, in current research, are 'engagement', 'immersion', 'engrossment' or 'involvement'. In the analysis of ludic action as becoming started in Chapter 7, involvement was introduced as its other key facet: choices made within the zone of becoming are only possible when there is a deep involvement between the game system and the player. Calleja also introduces the rather useful term, 'incorporation'; the role of this vis-à-vis involvement and within the zone of becoming will be addressed later.

All the various aspects in which becoming can be seen in process in earlier narrative media are also inherent in more recent media forms, including video games. With this in mind, the complexities of this experience will be explored further in terms of becoming.

Not surprisingly, the attempts to describe the involvement in video games start through comparisons with earlier media, albeit using a different critical vocabulary. Murray compares the experience with the holodeck in the *Star Trek: Voyager* series where Captain Janeway interacts directly with the characters and events of a gothic holonovel set in Victorian England. Ryan comments on the involvement between text and reader in novels such as *Madame Bovary* (Flaubert, 2010) and Charlotte Brontë's *Shirley* (Brontë, 1998). However, it remains to be seen how far these earlier accounts succeed in representing the process of gameplay.

In the holodeck: 'Immersiveness' and video games

To describe the involvement in gameplay, Murray uses the term 'immersion'. Many other commentators, some important exceptions notwithstanding, have also followed suit in accepting it as the standard term. The present analysis will, however, continue using 'involvement' in order to avoid the problematic connotations of 'immersion' that have emerged in subsequent research.

For Murray, the roots of immersion run deep in traditional literary criticism and link with Coleridge's notion of the 'willing suspension of disbelief' (Coleridge, 1847, p. 442). At the other extreme, she projects a futuristic science-fiction vision of digital immersiveness by comparing

it with the holodeck technology in *Star Trek*. She describes immersion as 'a metaphorical term derived from the physical experience of being submerged in water' (Murray, 1997, p. 98) and maintains that 'we seek the same feeling from a psychologically immersive experience that we do from a plunge in the ocean or swimming pool' (Ibid.). Judging by this comparison with submergence, Murray's description of immersion resembles a type of involvement like that in the fictional world of Don Quixote or the holodeck: an experience that is exclusive of everything else. The claim that the video game player is a Don Quixote cannot be left uncontested: the gamer's experience is not that of a total submersion in another world.

According to Murray, immersion can be achieved by structuring participation as a visit to the fictional world or as a masked participation in a role-play. In both of these cases, the experience is not as total as her initial analysis makes it seem. Murray has in mind the funhouse or amusement park rides which, according to her, provide the experience of an immersive visit that is also a narrative. It is, however, obvious that the totality of immersiveness is not experienced in the funhouse – the media-specificity of the rides is still to be experienced and despite any 'willing suspension of disbelief' the ride chairs, seatbelts and monorail tracks all preclude any sense of totality. As far as role-playing with masks is concerned, Murray herself acknowledges that the 'mask is a threshold marker [...] it gives us our entry into the artificial world and also keeps some part of ourselves outside of it' (Murray, 1997, p. 113).

The experience of immersion, in both of the above cases, is maintained by a combination of configuration and imagination; in video games, both of these elements need to work coherently to create the sense of involvement experienced by the player. This is true even of earlier media, where the reader of a printed book has to fill out the details of the fictional world with her imagination: this, in itself, is a type of configuration corresponding to the filling out of the empty interstitial textual spaces. Therefore, the textual framework cannot be ignored in the imaginative/configurative processes that create a reading. Consequently, the immersion of the reader in the fictional world cannot be total because the medium of the text is not transparent. Accordingly, Ryan describes the construction of a textual world as an 'active process through which the reader provides as much material as he derives from the text' (Ryan, 1999).

She is sceptical of the so-called holodeck experience and states that the active embodiment in a virtual world where the medium is transparent, as yet, is nothing more than a myth. Digital games, or any

technology for that matter, do not even come close to a situation where the medium is transparent and the user is totally absorbed within the environment, exclusive of any other world. As Ryan astutely observes, 'Except for some pathological cases mainly documented through imaginary characters – the usual suspects, Emma Bovary and Don Quixote – media users remain fully conscious of contemplating a representation, even when this representation seems more real than life' (Ryan, 2001, p. 351).

Interactivity vs immersion: Another problematic perspective

Although she differs from Murray regarding the transparency of the medium, Ryan retains Murray's terminology of 'immersion' and develops on her linking of immersion and action. Murray states that 'the more realised the immersive environment, the more active we want to be within it' (Murray, 1997, p. 126); whereas she develops this into her concept of agency, however, as shown in Chapter 7, Ryan concerns herself with the less controversial concept of 'interaction'. Like Murray, Ryan also sees the possibility of immersion and interaction being inter-linked but she can only see this possibility within virtual reality (VR). According to her, in VR, 'the user's awareness of the medium does not separate this from the immersive dimension' (Ryan, 2001, p. 351) but in every other medium, she sees the conflict as being sustained. She states that 'in literary matters, interactivity conflicts either with immersion or with aesthetic design, and usually with both' (Ibid.). Ryan, therefore, argues for a binarism separating immersion and interactivity, which she claims is based on the awareness of the medium. For her, interactivity involves a greater media-specific awareness and self-reflexivity than is present in immersive processes. Extending this argument further, Ryan concludes that 'interactivity conflicts with the creation of a sustained narrative development, and consequently with the experience of temporal immersion' (Ryan, 2001, p. 258).

However, she recognises the difficulty in denying that both the properties characterised as interactivity and immersiveness are prominent aspects of narrative texts, be they cinema, games or literature. She, therefore, employs the metaphoric distinction of the text-as-world and the text-as-game to represent the two aspects of texts. For her, the immersive text is to be understood as one that allows the reader to be, as it were, 'lost in a book' or to be a spelunker in a textual world. The interactive text is seen as being different because by subverting (and playing

with) textual rules, it demystifies the textual framework and thus according to Ryan, works contrary to the willing suspension of disbelief. This division, however, cannot be sustained across texts even for Ryan and she concedes that both schemes of viewing texts can be concurrent. As she comments, 'the best compromise of all is simply to regard the concepts of the game and the world as complementary points of view on the same object, much in a way modern physics uses the metaphors of wave and particle as alternative conceptualisations of light' (Ryan, 2001, p. 199). Her following comment, however, reveals more problems:

Yet because the observer cannot simultaneously occupy two different points in space, the complementarity of the two metaphors also means that we cannot experience both dimensions at the same time. We must therefore immerse and deimmerse ourselves periodically in order to fulfill [sic], and fully appreciate, our dual role as members of the textual world and players of the textual game.

(Ibid.)

Like her earlier comparison with the wave-particle duality in quantum physics, her model of complementarity between immersiveness and interactivity (as described through the metaphors of text-as-world and text-as-game) seems to rely on an oversimplification.

Ryan sees the two elements as binaries and, therefore, their respective experiences as mutually exclusive. She sees the complementarity working at its best in VR, where she observes 'the most complete fusion of immersion and interactivity' (Ryan, 1999). The 'profound difference of spirit' that she observes between VR and literature needs to be further examined. This binarism takes another significant turn with the following question: What happens in the video games, which have both the elements of playability and narrative? It must be noted that Ryan does not devote much space to the discussion of immersion and interactivity in video games and even when she does so, her examples are limited to a very few games and to a cursory analysis of MOOs (acronym for MUDs Object-Oriented). As far as the latter are concerned, she comes close to seeing interactivity and immersiveness working closely in them only to comment subsequently that if this is so then this is only dependent on the skill with which the MOO players deploy language.

For Julian Kücklich, '[Ryan's position] often requires a sort of "willing suspension of disbelief" on the part of the reader. [Her] line of argumentation is not always easy to follow, at all times associative, often bordering on the incoherent' (Kücklich, 2008). The analysis of the

'complementarity' of the categories of immersiveness and interactivity is not really clear and often gives contradictory impressions leading Kücklich to comment as he does. The problem arises mainly because Ryan, like Murray, attempts to distil the experience of involvement into the respective experiences of interactivity and immersion. In her schema, these two categories come together only under certain technological constraints such as those provided by VR. However, the separation that she seeks to establish exists only as an artificial construct: The process of involvement, as identified by psychologists such as Csikszentmihalyi, is described as a merging of action and awareness. This merging is, however, not an external addition of the one to the other. It is intrinsic in that the change in one experience also alters the other. Neither is it possible to identify and define the experiences as being located in separate centres and nor is there a hierarchy of structures as established by Ryan's metaphors of texts-as-worlds and texts-as-games, where either immersiveness or interaction occupy the primal position in the reading experience. Instead of a 'suspension of disbelief', perhaps it might be useful to compare the experience of the video game with J.R.R. Tolkien's 'secondary belief' or the adding of a belief to experience the story-world. However, this too cannot be viewed as an external addition of one more belief about the story-world.

The problem of having to provide an explanation that sits uneasily in logical terms is avoided if the phenomenon of involvement is recognised as a process which cannot be separated from action. This holds true equally well for VR, video games and earlier narrative media like printed fiction and cinema. This is not to say that the process itself is the same for all cases but rather to state that the general principle governing the process of involvement is similar. The nature of the action in novels obviously differs from that in video games. Whereas the action that the printed text allows readers to perform mostly happens in the imagination, in video games, it also takes place on a psychosomatic plane. Despite the media-specific differences, the principle of involvement remains similar in that it is in every case closely associated with action. This becomes more obvious on unpicking some of the other claims that Ryan makes to support her position.

Ryan attempts to employ Barthes's formulation of readerly and writerly texts to make the claim that readerly texts are more immersive while writerly texts are more interactive. As a reviewer notes, Ryan identifies realist novels as being immersive because they involve a passive experience of illusion and literary texts from the modernist period and onwards as interactive because they are reflexive and can be

'played' (Dannenberg, 2004). For Barthes himself, however, the boundaries between the two categories are not as clearly defined as they are for Ryan; as Graham Allen comments, 'Barthes demonstrates [how] the readerly text threatens to explode into something writerly, plural, paradoxical' (Allen, 2000, p. 81). By analogy, therefore, the immersive and the interactive elements also do not exist as watertight categories but are interdependent even in literary texts. Ryan's own examples will be analysed here to illustrate this.

Calvino's *If on a Winter's Night a Traveller* (Calvino, 1982) is a key text discussed by Ryan under the category of interactivity as described using the 'text as game' metaphor. Calvino's novel certainly makes the reader conscious of its medium and incorporates the element of play in it; however, whether it has any special 'interactivity' is questionable because it does not provide any actual opportunity of configuring the text, like a video game or a VR program might. The interactivity, like in other novels, is dependent on imagination, albeit perhaps to a different degree. The reader's imagination, of course, works within the world generated by the text to create a certain version of the story when it interacts with the descriptive and narrative elements in the story. Although the text highlights the possibilities of active readings and keeps the reader aware of the fact that what she is reading is a fiction, it also simultaneously maintains the impression of being real and of involving the reader within its make-believe world. This type of experience is not restricted to texts like Calvino's novel. Contrary to Ryan's claim, this is possible even in realist novels like those of Balzac's as much as in more playful novels like Calvino's.

Commenting on Barthes' analysis of writerly texts, Michael Moriarty states, 'Yet the text still, on this showing, *represents*. By insisting on plurality, heterogeneity, non-totality, giving priority to process rather than product, structuration rather than structure, Barthes has clearly shifted the text towards the ideal plural of *the scriptible*' (Moriarty, 1991, pp. 255, 128). With even the 'readerly' text revealed to be approaching the plurality of the 'writerly' and therefore, closer to Ryan's conception of interaction, her claim for the immersive-interactive binary can be contradicted by the very Barthesian framework which she employs.

It is possible to conclude, therefore, that the immersive and the interactive should not be considered elements with the opposite characteristics or even as separate entities; they are interdependent and supplementary in the Derridean sense. Where interaction ends and immersion begins is difficult to say, if at all possible. The two aspects of the reading experience are intrinsically part of each other and it

is therefore not possible to analyse them separately. Judging from the above discussion, the two terms make very little sense given their problematic implications. As already mentioned, this chapter will use the framework of 'becoming' to describe the intrinsically combined process of action and involvement that defines gameplay. Until such a framework can be clearly established, the process will be referred to as 'involvement' keeping in mind the aspect of action that is also implicit in the use of the term.

The 'intense' experience of gameplay

The process of involvement is felt intensely when playing any of the recent sensation-rich video games. Perhaps one of the best examples where this is illustrated is the game *F.E.A.R.* (Monolith Productions, 2005). The GameSpot review of the game captures the atmosphere very well:

Playing *F.E.A.R.* is like battling through a John Woo movie like *Face/Off*, because when firefights happen in this game, they're downright glorious to behold. Bullets tear chunks out of concrete and wood; blinding clouds of dust and debris fill the air; bodies are torn apart or slump on the ground; and the deathly silence of the aftermath contrasts so sharply with the sheer chaos that erupted only moments before. Gunfights in *F.E.A.R.* just *feel right*.

(Ocampo, 2005, emphasis added)

The review goes on to describe it as, 'This outstanding shooter combines creepy horror with kinetic and visceral action, and it elevates the genre to a whole new level of intensity' (Ibid.). The above extracts indicate how the game seems to involve the body of the player (especially notable in the use of 'visceral'). In fact, even though the only bodily connection is through the mouse, keyboard or console, the involvement is increased by ambient sounds such as the footsteps of the player's character, extremely realistic shadows and the first-person view. The reviewer's comment that the gunfights in *F.E.A.R.* 'just feel *right*' is significant: Here, the gameplay (gunfights) has been associated with *feeling* and this does a great deal to show how much the action in the game and feeling of involvement (or agency and immersion in earlier game studies terminology) are intertwined. While playing *F.E.A.R.* the actions and reactions of the player are nothing less than intense. Especially when crossing the gloomy and empty corridors of Armacham Tech in which the game is

mostly set, players encounter real fear. A gamer commenting on the element of horror in the game, states that 'what gets to me this time around is [...] the atmosphere. I am not ashamed to admit that this little Alma girl scares the bejeezus out of me' (Prosch, 2008). To describe similar experiences, Abe Burmeister's suggests a new term, *intensity*.

Burmeister's concept describes the way in which immersiveness and agency are interconnected during the instances of gameplay within the 'new level of intensity' that the review of *F.E.A.R.* also mentions. He derives his notion of intensity from the Deleuzian concept of the *intensive spatium*. For Burmeister, it denotes, 'a space containing one meaning that can be expressed in a multiplicity of forms and that can only be divided through an act that transforms the system itself' (Burmeister, 2008). He combines this concept with the Deleuzian concept of 'univocity of Being' described in Chapter 6. Describing the functioning of gameplay within the intensive spatium, Burmeister states that:

Rather than creating a 'special awareness' though, what the intensity does is actually create unawareness. In a space of univocal meaning, one's awareness, or at least the meaning associated with that awareness, is one and the same with the univocity. That which lies out of the bounds of the intensity disappears.

(Ibid.)

This formulation brings together two ideas: (1) the self-transforming act is the actualisation of multiple possibilities within the virtual space and (2) anything that lies beyond the bounds of the intensity disappears, creating an experience that is oblivious of all else. While his bringing together of action and intensity on the same plane begins to capture the sense of involvement within gameplay, Burmeister's analysis also poses some major conceptual problems.

In his reading, the intensive space is seen as a single space containing a single meaning that is expressed in a multiplicity of forms. Effectively, such a claim seems to imply that there is *one* final meaning that rami-fies into a multiplicity of meanings. As is attested by player-experience, gameplay means different things to different players and using the Deleuzian framework from the earlier chapters, it can be stated that the nature of the game as an assemblage precludes a conception of it as privileging any one base meaning. Burmeister's conception of the *intensive spatium* is adapted from DeLanda's reading of it. DeLanda's description, however, is different and closer to Deleuze's own. For DeLanda the intensive space is an 'undifferentiated space' and is comparable to a

nonmetric continuum from which the metric (extensive) space that we inhabit emerges (DeLanda, 2002, p. 25). His account speaks of the 'space of possibility' as an *undifferentiated intensive space*. This is not a space where a single meaning breaks up into a multiplicity of meanings as a tree-like branching that is something that Deleuzian thought opposes; rather, it is like the non-metric and unplotable space of the any-space-whatever, which as seen earlier, is also the 'zone of becoming'. It is more accurate to describe gameplay in terms of actualised possibilities, existing as processes in 'becoming' in the non-metric zone of the Deleuzian multiplicity as described in Chapter 6.

Burmeister's other assertion that intensity creates 'unawareness' creates further problems. According to him, the meaning associated with one's awareness is 'one and the same with the univocity' (Burmeister, 2008). Such a reading, in its overly condensed form, is quite distant from the Deleuzian conception. Instead of inferring the concept of 'univocity' to the reduction to a *one*, the element of immanence that is key to Deleuze's thought needs to be considered; it would be more accurate to say that the gameplay is *at one* with the *space of possibility* (which constitutes the univocity and is simultaneously a multiple space). However, Burmeister follows a different reading of the 'univocity of Being' and this leads him to the problematic claim that whatever lies out of the bounds of intensity disappears. Deleuzian philosophy does not posit the disappearance of possible options; neither does it exclude the possibility of an actualisation being influenced and altered by singularities other than the one under which it exists. In comparison, therefore, Burmeister's conception of intensity is more like Murray's notion of the holodeck, where the immersion creates an unawareness of everything else. The idea of intensity therefore needs to be modified to suitably describe the experience of gameplay.

Burmeister's description of 'intensity' while doing away with the immersion-agency binary, still moves back to the initial formulations of total immersion. Besides the above, another problematic assumption is found informing this position: the identities of the player and the game-character are seen to merge seamlessly into each other. One of the main objections against the implications that the holodeck analogy has for conceptions of player-identity is described by Salen and Zimmerman as the 'immersive fallacy'. For them, such an experience is one where 'the player would identify completely with the character, the game's frame would drop away, and the player would lose him or herself totally within the game character' (Salen and Zimmerman, 2003, p. 453). If this were to happen, then the situation would really be

describable as 'immersion': the totality of the experience would be such that the player would not even know of the existence of any other reality. So far, this is not true of video games. Even if it were, it would still not be representative of the involvement in the gameplay experience. As Elena Gorfinkel points out, this experience 'is not tied to a replication or mimesis of reality' (Salen and Zimmerman, 2003, p. 451); an abstract game like *Tetris* (Pajitnov, 1984) or *Sudoku* can be immensely engrossing despite there being no character to identify with.

James Newman makes it clear that 'it is a mistake to consider that they [video games] present only one type of experience and foster only one type of engagement' (Newman, 2002). Many studies of gameplay erroneously regard the engagement of the human player and the game only in terms of first and third-person shooters. In doing so, of course, some similarities with the holodeck may emerge; on looking closely, however, these are easily revealed to be superficial. In the holodeck, the user can play as a certain character but the point of view is always first-person. Of course, it is also possible to walk through the program as an observer but not affect the events. Although in the *Star Trek* episode called 'Elementary, Dear Data' (Bowman, 1988), the protagonist, Lt. Commander Data, plays at solving mysteries in-character as Sherlock Holmes just as the player of *Half-Life 2* wears the HEV suit and plays as Gordon Freeman; Data, however, does not have the same problematic experience of identity as the video game player. The algorithmic constraints of video games do not allow absolute freeform action or corporeal movement that the holodeck provides. In the case of third-person games, the camera is another problematic issue in the experience of ludic identity. The holodeck user does not have to see herself inhabiting the body of a different character, sometimes even having a different gender. Intriguingly enough, the *Star Trek* TV series or the movies do not have any cross-gender activity on the holodeck.

Besides the above types of games, there is an equally important experience of identity and involvement in games where the player does not have a visible body (even in part like the 'hand' or the gun in FPS games) and where the point-of-view is focused on a whole world rather than an individual and her surroundings. In RTS games, sometimes this 'god's-eye view' is given a characterisation (as in *Black and White* which has the player playing God) but sometimes the player has to work out an identity all for herself. In a two-dimensional game like *Breakout* or *Missile Command*, the player identifies with a paddle or with a bright yellow polygon representing a missile battery.

Sudnow's experience with *Breakout*, already mentioned in Chapter 5, is a case in point:

Playing *Breakout* again and again [...] from the one to the other to the other, I hit slam after slam after slam after slam, and was nodding, and bobbing, and tapping. I was learning to feel it go fast and go slow, to feel how fast fast is from this slow and that.

(Sudnow, 1983, p. 39)

His eloquent description of the experience of playing *Breakout* implicitly makes an important point. The 'I' of his account is a complex identity – it is not just himself as a human player, it is also an identification with the paddle on the computer screen which is hitting the ball 'slam after slam'. The 'nodding, and bobbing, and tapping' are obviously actions that he performs outside the game world but perhaps some of them might also be true of the paddle onscreen. Therefore, it seems as if he is acting both as the paddle as well as himself. The experience of the speed as described by him is also very important: he speaks of going fast and going slow whereas most probably his body does not move at these speeds during gameplay but it is the paddle onscreen that changes speed. Sudnow's description shows that the engagement with the game can be intense whether or not the game environment is realistic and the point-of-view is that of a first person game.

Neither does the player have to identify with a single character or element in the game. In team-based games it is possible to shift between characters during gameplay. In a different case, it is possible that the player keeps shifting her identification with different elements in the game. As the participants in Newman's PhD research interview claimed, 'they didn't consider themselves to be a single *Tetris* block so much as every *Tetris* block whether falling, fallen or yet to fall' (Newman, 2002). From the above cases, it is clear that the identification that occurs between the player and the game is a varied experience comprising of various ways of experiencing points-of-view and just to equate it to conceptions of a holodeck experience would be a mistake.

Further, even if video games do allow the player to experience an environment realistically, the situation in games is quite distinct from that in the holodeck and there are further problems in using the holodeck analogy. The holodeck allows the replication of certain types of objects created within it so that they can be transferred to the real world. Moreover, in *Star Trek*, it is possible to have holodecks within holodecks.³¹ All of these characteristics seem to be ignored by critics who compare digital games with the holodeck. From the above analysis, it is clear that the question of identity in video games is more complex than was understood to be by earlier accounts; it is therefore necessary to attempt a revised understanding of the issue.

Double-consciousness, outmersion and frame-analysis

A more accurate analysis of identity-formation in games is provided by Salen and Zimmerman in the following statement:

A player's relationship to a game character he or she directly controls is not a simple matter of direct identification. Instead, a player relates to a game character through the double-consciousness of play. A protagonist character is a persona through which a player exerts him or herself into an imaginary world; the relationship can be intense and emotionally 'immersive'. However, at the same time, the character is a tool, a puppet, an object for the player to manipulate according to the rules of the game. In this sense, the player is fully aware of the character as an artificial construct.

(Salen and Zimmerman, 2003, p. 453)

Certain key points emerge from their analysis. Intensity plays a key role in characterising the relationship between the game and the player. However, unlike in Burmeister's conception, here, intensity does not imply being oblivious of all other awareness and the identification, therefore, need not be total. Salen and Zimmerman recognise that the player is aware of the in-game character as an artificial construct. Their idea of 'double-consciousness' provides an appropriate framework for analysing in-game identities although care should be taken not to interpret it as a clear-cut duality, as Newman does.

Newman concludes that identification occurs in different processes for gameplay and character. Developing this position, he divides the 'double-consciousness' of Salen and Zimmerman into two discrete entities: off-line and on-line. For him 'off-line' means 'periods where no registered input control is received from the player' (Newman, 2002) and 'on-line' is the term for the period of player interaction. Newman, however, concedes that 'the binarism of on-line and off-line is insufficient to capture the variety of states of engagement. For this reason, on-line and off-line engagement should be thought of as the polar extremes of an experiential or ergodic continuum' (Ibid.). This experiential or ergodic continuum could be compared to the non-metric continuum of the any-space-whatever or the intensive spatium, described earlier. He does not take this approach but maintains, instead, that 'on-line, the "character" in the sense we understand it in non-ergodic media, dissolves' (Ibid.). For him, the character only exists in the 'off-line' sequences like cutscenes and becomes a mere vehicle during gameplay. As an example,

Newman discusses the character-formation of Snake, the hero of the *Metal Gear* games:

The 'characterisation', individuality and distinctiveness of Snake comes not from his appearance On-Line (where 'he' is embodied by the player as a set of available techniques and capacities) but rather in the Off-Line cut-scenes and contextualising narratives of the introductory sequences. On-Line, there is no Snake.

(Ibid.)

However, the concept of seeing the 'on-line' status character as that of a mere vehicle begs more questions. A simple comparison between the gameplay of *Metal Gear* and that of a racing game like *Need for Speed* highlights the problem with this vehicular analogy.

Developing Newman's point about the vehicle-like status of the 'on-line' character, it is clear that there is an obvious difference between playing as Snake in *Metal Gear* and driving a Lamborghini Diablo in *Need for Speed*. The concept of the *avatar* comes in useful, here. In *Need for Speed*, the player plays as herself driving a racing car, whereas in *Metal Gear* she plays in-character as Snake. The *avatar* has its distinctive characteristics and in this case, they can be experienced during gameplay and are quite different from the experience of driving a vehicle. Snake, for one, can smoke cigarettes and Max Payne does not use the standard first-aid kit to replenish health but prefers painkillers, in consonance with the theme of the game. In *Half-Life 2*, there are driving sequences similar to *Need for Speed* but the experience is not the same. The back-drop of the *Half-Life* story is important here and the player drives as Gordon Freeman; she can leave the vehicle and still be Gordon. Hence, it is difficult to see Gordon as a mere vehicle *sans* character during the gameplay.

There are similar issues with playing as Snake: for example, if the player is a non-smoker, she can choose not to smoke within the game but she cannot ignore the option of smoking built into the controls and scripted into her character's habits. While freeform games like *GTA* allow players to wander around and 'do their own thing', the game-world nevertheless reacts to the player *in-character*. For example, it is possible for the player to treat *GTA* as a non-violent driving game but while driving in rival gangland, the risks of getting shot remain, because in terms of the game-world the player is still a character during gameplay.

Further, games like *GTA: San Andreas* contain possibilities of acquiring skills and even physical traits during gameplay. For example, in *San*

Andreas it is possible for the player-protagonist, CJ, to become more muscular and healthy by exercising at the gym. Again, typically illustrating how video games resist binary classifications, this body-building becomes a character trait and at the same time also a part of the gameplay because it affects how much damage CJ can take.

Newman bases his conclusions about Snake on Kojima's comment:

We tried not to give him [Snake] too much character because we want players to be able to take on his role. Snake isn't like a movie star. He's not someone you watch, he's someone you can step into the shoes of. Playing Snake gives gamers the chance to be a hero.

(Newman, 2002)

Despite Kojima's assertion, it is clear that though the designers might not have wanted to give Snake 'too much character', they nevertheless created him with enough for a convincing and consistent role-play. The fact that *Metal Gear* has had many successful sequels and that the name Snake has itself become a marketable feature in all of them, is a case in point. Therefore, instead of trying to understand a phenomenon like 'double-consciousness' through a clear-cut division into a binary classification, more work needs to be done in examining its nature as a continuum where character, game environment and the actions of both player and game algorithm are inseparable and yet where the relation between the player and the game-system is not entirely seamless.

After pointing out that the 'double consciousness' suggested by Salen and Zimmerman is not conceivable as a set of binaries, it is nevertheless important to show how the concept functions. As stated earlier, even in FPS games, where the fusing of the player and the in-game character has been made much of, the identification is not seamless. Laurie Taylor observes, 'FPS games also disrupt the gaze by removing the player from the field of gaze' (Taylor, 2003). As Taylor states, seeing a different image of oneself in an in-game mirror can no doubt be quite a jarring experience.

The experience is further problematised in *Wolfenstein 3D*, where the display contains the face of B.J. Blazkowicz, the character being played. The face, here, disrupts the player's complete identification with the protagonist. However, at the same time it does create a sense of identification because it reflects the state of the player's health (grimacing in pain when it loses health and dripping blood when the health-meter is low). This identification is similar to what players experience when they exclaim, 'I've lost health' or 'I'm being fired upon'.

In third-person games like *Max Payne 2* or *GTA: San Andreas*, it is also possible to see the reflection of the protagonists in mirrors. This seems less jarring initially, since the reflections show the front-side view of the character that might have already been familiar to players from the game literature, cutscenes or from profile views during gameplay. However, on further consideration, it emerges that the player sees herself as inhabiting a different character's body and seeing the reflection of that different body. To return to Salen and Zimmerman's definition, the character in the game is not exactly a puppet in the conventional sense. Unlike a puppet, the character in a third-person game cannot be turned around and its face can only be seen in a mirror, only as a representation of the player's face. The double-consciousness in digital games poses a paradoxical situation. On the one hand, there is no total identification between the player and the in-game character or element, which seems at times like a vehicle or a puppet. Yet on the other hand, if it is a puppet, it is one in which the player-identity also gets absorbed.

The study of the complex and paradoxical nature of identity in video games has major implications for understanding the process of involvement. Frasca, in a parallel analysis to that made by Salen and Zimmerman, describes the player's awareness of the environment using a novel term: outmersion. Frasca's neologism is coined to indicate the player's capacity to view the game from outside. However, Frasca complicates the concept further by expanding it to what he describes as 'meta-outmersion'. He defines this as follows:

Unlike traditional outmersion – where the player distances herself from the game in order to critically analyse it – meta-outmersion happens when the player becomes self-aware of outmersion itself. In other words, the player sees herself critically reflecting on the game and connects this experience with the world outside the game (the so-called 'real' world).

(Frasca, 2006)

Frasca's analysis supports the idea that the planes of identification and involvement exist as a process and as a multiplicity. The phenomenon of involvement does not exist as a unitary experience. This unravels various levels of experience, such as those occurring within the game or outside the game or in the framing of the experience of the game in relation to one's non-game life.

This illustrates how the experience of the gamer is like a Deleuzo-guattarian assemblage: Moving far beyond the initial assumptions of a

simple and unitary immersive experience, the process of involvement can now be seen to be connecting or, as it were, plugging-into life itself. It is therefore not surprising that Frasca attempts to explain the processes that he describes through comparisons with the 'forum theatre' conceived by the Brazilian playwright, Augusto Boal, whose work he describes as follows: 'Boal's main goal is to foster critical thinking and break the actor/spectator dichotomy by creating the "spect-actor," a new category that integrates both by giving them active participation in the play' (Frasca, 2004).

In Boal's concept of the 'spect-actor', it is possible for the spectators to experience immersion in drama and yet at the same time to realise the play as an artificial construct and finally, to experience 'meta-outmersion' as they realise how the events of the play can happen in reality. In the realistic frame of Boal's theatre, the events that happen are political, in the sense that they relate to various social problems; he, therefore, calls his concept of theatre, the 'theatre of the oppressed'. Boal states that his '*invisible theatre* is not real, it is reality' (Boal, 2002, p. 286): his shows take place on the Paris Metro, on a ferryboat and other real locations and concern topics like unemployment, racism and sexual harassment.

This political aspect links well to the Deleuzoguattarian idea of plugging into multiple assemblages comparable similar to the examples in Chapter 2. The importance of this aspect will be further explored later on in the chapter. For the present, Boal's drama will be considered in terms of outlining the mechanics of the involvement in the computer game. The way in which Frasca applies the techniques of the Boalian 'forum theatre' to video games becomes clear in the following extract:

The player steps out of immersion in order to critically analyse either the game's fiction or mechanics. It should be noticed that outmersion can be a demanding process that requires the player's full attention. As such, it can lead to the player's entrancement, just like immersion does. The process of being immersed, then outmersed and once again back into immersion is a natural occurrence in most games and it is part of the player's in-game education (this is how she learns to play such [sic] particular game).

(Frasca, 2006)

His account is useful in introducing the working of the 'multiple consciousness' in digital games. A few questions, however, remain: how is it possible to trace what happens during the transition from outmersion

to the intense involvement and what effect does this shift have on the player's identity? These issues further complicate the experience of involvement during gameplay and need to be explored further.

Gary Alan Fine's comments on fantasy gaming in terms of sociologist Erving Goffman's discussion of frame-analysis is useful in answering these questions. As Fine observes:

Goffman describes social worlds as constituting frames of experience. He defines a frame as a situational definition constructed in accord with organising principles that govern both the events themselves and participants' experiences of these events [...] Goffman examines the linkages among frames of involvements, how individuals pass from one frame to another.

(Frasca, 2006, p. 181)

The process by which this happens is called 'engrossment' by Goffman. For Fine, such engrossment has an oscillating character and the frames 'succeed each other with remarkable rapidity' (Ibid.).

Fine, writing in the early 1980s, is more concerned about the then popular role-playing fantasy games (like *Dungeons and Dragons*) than digital games. He identifies a separation between the *character* identity and *player* identity in fantasy games on the basis of which he separates them from other games like chess. He says that in chess, for example, there is no difference between Karpov the chess player and black (assuming that Karpov is playing with the black pieces) whereas, of course, there may be a difference between Karpov the player and Karpov the man. Fine bases this separation on the basis of knowledge possessed by the two identities. In fantasy games, the character might know certain things about the game world that the player may not be aware of and similarly the player brings his own knowledge from the real world to his character.

This differentiation, of course, is contestable. Firstly, how far it is possible to attempt to differentiate Karpov the player from the man is a point of contention. More importantly for this analysis, just as the Russian grandmaster brings his special set of skills to the game, the chess pieces are also invested with their own special set of information coded into them by way of the rules. In digital games, the situation is much the same. The player, whether involved in the game as a character or as a configurable element (which plays the part of a character, like the paddle in *Breakout*), has a multiple identity. These multiple identities work as supplements for each other.

As Fine also observes, the players in a role-playing game may often speak to each other about their non-ludic selves and then rapidly shift back into game-related conversation. Sometimes they may converse about things outside gameplay even while using their in-game identities or vice versa. The following extract from *Cybergypsies*, Indra Sinha's novel about the early MUD communities, provides a telling example:

The 'real' people in the room were never invited to the party. They're here on sufferance, mere emissaries of the real guests: it's the personas who are meeting here. 'Hi, I'm Louella the half-Elven', a forty-five year old man with an alcohol and tobacco-ravaged face announces and, turning to his shy girlfriend adds, 'and this is Psychopath the Singing Blade'. No wonder so many people are loth [sic] to reveal 'real' names.

(Sinha, 1999, p. 103)

The above example describes a party organised by players of the fictitious online role-playing game called *Shades*. The peculiarity of this party is that the guests still retain their identities from the game world even though they are meeting each other in real life. In a sense then, the party is also full of guests who have never been invited – since both the real and the virtual selves of the players are present here. The situation is complicated because of the multiple identities involved. In video games it is not much different. In such cases, rather than shifting wholly from one frame to another, the player remains in multiple frames simultaneously moving deeper into the game when the action is characterised by greater engrossment.

Frame-analysis is a helpful way of understanding how multiple consciousness functions in gameplay. However, it does not describe the process of identity-formation as a result of plugging into the multiplicity of the machine assemblage or, of plugging into multiplicities in general, as seen in Chapters 2 and 7. Discussions of immersiveness generally do not include the identification with machine; yet, such an omission leaves the analysis incomplete. The machinic is also an aspect of the multiple consciousness and is more directly indicative of the plugging-in process that characterises the identification with all aspects of the multiple consciousness. To analyse how identification works in terms of plugging into multiple assemblages, it will be necessary to analyse it within a Deleuzoguattarian framework of becoming.

Involvement as a Deleuzoguattarian becoming

First, however, it is necessary to avoid confusing it with more conventional meanings of becoming. Newman rightly comments:

It is possible to [...] suggest that the very notion of the primary-player relating to a single character in the gameworld may be flawed. Rather than 'becoming' a particular character in the gameworld, seeing the world through their eyes, the player encounters the game by relating to everything within the gameworld simultaneously.

(Newman, 2002)

In fact, as mentioned earlier, the player encounters the game by relating to everything within the gameworld as well as elements that are not directly within the gameworld. Newman's argument against thinking of the player's experience in such terms is therefore entirely valid.

Deleuze and Guattari's notion of becoming, however, is far removed from what Newman understands as 'becoming' and needs to be differentiated clearly. For them,

A becoming is not a correspondence between relations. But neither is it a resemblance, an imitation, or, at the limit, an identification. [...] We fall into a false alternative if we say that either you imitate or you are. What is real is the becoming itself, the block of becoming, not the supposedly fixed terms through which that becomes passes.

(Deleuze and Guattari, 1987, p. 262)

In this definition of 'becoming', it is clear that the human subject does not take up a single new identity as was the point behind Newman's objection. Rather, what Deleuze and Guattari call the 'block of becoming', is synthetic and a process. In fact, instead of establishing connections through filiation, the block of becoming operates through a process analogous to symbiosis between certain roots and micro-organisms. As a process, becoming is more akin to what they call 'involution': according to them, 'to involve is to form a block that runs its own line "between" the terms in play and beneath relations' (Deleuze and Guattari, 1987, p. 263).

Both involvement (in the sense used with respect to gameplay) and involution share the same infinitive, 'to involve', and it can be argued that the resemblance is not coincidental. It can be seen that involvement in gameplay functions much like the formation of the

'block of becoming' mentioned above. It works between the player and the game-algorithm existing as a symbiotic system where these two elements are simultaneously the same and yet separate. In terms of frame-analysis, they are separate frames and simultaneously part of a composite frame. The alliance between the two entities is effected through the process of synthesis in the machinic zone of becoming. The analogy between the root-microbe symbiosis and the process of involvement in gameplay can be established through this comparison. It must be added, though, that the process of becoming occurs for all the entities: player, game and machine: hence the 'zone of becoming' is a machinic zone. The player in 'becoming' a character in the game is also 'becoming' part of the game algorithm.

What this does not mean is that the player loses her identity. She does not take the identity of a single element or simultaneously of multiple elements in the game; instead she 'inhabits' these in the sense of sharing in them. Colebrook, commenting on the Deleuzian idea of 'becoming' describes it as a '*contracting* from the complex flow of life [as well as a] becoming one with the flow of images that is life' (Colebrook, 2001, p. 127). Her comment addresses the various positions on involvement within game studies: Deleuzian 'becoming' takes into account and modifies the idea of identification that proponents of the holodeck-experience mention and at the same time, also links to the opposing concepts such as those of 'double consciousness' and 'meta-outmersion'.

Regarding 'meta-outmersion', it will be useful here to make a short digression. The derivation of the concept from Boalian dramaturgy adds further significance to the way in which it links to 'becoming'. As established in Chapter 2, 'becoming' (as evident in the processes of becoming-animal and becoming-woman) is a key process in the conception of minor-literature. It will be remembered that, in its minoritarian aspect, becoming has as one of its characteristics, the connection of the individual to political immediacy. Boal's dramaturgy, expressed in the contested political themes of the 'forum theatre', brings it close to this aspect of 'becoming' and, therefore, to the process of 'becoming' itself. Of course, both 'meta-outmersion' and 'becoming' are applied in a more general sense in terms of computer gameplay but on a more detailed analysis, certain other not-so-obvious links emerge, indicating multiple levels of connection between the concepts.

Colebrook also highlights what Deleuze calls the becoming-imperceptible. The process of 'becoming' is not containable within frames of existence, which are structured and therefore 'molar' in Deleuzoguattarian terminology; rather it 'constitutes a zone of proximity and indiscernibility, a no-man's land, a non-localisable relation

sweeping up the two distant or contiguous points' (Colebrook, 2001, p. 293). Instead of a shifting from within molar and structured frames, 'becoming' is the continuous process of movement in the molecular and deterritorialised spaces in-between.

Taking the above in consideration, Goffman's model of frame-analysis can still be relevant to understanding the process of involvement but only after some important modifications. This can be studied through one of the examples that Goffman uses to illustrate his theory: that of the spy using multiple identities. Goffman seems to imply that the spy shifts from one identity to another, depending on the circumstances. A Deleuzoguattarian analysis will, however, require some changes to this model: The shift of identity does not occur as a clear-cut jump from one frame to another. Instead, it is evident that at any given moment, the spy 'occupies' *both* identities and the fact that he actualises one in certain situation does not imply that he has lost his other identity. For example, in Ian Fleming's novel, *Casino Royale* (Fleming, 1953), James Bond's assistant Vesper Lynd is actually a Soviet double-agent. Until the end of the novel, Lynd's real identity is not known to the readers – yet she obviously exists 'in character' for Bond and the readers while at the same time having a different identity for the Soviet secret police. The identities that come to the forefront, as it were, are therefore the ones that the character chooses to actualise. The other identities nevertheless remain: as virtual identities that exist as a multiplicity.

In gameplay, too, this situation has been observed earlier when various instances of gameplay were shown to exist in the space of possibility and various choices coexisted simultaneously, waiting to be actualised. The formation and reconfiguration of identities occur as a consequence of the actualisation of these choices. For example, in *Battle for Middle Earth* (EA Los Angeles, 2004), it is possible to play out a sequence of events from the perspective of the forces of good, or the Fellowship of the Ring, as well as from the perspective of the evil forces of Sauron and Saruman. Even within these perspectives, the player has to keep moving from character to character while the game AI controls the other characters. In a sense, then, both the game algorithm and the human player keep shifting identities as a result of the choices being actualised. At the same time, it must be noted that neither has absolute control: it is not possible for the game algorithm to totally control the actions of a character or characters that the player has *become*; on the other hand, the player cannot control the AI-driven characters of the opposing forces.³² In real-time strategy games such as *Battle for Middle Earth*, the player can also simultaneously control multiple units in her army thus giving

rise to a further complicated notion of identity. In all the above cases, identity and action are inter-related: player-choice helps in shaping the identities and obviously, the identities themselves create restrictions on the possible choices.

As observed earlier, the process of involvement and the concomitant shaping of identities that becoming entails is not new to digital games. Deleuze has already pointed out how this process works in earlier forms of narrative, especially in Kafka's short stories and Melville's *Moby Dick* (Melville, 1981). Captain Ahab's obsession with the white whale and his spectacular death as he is lashed to the whale by his own harpoon is seen by Deleuze as a 'becoming-whale'. Kafka's stories contain similar instances. As Colebrook notes,

This is why Deleuze and Guattari favoured the literature of Kafka: stories where Kafka imagined being an insect, a burrowing animal or a machine. Here, we can imagine life from an inhuman perspective. Instead of being an image set over against the world, such as a mind that receives impressions, we recognise ourselves as nothing more than a flow of images, the brain being one image among others, one possible perception and not the origin of perceptions.

(Colebrook, 2001, p. 128)

Like Gregor Samsa turning into an insect in *Metamorphosis* and yet struggling to perform human activities experiences a 'becoming-animal', in Deleuzoguattarian terms, the player in digital games also experiences a *becoming*. In the latter case, of course, the player consciously acts as the game algorithm requires. Often, the player tries to act as she would in real-life – only to be frustrated and become conscious of the algorithmic restrictions and the physical devices through which she interacts with the game. In digital games like *Breakout*, the player plays as a paddle and being deeply involved in the game behaves as the game requires a paddle to behave. At the same time, she is aware enough, or 'outmersed', so as to be conscious of her real self as well as to be 'meta-outmersed' and consider herself as a human acting as a paddle within a digital game's rules. Similarly, in many first-person shooters, the player can see her virtual 'hands' holding a gun while being aware of her real-life hands moving the mouse or the joystick. Within the gameworld, however, her onscreen hands are perfectly real. She has *become* the gun and the paddle, as the case may be.

To make a brief observation regarding the first-person game itself, it can be said that the German term 'egoshooter'³³ perhaps expresses the

experience of identity in the FPS more effectively. The word *egoshooter* is a unique German coinage and is, in itself, a multiplicity: in German, it is a *scheinanglizismus*, meaning a pseudo-anglicism. The root comprises of *ego* which is 'I' in Latin and Greek (*Εγώ*) and 'shooter' in English while the actual usage of the compound word is German. In the true nature of the multiple, the word plugs into various language-systems and meaning-systems. Playing with the word might result in a combination like 'I, shooter' (where I is the subject) or in another different one such as 'I-shooter' (where the full expression is the subject and the meaning is changed). The first meaning contains the conventional sense of the FPS as a shooter where the player identifies with the player-character as the subject. On the other hand, as the 'I-shooter', the player identifies with the 'I' that is being shot. The two identities occur together as one and yet as different instances within the virtual; each actualisation of which occurs as a process or a 'becoming'.

The shift of identities within the multiple space of possibilities is indeed complex. As games researcher, Mark Butler, comments:

Another split exists in the fact that the player is at once on the outside watching/hearing/feeling the gameplay and on the inside embodied in a virtual-imaginary world. The in-between zone that opens up between not-me (programmed figure) and not-not-me (ego) opens up a space of possibilities.

(Butler, 2009)

The split that Butler describes is simultaneously also a non-split within the space of the possible. In the 'in-between zone' that he refers to can be seen as the locale for a continuum of identities: the 'becoming' can be a 'becoming-gun' and also at the same time a 'becoming' of the 'I' that is being shot at. Again, *S.T.A.L.K.E.R.* provides an appropriate metaphor for this situation. As mentioned earlier, the player is entered into the game as a 'Stalker' who has been left for dead and is suffering from memory-loss. Throughout the game, the character's identity is developed through 'becomings' that form the process of gameplay. Further expanding the continuum of identities in the game, there is also another dimension to the character's identity which is revealed through intermittent flashbacks from the Stalker's past. The way in which the game's plot introduces the alternate identity theme also connects well with the analysis of the term 'egoshooter' above.

Despite his amnesia, the Stalker has two words tattooed on his arm which define his mission at the beginning of the game: 'kill Strellok'.

It is later discovered that the Stalker himself is Strelok and therefore, paradoxically his mission is then to kill himself. The choice of the name Strelok is also does not seem fortuitous. In Russian, the word 'strelok' means 'shooter' ('Strelok,' n.d.) and it can be argued that this describes a case similar to the analysis of the 'egoshooter' above. To kill Strelok is, as it were, to shoot the shooter. In the game, this can be seen as a metaphor for the player embodying both the shooter and that which is to be killed (shot). The many different levels of 'becoming' that are experienced in the game therefore need to be seen in terms of a more complex and 'multiple' process than having a single identity within the game. This has already been demonstrated above in the example of the player's identification with the various blocks in *Tetris*. The process of 'becoming' then can be said to encompass the entire game itself and the player, as it were, plugs into all the aspects of the game and not just a single character of point-of-view.

Perhaps the more apposite Deleuzian term for this process would be 'becoming-game'. In the rhizomatic connections that 'becoming' as a process entails, many other forms of 'becoming' are simultaneously possible. This is evident in the analysis of the process of identification in RTS games and 'god-games'. For example, in playing a game like *Spore*, the player controls the creature that she has 'created'. However, in a somewhat godlike manner, she also 'inhabits' the body of this creature, in the sense that her actions are reflected onscreen through this creature. Her identity, therefore, exists as an in-between and since the creature's AI also starts influencing the player's control, both the entities exist in a symbiotic relationship. In Deleuzian terms, this can be seen as a form of 'becoming-animal' (or 'becoming-inhuman'); if so this 'becoming-animal' can only be understood as a 'becoming-game'. Further, it must also be remembered that the above situation is mediated through a machinic environment that has its own impact on the workings of the *becoming*.

In a sense, in terms of the virtual extensions of the body, or the 'extended object' that Colebrook refers to, the player is already a part of the machine and vice versa. Ludic agency has already been seen as being jointly exercised by the player and the machine and in Chapter 2 it has been shown how digital games function as machinic narratives. Using both the analysis of the machinic element in ludic agency and the machinic narrativity of digital games, it will be possible to further examine involvement in gameplay as a machinic process. The process of involvement is dependent on the machine – both in the form of the coded game-algorithm as well as the physical or 'hardware' part of the playing apparatus.

Unlike in the holodeck, the medium in digital games does not disappear. Involvement in gameplay requires the player to learn certain ways of behaving within the game world. Some basic bodily actions such as looking, running or crouching are replicated onscreen; however, the ways of performing them are quite different from real-life actions. Often, the games demand a considerably high degree of reflexes but again these have different meanings in the game world and in real-life. For example, shooting reflexes in games often correspond to mouse-clicking skills in real-life. However, as already seen throughout the thesis, the body often treats the game apparatus as an extension of itself. One of the most important skills required in most video games is good hand-eye co-ordination. However, both the hand and the eye have an extended existence in digital games. The hand is extended to the keyboard, mouse or gamepad while the eye is extended to the screen. These extensions, however, are not prosthetic: from the point of view of the game world, they are perfectly real because they behave as the players would expect them to behave from the knowledge they bring to the game from real-life experience. The crosshair in the game and the effect of the zooming vision created by the in-game binoculars seem extremely plausible during gameplay. The extract from the walkthrough of a game gives a better idea of how gamers treat in-game action:

Get to the top of the roof of that first house by not going into the attic opening. You can 'stand' on the ledge of the masonry [sic] wall and hug the house to get atop the roof. Once you are on the roof, you should spot a second identical house just north of the one you are standing on.

(IGN, 2007)

The verbs in the extract imply that the actions mentioned are possible in reality. It is important to note that the writer has put 'stand' within quotation marks indicating an intriguing dichotomy between real and virtual actions. Yet all the actions described are equally real from the perspective of the gameplay. Although it is difficult to say why the writer has singled out 'stand', it is nevertheless obvious that bodily actions need not be perceived totally, either from a real-life perspective or from the perspective of gameplay. The body remains in a state of becoming, as an in-between entity.

In Deleuzian terms, this aspect of involvement in gameplay is perhaps a literal form of 'becoming-machine', in the sense of establishing the machinic identity of the individual – a recurrent theme in Deleuzian thought. Moreover, the 'becoming-machine' is also a 'becoming-game'

as well as a 'becoming-paddle' or 'becoming-Stalker'. True to the Deleuzian framework of the multiple, the computer game has a multiple structure not just in the multiplicity of the events as described in Chapter 6 but also in the process of 'becoming' itself. In Deleuze, the metaphor of metempsychosis, already mentioned in Chapter 6, corresponds to this. There, Deleuze gives his famous example of the philosopher and the pig: the multiplicity is not just one of the events; it also functions on the level of identities.

Having said this, it is possible now to bring together all the issues connected to the experience of 'becoming' in terms of gameplay. Using the Deleuzian framework of 'becoming' it is possible to address the intrinsically related elements of ludic action and involvement in the context of their machinicity. Such an analysis also reveals how this phenomenon is not a seamless immersion but a complex of multiple types of identification. Even if it is seen as a shifting of frames, then this shift must be considered as a continual process and the identification needs to be seen as an in-between existence. The 'in-between' nature of this 'becoming-game' that describes the process of ludic engagement needs to be clearly distinguished from the more extreme positions on such engagement. The direct corporeal participation in virtuality as described by the 'holodeck experience' has already been addressed in detail in the critique of Murray's theory of immersion, which uses the holodeck analogy. However, the other extreme, though quite attractive to some theorists, is also something that this thesis argues against, at least as a suitable framework for describing the involvement between the player and the computer game.

This is the more extreme position of theorists like Pierre Levy, who as Marks describes it, present 'an unrecognisably smooth cybernetic reading of Deleuze and Guattari' (Marks, 2006, p. 206). Levy reads Deleuzoguattarian theory to conceive of a human body as a temporary actualisation of a vast 'technobiological hyperbody', a concept which resembles Teilhard de Chardin's *noosphere* more than Deleuzoguattarian theory. A good illustration of the implications of this kind of a reading of Deleuze and Guattari is found in Cory Doctorow's short story, 'I-Rowboat'. In the story, Robbie, a sentient and artificially intelligent rowboat makes an important observation on humankind: 'In the sense that most humans today understood life, Kate's most important life was the one she lived in the noosphere. This dumbed-down instance of her in a meat-suit was more like a haircut she tried out on holiday' (Doctorow, n.d.). The 'dumbed-down instance in a meat-suit' that Robbie refers to can be any instance in any 'meat-suit': a multiplicity of identities like

this is also suggested in the concept of 'becoming-game' but the extent to which this is suggested is not possible in video games. This is because of the other key problem with this kind of a position. Imagining the gamer as an inhabitant of the *noosphere* would be to acknowledge the total absence of the physical body or what Philippe Breton criticises in Levy as a case of 'debiologisation'. The Deleuzoguattarian concept of the rhizome and especially the 'body-without-organs' might be a tempting influence for Levy's conception but such a conclusion inevitably ignores the importance of 'striatedness' in Deleuzoguattarian theory and instead solely prioritises 'smoothness'. The 'body-without-organs' is not a Teilhardian *noosphere*. As Marks clarifies,

Although the body without organs lacks the discreteness of what we conventionally know as an individual, that is not to say that it does not have resistance. It is, on the contrary, a zone of intensity. It may be traversed by forces, but is not simply a relay for those forces.

(Marks, 2006. p. 209)

The Deleuzoguattarian framework suggested here (and similar to that in Deleuze's *Cinema* books, as discussed in Chapter 7) is what characterises the computer game.

The 'zone of intensity' that Marks mentions is quite obviously similar to the 'zone of becoming' described earlier in this thesis. Within the 'zone', various possibilities are actualised and they have an impact on the player's identity; however, that is not to say that the player exists as part of a bodiless universal mind that inhabits the *avatars* in the game. The role of the body in the computer game has already been commented on in Chapter 2 and all the earlier descriptions of involvement in games consistently ground the experience in the physical body, albeit to different extents. Marks points out that for Levy, cybertechnology provides a freedom from previous material constraints. This implies a 'newness' in the technology which is able to facilitate the process of becoming in the human and the machine. Such a position has already been contested in Chapter 2 where the ontological relationship between technology and the body was illustrated in terms of gameplay. In Deleuze and Guattari, 'becoming' is neither a phenomenon mediated by new technologies, nor does it ignore the physicality and restraints that are involved within the process. The Deleuzoguattarian understanding of 'becoming' in this thesis is, therefore, very different from the more Teilhardian character that Levy provides it with. 'Becoming-game' is seen here as incorporating the physicality as part of the process and also as a fitting metaphor

for the continuum of involvement and action that is mediated in an assemblage where the player's body has an equally important role as any other element.

A note on the avatar and incorporation

At this point, it is necessary to further question the notion of how the concept of the 'avatar' describes the process of involvement between players and their onscreen characters. There are, obviously, extremes such as the avatar in James Cameron's film (Cameron, 2009) where the protagonist's consciousness seamlessly leaves his human body and wakes up into his avatar body or of Doctorow's story where the inhabitant of the noosphere engages with her self on earth as a mere 'dumbed-down instance of her in a meat suit'. In our analysis of earlier game studies research on the subject, this seamlessness is seen as too simplistic a description of the player-avatar relationship and a rethinking of the how 'avatar' is understood.

What most people are unaware of is that 'avatar' is originally a Sanskrit word that loosely means 'incarnation' in Hindu philosophical and religious discourse. In 1986, Chip Morningstar, designer of the video game *Habitat* (Lucasfilm Games, 1986), used the word to mean the player's 'real-time presence in an online world' (Farmer and Morningstar, 2011). Soon after, the novelist Neal Stephenson popularized this usage in *Snow Crash* (Stephenson, 2000) and in little over a decade, the word has gained phenomenal currency in game studies, discussions of gameplay, social networking and even in Cameron's blockbuster film. Although, its new adaptation is more popular, the original Sanskrit could, arguably, be the key point of departure for analyses of in-game identity and involvement.

As discussed earlier, in video games the player and the avatar can operate in complex ways such as when the player is simultaneously aware of and experiencing both her non-game and in-game identities. This situation is further complicated when the player reloads the game sequence and consequently the in-game identity is (re)formed each time a different game event loads. In the original Sanskrit usage, the 'avatar' is the incarnation (literally 'the being made flesh') of divinity on earth and the idea is also associated the idea of cyclical reappearance of divinity. Vishnu, the preserver of the world, is said to have descended on earth in various avatars (commonly considered to be ten but the number varies). Other gods such as Ganesha and Shiva also manifest themselves as avatars. This section explores how the original avatar concept taken

in its fuller complexity from Indic philosophy is useful in understanding the video game avatar in terms of identity-formation because it includes within its conception the notion of both multiple shared identities and cyclic recurrence.

'Avatar' comes from the words 'ava' and 'tri' meaning 'below' and 'crossing' respectively – thus an avatar is the 'crossing-down' of a god to free humanity from evil. Geoffrey Parrinder (Parrinder, 1997) identifies 12 characteristics of the Hindu doctrine of Avatar: avatars are real; if human (the early avatars of Vishnu bear non-human or semi-human forms), they take worldly birth; they mingle the divine and human; they die; there is a historicity to some avatars; they are repeated; they are often exemplars of proper living; they have a mission and they guarantee divine grace. Further, the avatar is either a full manifestation of the deity or a partial one; it is also possible for the deity to manifest himself or herself as multiple avatars, simultaneously. As an example of the latter, the brothers Krishna and Balaram are both said to be avatars of Vishnu. In the epic Ramayan, Ram and Parashuram, both said to be avatars of Vishnu, meet each other.

The time-schema of the avatar concept is complex; the avatars in Hindu philosophy are cyclic but they can also appear simultaneously and interact with each other. The other complexity is of course the relation between the deity himself or herself and the avatar as the manifestation of the deity. For example, as Freda Matchett poses the question: 'what is the supreme reality: Krishna or Vishnu?' (Matchett, 2013). Matchett points out that relationship between Krishna and Vishnu is 'something altogether more mysterious, the *ā' scarya* which reflects on earth the wonder that is Visnu' (Matchett, 2013, p. 43). Describing the relationship of Ram to Vishnu, Raimundo Panikkar comments that 'Rama in fact is totally human and totally divine, Rama is material and spiritual, temporal and eternal' (Panikkar, 1981, p. 38).

Morningstar's usage of 'avatar' is based on a very specific interpretation that according to him 'seemed an appropriate mapping [...] in the sense that we humans are like deities, or at least external souls, with respect to a virtual world that exists only inside a computer simulation' (Kan, 2010). As a history simulation website claims: 'with the popularization of the term, now it's not just Hindu gods who can descend upon different worlds, but people. Today, avatars come in the form of characters ready to fight in some virtual battlefield to the simple picture used to identify oneself on an internet forum' (Ibid.). In a similar usage, the *Second Life* platform allows one to 'create an avatar that resembles your real life or create an alternate identity. The only

limit is your imagination. Who do you want to be?’ In another recent popularisation of the term, Cameron describes it as follows for his film, *Avatar*:

It’s an incarnation of one of the Hindu gods taking a flesh form. In this film what that means is that the human technology in the future is capable of injecting a human’s intelligence into a remotely located body, a biological body. It’s not an avatar in the sense of just existing as ones and zeroes in cyberspace. It’s actually a physical body. The lead character, Jake, who is played by Sam Worthington, has his human existence and his avatar existence. He’ll be shown using live-action photography in 3-D and computer-generated imagery.

(Keegan, 2007)

These descriptions all show an awareness of the Hindu usage of ‘avatar’ but this is, arguably, a rather limited understanding of the concept. The relationship described is that of a straightforward assumption of the human form by the deity. For Morningstar, the avatar exists only inside a computer simulation and the human is like an ‘external soul’. Newman points to cultural practices such as cosplay where gamers and fans dress up as their favourite game characters – effectively bringing the avatar *out of its screen existence*. As he comments on the cosplay practices, ‘these scenes speak for the desire for ownership of these characters and the embeddedness of virtual persona(e) in the real lives of cosplayers’ (Newman, 2008, p. 88). As such, the avatar proves to be far more complex than Morningstar is able to imagine in his early formulation. Cameron’s protagonist has a human existence and an avatar existence and how the two interact (if at all) is not revealed in his comment. A newspaper report quotes him as stating ‘I didn’t want to reference the Hindu religion so closely but the subconscious association was interesting’; given this connection with the Hindu concept, he could possibly be exploring a more complex notion of the avatar than his earlier comment seems to indicate.

As stated by Parrinder, in the Hindu concept of the avatar, the divine and human mingle; further, the manifestation of the deity may be full or partial and the same deity may be manifested simultaneously in multiple avatars. Further, and this is an aspect that none of the popular Western conceptions of avatar (including those in game studies) take into account, the avatar in the Hindu religio-philosophical terms is characterised by cyclical repetition. Also as Matchett remarks, the

relationship between the deity and the avatar is one of mysterious complexity. The avatar can be totally human and totally divine at the same time.

While wary of reading too deeply into the similarities, it may be argued that the original Sanskrit meaning of 'avatar' applies more fully to video games and their complex process of involvement and identity-formation than the sense of the straightforward graphical representation of the user's alter-ego', which it has taken in game studies and contemporary culture.

As already discussed in the context of agency, action and involvement, just as the player brings her special set of skills to the game, the game environment is also invested with its own special set of information coded into it by way of the rules. The player, whether involved in the game as a character or as a configurable element (which plays the part of a character, like the paddle in *Breakout*), has a multiple identity. These multiple identities work as supplements for each other. As in Matchett's question on whether the supreme reality is Vishnu (the deity) or it is Krishna (the avatar), the identities of the player and the avatar are supplementary in the Derridean sense of the term that has been employed earlier: it is neither inside nor outside, and/or both inside and outside at the same time. It forms part without being part, it belongs without belonging' (Royle, 2003). Together with all of these meanings, the identity-formation of the avatar in the game is closely linked with the many lives that are played and remembered as the game is saved and reloaded. The temporal multiplicity, as analysed in Chapter 6, is also a vital aspect of the process of involvement and identity-formation that is connected to playing a video game. The Sanskrit conception of avatar, although hitherto largely unnoticed by games research, encompasses all these aspects and, arguably, contributes to a fuller understanding of these processes.

The avatar is neither an added-on entity nor is it formed inside the player identity. It is in addressing this relationship that another recent concept from game studies comes in useful. Calleja (2011) proposes the process of 'incorporation' as the way in which the player interacts with the game and the avatar. For Calleja, incorporation is a process that operates on a double axis:

the player incorporates (in the sense of internalising or assimilating) the game environment into consciousness while simultaneously being incorporated through the avatar into that environment. [...] Put another way, incorporation occurs when the game world is

present to the player while the player is simultaneously present, via her avatar, to the virtual environment.

This formulation retains the traditional interpretations of the concept as the assimilation to the mind and as embodiment.

Calleja's description of the player's experience vis-à-vis the game avatar is compelling. As mentioned earlier, the process of identification in video games, involves the avatar consciousness as well as the player consciousness. In a parallel from the earlier discussion of Hindu theology, avatars such as Krishna and Narasimha (or the man-lion avatar) share in Vishnu's essence and vice versa. Krishna in the Mahabharata, to counter Arjuna's reluctance to fight overwhelms him by showing manifesting himself in the myriad divine forms of Vishnu. At other times, in the avatar of Krishna, Vishnu is constrained by the worldly environments of that of a cowherd and then a king. Although differing from the idea of incorporation in that for the Hindu avatar there is no greater or lesser involvement, the participation in both the player consciousness and the avatar consciousness holds close similarities. Vishnu's relationship to his avatar could, arguably, be seen as a becoming rather than a being. 'Becoming' can be said to link with the Deleuzoguattarian 'block of becoming', discussed in the previous section, where it is clear that the human subject does not take up a single new identity but rather, is synthetic and processual.

The Standard English translation for avatar in Hindu mythology is 'incarnation'. The etymological root for the word is the Latin incarnation, literally the 'making flesh'. OED defines 'incarnation' as a person who embodies in the flesh a deity, spirit, or a quality. Consider now the meaning of 'incorporation' – derived from the Latin *incorporare* it means 'form into a body' and bears a close resemblance to 'incarnation'. As Calleja points out, the literary meaning of incorporation is that of having a bodily form or being embodied. The etymological similarity is not superficial and it merely backs up the earlier analysis where the becoming-avatar and the becoming-god as well as the becoming-player have been seen in terms of incorporation. To add to Calleja's already robust explanation, the process of incorporation is seen here as a 'becoming' and the very conception of the avatar in video games, especially traced to its roots in Indic philosophy and religion, is to be understood as an experiential process rather than a holistic essence.

With this in mind, a brief analysis of an example from video games might be attempted. In the *Assassin's Creed* games, the player enters the game as the avatar-protagonist Desmond Miles whose genetic code

is read by a futuristic machine that resuscitates the lives of his ancestors in his memory. His ancestors, Altair ibn Ahad from the age of the Crusades and Ezio from the Italian Quattrocento, appear in the memory of Desmond's past lives and resemble the repeating divine incarnations (although in the protagonist's memory as the game's SF plot tells us). Desmond, Altair and Ezio all fight the forces of evil in their respective historical times, much like the avatars of Vishnu. Self-reflexively, the games talk about the process of incorporation in their plot itself. Desmond can be seen to be playing out his memories in the avatars of his ancestors. Various different memories result in respective avatar instances and Desmond is incorporated in the avatars and they in him literally through his genetic code and experientially as he plays out their adventures as if in a video game. As players, those who play *Assassin's Creed*, also have a similar identification with Desmond himself as well as with Altair and Ezio. The experience is a continual process of becoming-Desmond, becoming-Altair, becoming-Ezio and becoming-player.

Involvement, incorporation, becoming

Calleja differentiates incorporation from involvement which he sees as occurring when any dimension of the player's experience requires the player's full conscious attention, for example in the case of a new player negotiating and struggling with the WASD keys for moving the avatar within the game environment. His account of incorporation seems to differ from involvement in the *degree* of conscious attention that the player devotes to the game-world. According to this model, then, incorporation is a subset of involvement. However, the experience of play includes new players struggling with the controls, players to whom the game seems like an extension of their bodies, the cosplayers who are playing out their avatars in real life surroundings and many other play experiences. To address the full range of such experiences, however, a framework that represents the varying degrees of the player's interaction with the game-world is necessary. As described in the earlier sections, it is this continuum of experiences that the framework of becoming represents and it accommodates within it, more recent concepts in game studies such as incorporation as well as a deeper analysis of the notion of the avatar.

The analysis of the process of involvement in terms of *becoming* plays a key role in understanding how gameplay functions. Ludic agency and involvement exist as interdependent aspects of the process

of becoming in digital games. Together they contribute to the multi-telic nature of these games and also in the repeated (re)construction of the various identities of both the player and the game. However, the process of 'becoming' is not single; rather, in itself it constitutes a multiplicity. Neither is it unidirectional: The player experiences a becoming-game but the game also experiences a becoming-player. The latter is true when the game-algorithm exercises ludic agency or in the way the code constantly involves (in the sense of both involvement and involution) itself symbiotically with the movements of the player. Naturally, all of these processes occur simultaneously with the process of becoming-machine which characterises the player. Together, the player and the game-system (algorithm as well as the physical device) form an assemblage and each plugs into the other as well to other assemblages. The game-system (literally) plugs into a power source, into the internet for downloading updates and obviously into the player during gameplay, amongst other things. The player plugs into various assemblages such as other players, communities, the Internet, books, the game itself, other games and so on. The relationship between these entities is maintained as in a rhizome, allowing for lines of flight from one plane to another.

The older conception of gameplay as being characterised by immersion was limited because it implied being submerged below a certain plane. The actual process of gameplay is, however, much less restrictive and is characterised by interplay between the various aspects of the ludic assemblage. In the midst of this assemblage, when the frantic mouse-clicks of the player result in bursts of machine-gun fire on the computer screen or when in a game like *F.E.A.R.*, the player's shadow on the wall and her shadow on the floor onscreen makes her wonder which is real, a change is in progress. Gameplay is now 'becoming'.

9

Concluding Remarks: Video Games versus Books, and Other Egg-Indian (Non)Debates

The feline handkerchief: The story-game complex in video games

In thinking of the video game player's involvement in the multiple instances of gameplay, a comparison with a scene in a children's story by the Bengali writer, Sukumar Ray (Ray, 1997), comes to mind. In Ray's story, written in the style of Carrollian nonsense-literature, the protagonist has a bizarre experience: his handkerchief turns into a cat. The cat (or the handkerchief-cat), however, is not bothered by this metamorphosis. In fact, it claims that it is simultaneously a cat, a handkerchief as well as a semi-colon. This strange feline argument resembles the problematic questions about identity and action that video games also ask. In the three identities that the cat provides, each is equally valid and in effect, the cat claims to be all the three things and even more.

These examples describe a situation where there is a multiplicity of events and where the shift in identities that this results in is only possible as a process of 'becoming'. Further, the multiple identities exist as part of an assemblage: a concept that is important even in the general scheme of analysing video games and their characteristics. The continuum of the 'zone of becoming' is also a valid metaphor for describing other aspects of video game theory such as the contested relationships between the ludic and narrative elements, or the magic circle that supposedly separates the play world and the real world. The complexity of the video game-assemblage, therefore, cannot be analysed in terms of binaries and watertight categorisations because these ignore the multiplicity that informs any understanding of video games.

This, however, is still not a universal realisation. Game studies' critics often react like the protagonist of Ray's story: for them, the game

is either the handkerchief or the cat. This, however, is a unitary categorisation that video games consistently resist and therefore, can result in much bewilderment. A consequence of this is that the field is still fraught with opposing contested claims. The Ludology–Narratology debate, mentioned earlier, has now more or less faded away from the critical horizon. Newer debates have taken its place; yet these too are based on very similar binary frameworks. Two very recent comments by eminent game critics indicate further problems with the perception of the field.

The threat of video games

The first comment is made by Juul in a blog-posting celebrating five years of his blog, ‘The Ludologist’. Juul states that ‘it’s official: the new conflict in video game studies is between those who study players and those who study games’ (Juul, 2008). To such an observation, the most common response is that studying players and studying games cannot be seen as separate because, as this thesis illustrates, playing a video game is a process that involves both the player and the game-algorithm. Any such one-sided argument is bound to resemble the conflict from *Gulliver’s Travels* where the tiny people of Lilliput and Blefuscu were permanently at war over whether to eat a boiled egg from the little end or the bigger end. Juul, himself, in a follow-up posting, clearly distances himself from such a conflict. He maintains that ‘I find it really disturbing to think that one should have to make a choice like that. I think that different questions and methods should co-exist’ (Ibid.).

The second comment, revealingly (and somewhat sensationally) titled ‘Why is the book world threatened by gamers?’, is a recent posting on *The Guardian Gamesblog* by Aleks Krotoski:

Books are the equivalent of single-player games and old-school websites. They are snapshots of information at a single point in time, where stories are created and navigated from the point of view of one person. Social media has changed the nature of information gathering and production, and multiplayer games have re-inspired collaborative play. Static media which insists on remaining static is on its way to becoming a curiosity.

(Krotoski, 2008)

Krotoski’s comment about static media may be valid but the attempt to see the book and the game (in this case, probably the multiplayer game)

as wholly different textual artefacts poses serious problems. Curiously, she equates books to single-player games: a fact which immediately contradicts her title where the book world is threatened by gamers, unless of course a non-standard usage of 'gamers' which excludes all players of single-player games, is implied here. The equation of single-player games to books (and old school websites) is very casually done and ignores an entire decade of debate among game studies scholars on this very issue. Finally, the comment seems to altogether ignore the history of books as a social media and the way in which fandom generates its own parallel texts. Even with the printed text, the power of authorship does not rest solely in the writer of the book, as Barthes and the reader-response theorists have pointed out decades ago. This is not to say that books and video games are the same thing but rather to point out that the difference is not as simple or as clear-cut as Krotoski suggests. As the earlier chapters have illustrated, books can be played and games read. The notion of games being 'threats' to books, although sensational, is probably incorrect.

Although its oversimplifications are obvious, the notion still provides some important insights. It might be recalled that the early responses to other types of narrative technology like cinema and the novel were quite similar. These were also looked upon as being parvenu forms and therefore perceived as threats to the received notions of narrative. Moreover, the audience itself was, in many cases, unprepared for the new media. A famous example is that of the 'train effect' in early cinema, where the audience was purportedly frightened into stampeding out of theatres because they mistook a train on film for an approaching train in real life. The concept of 'threat' operates on multiple levels. In saying that video games are threatening books, Krotoski does not describe a new phenomenon: this has always been applicable to any new technology in its incunabular years. The technology of writing is another case in point. Plato condemns writing because it 'will create forgetfulness in the learners' souls, because they will not use their memories; they will trust to the external written characters and not remember of themselves' (Plato, n.d.). In *Phaedrus*, the Egyptian god Thamus tells Theuth, the inventor of writing, that what he has created is actually a threat: it is a fatherless (that is, it does not know its father) entity unlike the 'living word of knowledge which has a soul' (Plato, n.d.).

In this context, Derrida's essay 'Plato's Pharmacy' comes to mind. The word that Theuth uses to describe writing is *pharmakon*, which can mean both 'remedy' and 'poison', as Derrida observes. As *pharmakon*, writing is treated by Plato as something that needs to be comprehended on the

basis of opposition. It does not, however, allow itself to be constricted to the framework of oppositions, to the inside-outside binary. As the surrogate or supplement for the Platonic conception of the 'ideal' memory (*mneme*), writing is dangerous because, according to Derrida, 'its slidings slip it out of the alternative presence/absence. *That is the danger*' (Derrida, 1983, p. 112). The threat of 'that dangerous supplement' is not that it replaces memory but rather the fact that in adding to and replacing the so-called 'ideal' primary element, the supplement reveals that it intrinsically constitutes the primary element itself.

It can be argued that a similar process is at work in Krotoski's notion of video games. Video games are also 'that dangerous supplement' and the threat they pose is not that of simply replacing earlier narrative media, just as writing has not replaced either the spoken word or the memory. The 'danger', as in the case of writing, that video games pose is that they illustrate how the ludic is intrinsic to the conceptions of the narrative and *vice versa*. Thus video games have emerged as something entirely *new*: the novel has also always been a ludic form, as all the examples ranging from an eighteenth-century text like *Tristram Shandy* to modern texts by Borges and Calvino show. Video games are certainly storytelling media but that is not to say that they are going to replace all the earlier narrative forms. The threat that was presented as emerging because video games are *new* and *different* is actually perceived because they show how the oppositions collapse and how the supplementarity of the ludic and narrative that characterises them is also characteristic of other narrative media, where the difference is media-specific and it is one of degree and not of process.

The concept of supplementarity is not only applicable to the binary distinctions of the ludic and the narrative. As Juul's posting indicates, within conceptions of the ludic itself, there are further binaries to consider. Should people study games or players? Does the game exist within a 'magic circle' secluded from reality, as the earlier games criticism of Huizinga and Caillois would have it? In the egg-endian controversy from *Gulliver's Travels*, the two warring nations forget the egg in their concern with which side to start eating from. Such questions about the reality of the magic circle and the game versus players debate do the same. Instead of the hierarchical structures built by the earlier critics, a more 'playful' philosophy is more appropriate in explaining how the ludic element functions. The 'supplement', in Derrida's work, is always *in-play*. If considered, for example, in terms of studying games versus players or *vice versa*, the privileged term in each case is 'endangered', as described above, by the 'supplement'. The breakdown of the binaries is

exemplified in Chapters 4 and 5 where the boundaries of the magic circle; game and play (in the sense of *ludus* and *paidia*); and finally, game and narrative is deconstructed. As far as the 'new conflict' that Juul proclaims 'official' is concerned, the same process is at work (it is better to say, *in-play*). Neither players nor the game can be studied in isolation.

The game fits into various categorisations, none of which is final or clearly defined. It is, however, not possible to view the game as a conglomeration of discrete units because in doing so, the overlap that occurs between categories is ignored. The game is a multiplicity, in the sense that it 'plugs' into' other multiplicities such as social, political, fictional and psychological systems. To reapply the Deleuzoguattarian terms from Chapter 2, the game is an assemblage and as such comparable to the examples provided by Deleuze and Guattari, like the literature-machine, the love-machine or the war-machine. The question of whether one should study games or players does not then arise; even if only the narrative element of video games is analysed, then it is not possible to do so without considering the multiple dimensions such as technicity, ludicity, culture and identity. This issue is evident in video games even more than in older narrative media and is, arguably, the reason for so much speculation about 'new conflicts'. In games such as *Fable*, with the clear narrative intention indicated even in the title itself, it is impossible to ignore the narrative during gameplay: effectively, the game plugs into the ludic and the narrative assemblage simultaneously. As it does so, the player has to constantly engage with the game's algorithm (hence at another level, the machine code) and in doing so, she has to reconfigure the code in every actualisation of the multiplicity of possibilities that the algorithm presents. By and large, the process of 'plugging into' the narrative and the machinic elements in the game is characteristic to the gameplay experiences of video games in general, the difference being in *degree* rather than the nature of the phenomenon. This thesis, though necessarily engaging itself with other aspects of the gameplay assemblage, is concerned more specifically about the ludic, narrative and machinic aspects of gameplay.

Plugging into the ludic assemblage

The process of 'plugging in' is impossible to conceive without considering the player's involvement; for the ludic, narrative and machinic aspects, the player is a very important factor in the (re)configuration of these elements. In engaging with (and often modifying) the rules of the game and the events of the story, the player is, as it were, almost

'becoming' the game and the story. Similarly, in his or her engagement with the algorithm, the player participates in a feedback loop with the machine itself: in this he or she 'becomes' part of the machine. Further, all of these 'becomings' are simultaneous: none of them can occur in isolation.

However, this 'becoming' is not a direct identification; in the introductory paragraph, the handkerchief-cat or the elephant-dragon-swan sculpture by Dali are not cases of direct identification. Rather, the relation between the different entities is represented as being part of a process, which is suitably described by the framework of the Deleuzoguattarian conception of 'becoming' as engaged with in this thesis, particularly, in Chapters 2 and 8.

Seen within such a framework, the inadequacy of the player studies versus game studies approach is even clearer. The framework of 'becoming', however, does much more for the analysis of video games than just being a means of further establishing the supplementarity of the various aspects of the gameplay assemblage. In the video game-narrative, the concept of 'becoming' successfully frames the two contested notions of agency and immersion. It also accounts for the multiple telic possibilities in the game-narrative, locating the player in a 'space of possibility' that is also the 'zone of becoming' or a multiplicity where different identities, events and actions coexist and influence each other even as they are constantly actualised as options in the game.

The framework of 'becoming' is not unique to video games but is originally present in all narrative media: Deleuze and Guattari have applied it to Kafka's works and Deleuzian conceptions of cinema also consider it a key process. The appropriateness of this framework further illustrates the problems with those claims, such as Krotoski's, which see the video game-narrative as something absolutely 'new'.

This is, however, far from saying that there is no difference between how the process operates in the case of video games and earlier narrative media. The differences, as stated earlier, are media-specific and are differences in degree rather than in underlying principles. This is also true among video games themselves. In Chapter 3, the principal selling-point of the much-hyped *Doom 3*, was shown to be its technical sophistication over the earlier games in the series, rather than a total innovation in the way of narrative capabilities. New technologies certainly provide the means of finessing narrative techniques and the experience of gameplay; however, the 'zone of becoming' remains the relevant metaphor for describing the basic principles though, of course, the playing field, in this case, is a significantly larger space of possibilities.

Just as many more events can be actualised in *Doom 3* than in a book (unless this is done solely in the player's imagination), in newer games such as *BioShock*, the level of complexity of the available possibilities is often much higher. As a reviewer, commenting about the ways in which the game allows the player to combine various affordances, states:

Even well before you're blessed with all sorts of options, the degree of tactical choice dawns on you. [...] It's a game all about being observant and experimenting – and when it all comes together, it offers possibly the most thrilling combat in any FPS you've ever experienced. The scope to do things *your way* is simply mind boggling, in such a way it makes regular shooters look pathetically dated and uninspired by comparison.

(Reed, 2007, original emphasis)

The experimenting that *BioShock* allows makes 'regular shooters look pathetically dated' and obviously adds a further level of complexity to the game. While the innovations in graphic design and in AI have important implications for the way in which narrative is presented, *BioShock's* novelty lies in that it makes a formal gameplay requirement of the player's desire to combine various gameplay affordances.

The classic example of the latter is also found in older games such as *Deus Ex*, where the player can scale a very high wall using a combination of 'proximity mines' (a game element designed for a very different purpose) and jumping skills. This is not very different from the combinatorial moves in *BioShock*, except that this was not what the designers of *Deus Ex* intended. Other, older games, also exhibit similar characteristics although they might not explicitly say so. In *Fable*, the need to combine elements is implicit. For example, the battle with the game's chief villain Jack-of-Blades almost always ends in certain defeat unless the hero (as the player is called in the game) uses his magical powers in combination with his fighting skills or other magical powers. One of the best ways of outwitting Jack is to use the 'slow time' spell and once time is slowed down, to attack using a volley of fireballs. *Fable* and *Deus Ex* seem to want players to experiment with combinations of the affordances that it provides and the 'scope to do things *your way*' is not a feature that is unique only to recent games like *BioShock* or to ones that are yet to be released.

This, however, is not to deny the novelty of recently-released games, especially in their complexity and the much wider range of possibilities arising out of their technological and visual superiority. Recent

video games have moved the narrative medium to levels of complexity that could not have been imagined even a few decades ago: when Calvino was describing literature as a 'combinatorial game' in the 1960s, it was hardly expected that the level of possible combinations would become so complex that they would form worlds of their own. It is, therefore, not surprising that, with increasing complexity in the 'space of possibility', some commentators fail to see the similarities with older media that exist at the very basis of the narrativity of video games.

The visual and technical developments often add greatly to the emergent properties of the video game, as a reviewer of the visually stunning *Crysis*, which uses the advanced CryEngine 2, indicates:

Getting caught in a firefight in the jungle is a cinematic treat, thanks to the way the bullets will chop down trees, while branches sway from impacts. This isn't just a visual effect, either, as falling timber can kill if it lands on someone. There's all sorts of emergent behavior like that throughout the game, events that spring up completely unintended or unforeseen.

(Ocampo, 2007b)

Such compelling graphics, artificially intelligent responses and the emergent properties of video games create increasing intensities of involvement. However, instead of seeing this as a totally new phenomenon, as some proponents of 'new media' seem keen on doing, it is important not to lose sight of the fact that even earlier narrative media show similar behaviour. This emerges more clearly when the comparison is made using the framework of 'becoming', as shown earlier. The 'zone of becoming' is particularly suitable in describing the varying degrees of involvement in the game as well as increased levels of emergence and complexity.

Primarily, the framework of the 'zone of becoming' has been applied here to single-player video games. However, the metaphor is similarly applicable to multiplayer games and games played using technologies such as the Wii, Kinect and the Oculus Rift.

For multiplayer games, the focus is on the vastness of the space of possibility, which is increased manifold because other human players are also part of the system. Further, these also involve issues such as involvement and identity-formation. The metaphor of the 'zone of becoming' is still applicable: this is because its Deleuzoguattarian framework is suitable for describing any emergent system in terms of assemblages that

are constantly in process of being (re)created. It can, therefore, be used to describe all the multiple narrative instances and the multiplicity of aspects that can be seen as 'plugging into' the assemblage.

The notion of a processual network characterised by various elements 'plugging into' an assemblage is useful in meeting the challenge that new technologies like the Oculus Rift or Wii pose to games research. The major development that the Wii brings to gaming is the introduction of a handheld pointer system that turns playing video games into a more physical experience than before. The 'Wii experience' is fraught with much controversy: according to an article in *The Escapist* magazine, the Wii controller provides an 'added level of immersion' but the same article goes on to state that the 'players are animated and acutely aware of their immediate surroundings' (MacInnes, 2007). As the *New Scientist Technology Blog* rightly comments, 'Anyone who's played a Wii knows that your flailing arms bear little relation to real-life moves. And the force feedback hardly makes you feel as you're really inside the game' (Simonite, 2007). To claim a complete immersive experience for the Wii would therefore be untenable. The identification, it can be argued, is still like what the player experiences in the 'zone of becoming' described for non-Wii games.

Conclusion: What's wrong with that?

Gaming technology is in a state of fast development and future research on video games needs to constantly keep up with the media-specific changes in the new generic forms and technologies. However, it is equally important to consider the relationship of these with earlier video games as well as other narrative media. Moreover, on further examination of video games themselves, it is clear that the claims that recent game technologies have created unprecedented levels of difference in the gaming experience are highly overstated. The 'zone of becoming' framework shows how similar principles work in video games and other narrative media. The advantage of this comparison is that it does not aim to fit every narrative media into a certain common frame; instead, while not losing sight of the media-specific differences among various video games as well as between video games and earlier narrative media, it also points towards their underlying similarities. Examined in such terms, this can change the way in which newer and older narrative media perceive themselves: a reader of *One Thousand and One Nights* can then perceive the ludic nature of the text and compare it with the narrative in *Sands of Time*, as analysed in Chapter 6.

Instead of watertight categorisations that mark out 'player studies' from 'game studies'; older games from newer games and finally, games from storytelling; it is important to view video games as an assemblage and not as part of a binary formulation. As in the example of the handkerchief and the cat in Ray's story, video games continue to resist compartmentalisation. If, indeed, they are a threat, then they are not a threat to books as critics like Krotoski claim; rather, they are a threat to some of the more traditional conceptions of narrative media which rely on ascribing definite identities to texts. The 'threat' is perhaps there in the realisation that the characteristics of video games, thought to be an external and 'new' addition, were always intrinsic to the narrative text in its various forms. As texts, video games cannot be constrained within any single categorisation and they constantly resist forming binaries by revealing intrinsic links with the posited 'other'. This is becoming increasingly obvious in various aspects of video games, not least in the design itself. In a recent interview, Greg Zeschuk and Ray Muzyka, the key executives of *BioWare*, were asked if there were two schools of thought in video games – one that sees games as an art form and the other as toys and entertainment. Their reply was, 'Maybe they're both. What's wrong with that?' (Webster, 2008). Coming from the makers of the phenomenally successful *BioShock*, this clearly indicates a shift in the way video games are beginning to be perceived. Not surprisingly, their response is similar to that of the cat that can 'become' a handkerchief: 'What's wrong with that?'

Notes

1 Introduction: Video Games and Storytelling

1. It must be noted that the term 'Narratological' is a rather loose application by the Ludologists and the implications of this are pointed out later in this chapter.
2. Roland Barthes states that the '*infinity* of the signifier refers not to some idea of the ineffable (the unnameable signified) but to that of a *playing* [...] the Text is plural'. Source: Barthes, R., 1977. Image, Music, Text, in: Heath, S. (Tran.), *Fontana Communications Series*. Fontana, London. pp. 158–159.
3. In *Gaming Globally: Production, Play, and Place* (Huntemann and Aslinger, 2012), the editors acknowledge that 'while gaming may be global, gaming cultures and practices vary widely depending on the power and voice of various stakeholders' (p. 27). The paucity of games studies scholarship coming from some of the largest consumers of video games, such as South Korea, China and India, to name a few, is markedly noticeable. The lack of representation of non-Western conceptions of play culture and storytelling traditions is similarly problematic.
4. Chapter 8 will engage with this issue in more detail.
5. '(W)reading' is preferred over the more commonly used neologism 'wreading' to emphasise the supplementarity of the reading and writing processes and also to differentiate it from earlier usage that might claim that the two processes are the *same thing*.

3 (W)Reading the Machinic Game-Narrative

6. For which he is criticised by Hayles (see Chapter 2).
7. Landow responds to this by rightly stating that Aarseth misreads his original comment where he claims that 'the reader who chooses among links or takes advantage of Storyspace's hypertext capabilities shares *some* of the power of the author' (Landow, p. 327, original emphasis). While his is a valid position, Landow does not expound on what the '*some* of the power' can be. Moreover, he persists with the *lexia*-based model, which as this thesis shows, emerges as especially problematic when applied to nonlinear texts like video games.
8. This kind of Ludology versus 'Narratology' argument, given the originary supplementarity between the ludic and the narrative entities, is incomplete and a following chapter will illustrate its shortcomings in more detail.
9. Called *Sands of Time* here onwards.
10. Called *RTCW* from here onwards.
11. If one does not consider the backstory as the whole story, such a conclusion would, of course, be incomplete.

12. WAD is the acronym for 'Where's All the Data?' as mentioned in the initial *Doom* design document.

4 Reading Games and Playing Books: Game, Play and Storytelling

13. See previous chapter for a more detailed commentary.
14. As Johan Huizinga, observes, 'in this intensity, this absorption, this power of maddening, lies the very essence, the primordial quality of play [...] this last named element, the *fun* of playing, resists all analysis' (Huizinga, 1970, p. 2). See also Raph Koster's book *Theory of Fun for Game Design* (Koster, 2013) for a detailed illustration.
15. This derives from Huizinga's pioneering effort, although it must be noted that Salen and Zimmerman do not subscribe to the idea of total immersion, as discussed in detail in Chapter 8.
16. Huizinga's conception of poetic creativity is not very clear. He seems content to identify the poet with the child and the savage in what seems a kind of pristine pre-culture state and involved in sacred play. As he comments, 'In this sphere of sacred play the child and the poet are at home with the savage' (Huizinga, p. 26). Interestingly, however, he goes on to identify a progressively ludic sensibility in modern man: 'His aesthetic sensibility has brought the modern man closer to this sphere than the "enlightened" man of the eighteenth century' (p. 26).
17. Fox News reports that 'In summer 2006, an Iranian political group called the Union of Islamic Student Societies revealed that it was planning on entering the video-game business.' <http://www.foxnews.com/story/2006/09/11/islamogaming-looking-for-video-games-in-muslim-world> [accessed 10 February 2015].
18. In Huizinga's sense of being a source and being 'formerly serious' activities (see Ehrmann).
19. At least that is how it seems from his use of a word loaded with deep theological import.
20. 'Noncentric' is an adaptation from Derrida's concept of the 'noncentre' – it points at the similarity to and the difference from the 'concentric'. It aims to mark the fact that gameplay is a 'single gesture but doubled'.
21. As in the ARGs described earlier.
22. Called *Rome* in subsequent references.
23. The HeavenGames' Rome: Total War forum and its sections on Roman History, gameplay and chatrooms carry the game beyond itself. The forum can be accessed at <http://rtw.heavengames.com/cgi-bin/forums/Ultimate.cgi> [accessed 10 February 2015].
24. I am indebted to Dr Will Slocombe for suggesting this point.
25. A large number of gameplay affordances need to be discovered or experienced rather than learned from manuals. Indeed, many gamers never even look at manuals when they play; they bring to their gameplay the combinations of rules, approaches, styles and tactics that Craig Lindley calls the 'gameplay gestalt' (Lindley, 2002).

6 Ab(Sense) of an Ending: Telos and Time in Video Game Narratives

26. Hence the name, *Sands of Time*, signifying the sands on the coast of the 'Sea of Time'.
27. The later sections of this chapter will illustrate in detail why 'virtual' has been used in this context.
28. Although they were released after *Sands of Time*, in keeping with the complex temporality of the story it is difficult to establish any chronological order and hence to call them sequels would not be accurate.
29. James Newman makes this point in *Videogames* (Newman, 2004, p. 103).

7 Playing in the Zone of Becoming I: Agency and Becoming in Video Games

30. cf. Marks's description of becoming.

8 Playing in the Zone of Becoming II: 'Becoming' as Identity-Formation in Video Games

31. This is shown in the episode 'Elementary, Dear Data'.
32. Some games allow the player to change the pace of the game and to exercise some basic controls on the AI but this obviously comes nowhere near controlling the opponent. Similarly, the game algorithm can control the player sometimes: for example, in *S.T.A.L.K.E.R.*, the psycho-kinetic monster momentarily disables the player from acting. This control, again, is not in any way total.
33. I am grateful to Dr Mark Butler for bringing this to my attention.

Bibliography

- 2K Boston and 2K Australia, 2007. BioShock [DISC]. 2K Games, Novato, CA.
- Aarseth, E., 2003a. Nonlinearity and Literary Theory, in: Wardrip-Fruin, N., Montfort, N. (Eds.), *The New Media Reader*. MIT Press, Cambridge, MA; London.
- Aarseth, E., 2003b. Playing Research: Methodological Approaches to Game Analysis. Presented at *the Digital Arts and Culture*. URL https://scholar.google.de/citations?view_op=view_citation&hl=en&user=xxdwlx8AAAAJ&citation_for_view=xxdwlx8AAAAJ:RHpTSmoSYBkC.
- Aarseth, E., 2004. Espen Aarseth Responds [WWW Document]. Electronic Book Review. URL <http://www.electronicbookreview.com/thread/firstperson/cornucopia> (accessed 2.10.15).
- Aarseth, E., 2006. Genre Trouble, in: Wardrip-fruin, N., Harrigan, P. (Eds.), *First Person – New Media as Story, Performance and Game*. MIT Press, Cambridge, MA, p. 45.
- Aarseth, E.J., 1997. *Cybertext: Perspectives on Ergodic Literature*. Johns Hopkins University Press, Baltimore, MD; London.
- Aarseth, E.J., 2004. Quest Games as Post-narrative Discourse, in: Ryan, M.-L. (Ed.), *Narrative across Media: The Languages of Storytelling*. University of Nebraska Press, Lincoln, NE; London.
- Abraham, B., 2009. SLRC – Subterranean Loner Rendered Comatose: Permanent Death, Episode 1: An Inauspicious Beginning.
- Adams, E.W., 2005. Interactive Narratives Revisited [WWW Document]. Interactive Narratives Revisited: Ten Years of Research. URL http://www.designersnotebook.com/Lectures/Interactive_Narratives_Revisit/body_interactive_narratives_revisit.htm (accessed 1.29.15).
- After Action Report, 2015. Merriam-Webster Dictionary.
- After Action Reporter, 2015. After Action Reporter.
- Aleksandrov, G., Eisenstein, S.M., 1930. Old and New (The General Line).
- Allen, G., 2000. *Intertextuality: The New Critical Idiom*. Routledge, London; New York.
- Allen, M., 2008. This Is Not a Hypertext, But ... : A Set of Lexias on Textuality. CTheory.
- Apple iPhone Website, 2014. Apple – iPhone 5s – Features [WWW Document]. Apple iPhone website. URL <https://www.apple.com/iphone-5s/specs/> (accessed 7.1.14).
- ARGology.org, 2010. What Is an ARG?: ARGology [WWW Document]. ARGology.org. URL http://www.argology.org/_what-is-an-arg/ (accessed 2.10.15).
- Armstrong, A., 1997. Some Reflections on Deleuze's Spinoza: Composition and Agency, in: Pearson, K.A. (Ed.), *Deleuze and Philosophy: The Difference Engineer*. Routledge, London; New York.
- Ashby, W.R., 1979. *Introduction to Cybernetics*. Methuen, London; New York.
- Ashton, D., Newman, J., 2010. FCJ-110 Relations of Control: Walkthroughs and the Structuring of Player Agency. *The Fibreculture Journal*.

- Atkins, B., 2007. Killing Time: Time Past, Time Present and Time Future in Prince of Persia: The Sands of Time, in: Krzywinska, T., Atkins, B. (Eds.), *Videogame, Player, Text*. Manchester University Press, Manchester.
- Babbage, C., 1967. *The Ninth Bridgewater Treatise: A Fragment*, 2nd edition reprinted, Cass Library of Science Classics. Cass, London.
- Badiou, A., 1999. *Deleuze: The Clamor of Being*, 1st edition. University of Minnesota Press, Minneapolis.
- Barthes, R., 1975. *S/Z: An Essay*. Hill and Wang, New York.
- Barthes, R., 1977. Image, Music, Text, in: Heath, S. (Tran.), *Fontana Communications Series*. Fontana, London.
- Bateson, G., 1972. *Steps to An Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution, and Epistemology*. Chandler Publications for Health Sciences, San Francisco.
- Bateson, G., 2007. A Theory of Play and Fantasy, in: Bial, H., Brady, S. (Eds.), *The Performance Studies Reader*. Routledge, London; New York.
- Bergman, I., 1958. *The Seventh Seal*, Sweden.
- Bethesda Game Studios, 2011. *The Elder Scrolls V: Skyrim*. Bethesda Softworks, Rockville, MD.
- Big Blue Box, 2004. *Fable: The Lost Chapters [DISC]*. Microsoft Game Studios, Redmond.
- Biggs, S., 2004. On Navigation and Interactivity, in: Block, F.W. (Ed.), *p0es1s: The Aesthetics of Digital Poetry*. Hatje Cantz, Germany.
- Bissell, T., 2011. *Extra Lives: Why Video Games Matter*, Reprint edition. Vintage, New York.
- Blake, K., 1974. *Play, Games and Sport: Literary Works of Lewis Carroll*. Cornell University Press, Ithaca.
- Blanchot, M., 1989. *The Space of Literature: A Translation of 'L'Espace littéraire.'* University of Nebraska Press, Lincoln.
- Blanchot, M., 2002. *The Book to Come*, 1st edition. Stanford University Press, Stanford, CA.
- Blizzard Entertainment, 2004. *World of Warcraft [DISC]*. Blizzard Entertainment, Irvine, CA.
- Boal, A., 2002. *Games for Actors and Non-Actors*, 2nd edition. Routledge, New York.
- Bogost, I., 2008. *Unit Operations: An Approach to Videogame Criticism*. The MIT Press, Cambridge, MA.
- Bogue, R., 2003. *Deleuze on Literature*. Routledge, New York.
- Borges, J.L., 1993. *Ficciones*, Reissue edition. Everyman's Library, New York.
- Boswell, J., 2006. *Boswell's Life of Johnson* Abridged and edited, with an Introduction by Charles Grosvenor Osgood.
- Bowman, R., 1988. *Elementary, Dear Data*, Paramount Television, United States.
- Bowden, O., 2011. *Assassin's Creed: The Secret Crusade*. Ace, New York.
- Bresson, R., 1959. *Pickpocket*.
- Bronte, C., 1998. *Shirley*, Reprint edition. Wordsworth Editions Ltd, Ware.
- Bronte, C., 2014. *Jane Eyre*. CreateSpace Independent Publishing Platform.
- Buckley, W., 1999. A Literary Ball Game [WWW Document]. *The Guardian*. URL <http://www.theguardian.com/football/1999/oct/24/sport.comment3> (accessed 2.13.15).
- Burmeister, A., 2008. *Games and Intensity*. URL <http://www.abstractdynamics.org/archives/games-intensity.pdf> (accessed 2.10.14).

- Butler, M., 2009. Personal Communication.
- Caillois, R., 2001. *Man, Play and Games*. University of Illinois Press, Urbana.
- Calleja, G., 2007. Digital Game Involvement a Conceptual Model. *Games and Culture* 2, 236–260. doi:10.1177/1555412007306206.
- Calleja, G., 2011. *In-game: From Immersion to Incorporation*, 1st edition. The MIT Press, Cambridge, MA; London.
- Calvino, I., 1979. *The Castle of Crossed Destinies*, 1st edition. Mariner Books, New York.
- Calvino, I., 1982. *If on a Winter's Night a Traveler*. Harcourt Brace Jovanovich, New York.
- Calvino, I., 1987. *The Literature Machine: Essays*. Secker and Warburg, London.
- Cameron, C., 1997. Glass Bead Game as Game Designer's Holy Grail [WWW Document]. URL <http://home.earthlink.net/~hipbone/Grail.html> (accessed 2.11.15).
- Cameron, J., 2009. *Avatar*, US and UK.
- Camus, A., 1991. *The Plague*. Vintage, New York.
- Captainsnake, 2009. Strikes, Riots and Rebellions. How Do I Stop Them? – Empire: Total War Answers for PC – GameFAQs [WWW Document]. GameFAQs.com. URL <http://www.gamefaqs.com/pc/942966-empire-total-war/answers/55267-strikes-riots-and-rebellions-how-do-i-stop-them> (accessed 2.14.15).
- Carr, D., 2006. *Computer Games: Text, Narrative, and Play*. Polity, Cambridge.
- Carroll, L., 1999. *The Annotated Alice: The Definitive Edition*, Upd Sub edition. W. W. Norton & Company, New York.
- Castronova, E., 2005. *Synthetic Worlds: The Business and Culture of Online Games*. University of Chicago Press, Chicago.
- Cheatbook.de, 2015. Cheatbook-DataBase 2015 – Cheats, Hints and Tips for Games. www.cheatbook.de.
- Chey, J., 2003. Irrational Game's System Shock 2, in: Grossman, A. (Ed.), *Postmortems from Game Developer*. CMP Books, San Francisco, CA.
- Chick, T., 2004. Shoot Club: The Doom 3 Review [WWW Document]. Shoot Club: The Doom 3 Review. URL <http://www.quartertothree.com/inhouse/columns/90/> (accessed 2.8.15).
- Clark, T., 2000. Deconstruction and Technology, in: Royle, N. (Ed.), *Deconstructions: A User's Guide*. Palgrave Macmillan, Basingstoke.
- Colebrook, C., 2001. *Gilles Deleuze*. Routledge, New York.
- Colebrook, C., 2002. *Understanding Deleuze*. Allen & Unwin; London: Orion [distributor], Crows Nest, N.S.W.
- Coleridge, S.T., 1847. *Biographia Literaria, or, Biographical Sketches of My Literary Life and Opinions*. Wiley & Putnam, New York.
- Consalvo, M., 2003. Zelda 64 and Video Game Fans a Walkthrough of Games, Intertextuality, and Narrative. *Television New Media* 4, 321–334. doi:10.1177/1527476403253993.
- Consalvo, M., 2009. *Cheating: Gaining Advantage in Videogames*. The MIT Press, Cambridge, MA; London.
- Consubstantiation, n., n.d. OED Online.
- Cook, M., 2009. Story Time with Agent 47 [WWW Document]. The Escapist. URL <https://lockerdome.com/6307696345359681/win-an-aliens-prize-pack-from-the-escapist-gamefront> (accessed 2.14.15).

- Cortazar, J., 1987. *Hopscotch: A Novel*, 1st Pantheon pbk. edition. Pantheon, New York.
- Costikyan, G., 2007. Games, Storytelling, and Breaking the String [WWW Document]. Electronic Book Review. URL <http://www.electronicbookreview.com/thread/firstperson/storyish> (accessed 2.13.15).
- Crawford, G., Gosling, V., Light, B. (Eds.), 2013. *Gamers: The Social and Cultural Significance of Online Games*, 1st edition. Routledge.
- Cronenberg, D., 1999. eXistenZ, Canada, UK.
- Cruz-Cunha, M.M., 2012. *Handbook of Research on Serious Games as Educational, Business and Research Tools*, 1st edition. IGI Global, Hershey, PA.
- Csikszentmihalyi, M., 1990. *Flow: The Psychology of Optimal Experience*, 1st edition. Harper & Row, New York.
- Cyan, 1993. *Myst* [DISC]. Broderbund, Eugene, Oregon.
- Dannenberg, H.P., 2004. Narrative as Virtual Reality: Immersion and Interactivity in Literature and Electronic Media. *Style* 38, 388.
- Dar al-Fikr, 2001. *Under Ash* [DISC]. Syria.
- Davidson, D., 2008. *Journey of Narrative: The Story of Myst across Two Mediums*. URL <http://waxebb.com/writings/journey.html> (accessed 29.01.15).
- de Mul, J., 2005. The Game of Life. Narrative and Ludic Identity Formation in Computer Games, in: Goldstein, J., Raessens, J. (Eds.), *Handbook of Computer Games Studies*, 251–266. Cambridge MA, MIT Press.
- DeLanda, M., 2002. *Intensive Science and Virtual Philosophy*. Continuum, London; New York.
- DeLanda, M., 2006. *A New Philosophy of Society: Assemblage Theory and Social Complexity*, annotated edition. Bloomsbury Academic, London; New York.
- Deleuze, G., 1986. *Cinema 1: The Movement-Image*. Athlone, London.
- Deleuze, G., 1990. *The Logic of Sense, European Perspectives*. Columbia University Press, New York.
- Deleuze, G., 1993. *The Deleuze Reader*, 1st edition. Columbia University Press, New York.
- Deleuze, G., 1995. *Difference and Repetition*. Columbia University Press, New York.
- Deleuze, G., 2001. *Empiricism and Subjectivity*. Columbia University Press, New York.
- Deleuze, G., Guattari, F., 1986. *Kafka: Toward a Minor Literature*. University of Minnesota Press, Minneapolis.
- Deleuze, G., Guattari, F., 1987. *A Thousand Plateaus: Capitalism and Schizophrenia*. Continuum, London.
- DeLong, J.B., 2005. Estranged from One's Species Being (Brad DeLong's Grasping Reality...) [WWW Document]. Brad DeLong's Grasping Reality. URL http://delong.typepad.com/sdj/2005/04/adam_kotsko_is_.html (accessed 2.2.15).
- Derrida, J., 1976. *Of Grammatology*, 1st American edition. Johns Hopkins University Press, Baltimore.
- Derrida, J., 1980. *Writing and Difference*, Reprint, 1993 edition. University of Chicago Press, Chicago.
- Derrida, J., 1983. *Dissemination*, 1st edition. University of Chicago Press, Chicago.
- Derrida, J., 1995. *Points ...: Interviews, 1974–1994, Meridian: Crossing Aesthetics*. Stanford University Press, Stanford, CA.
- Derrida, J., 2005. *Paper Machine*. Stanford University Press, Stanford, CA.

- Derrida, J., Stiegler, B., 2002. *Echographies of Television: Filmed Interviews*, 1st edition. Polity, Cambridge, UK; Malden, MA.
- Dickens, C., 2000. *Great Expectations*, 12th edition. Rupa Publications India, New Delhi.
- Dick, P.K., 1996. *Do Androids Dream of Electric Sheep?* Del Rey, New York.
- Dietz, S., 1999. Telling Stories: Procedural Authorship and Extracting Meaning from Museum Databases, in: *Museums and the Web*. Presented at the Museums and the Web, Boston, MA. URL <http://www.archimuse.com/mw99/papers/dietz/dietz.html> (accessed 29.01.15).
- DMA Design, 1997. *Grand Theft Auto [DISC]*. BMG Interactive, New York.
- Doctorow, C., n.d. I, Row-Boat.
- Dostoevsky, F., 2003. *The Idiot*, Reprint edition. Vintage, New York.
- Dovey, J., Kennedy, H.W., 2006. *Game Cultures: Computer Games as New Media, Issues in Cultural and Media Studies*. Open University Press, Maidenhead, Berkshire, England.
- EA Los Angeles, 2004. *Lord of the Rings: Battle for Middle Earth*. EA Games, Redwood, California.
- Ehrmann, J., 1968. Homo Ludens Revisited. *Yale French Studies*, 41, 31–57.
- Eichner, S., 2014. *Agency and Media Reception: Experiencing Video Games, Film, and Television*, 2014 edition. Springer VS, Wiesbaden.
- Empire Online, 2015. Steven Spielberg and George Lucas on Hollywood's Future Interviews [WWW Document]. empireonline.com. URL <http://www.empireonline.com/interviews/interview.asp?IID=1714> (accessed 1.28.15).
- Ensemble Studios, 1997. *Age of Empires [DISC]*. Microsoft Studios, Redmond, Washington, DC.
- Ensslin, A., 2014. *Literary Gaming*. The MIT Press, Cambridge, MA; London.
- Epic Games, 1999. *Unreal Tournament [DISC]*. GT Interactive, New York.
- Ermi, L., Mäyrä, F., 2005. *Game Studies 0501: Player-Centred Game Design: Experiences in Using Scenario Study to Inform Mobile Game Design*. Game Studies 5(1).
- Eskelinen, M., 2001. *Game Studies 0101: Eskelinen: The Gaming Situation*. Game Studies 1.
- Farmer, R., Morningstar, C., 2011. *How Gamers Made Us More Social*. URL net/2011/03/sm-pioneers-farmer-morningstar.html (accessed 29.01.15).
- Fernández-Vara, C., 2014. *Introduction to Game Analysis*, 1st edition. Routledge, New York.
- Figgis, M., 2003. Timecode [2000]. Optimum Home Entertainment.
- Fine, G.A., 1983. *Shared Fantasy: Role-Playing Games as Social Worlds*. University of Chicago Press.
- Flaubert, G., 2010 (1857). *Madame Bovary*, 1st edition. Viking, New York.
- Fleming, I., 1953. *Casino Royale: A James Bond Thriller*, 29th edition. Signet, New York.
- Fowles, J., 2004. *The French Lieutenant's Woman*. RHUK, London.
- Frasca, G., 1999. Ludology Meets Narratology: Similitude and Differences between (Video) Games and Narrative. [WWW Document]. Ludology.org. URL <http://www.ludology.org/articles/ludology.htm> (accessed 1.29.15).
- Frasca, G., 2000. *Ephemeral Games: Is It Barbaric to Design Videogames after Auschwitz?* in: *Cybertext Yearbook 2000*.
- Frasca, G., 2004. Videogames of the Oppressed [WWW Document]. Electronic Book Review. URL <http://www.electronicbookreview.com/thread/firstperson/Boalian> (accessed 2.20.15).

- Frasca, G., 2006. Immersion, Outmersion & Critical Thinking [WWW Document]. URL <http://www.dream.dk/uploads/files/Gonzalo%20Frasca.pdf> (accessed 7.20.08).
- Galloway, A.R., 2006. *Gaming: Essays on Algorithmic Culture*. University of Minnesota Press, Minneapolis, MN; London.
- gameplay, 2010. Oxford Dictionary of English.
- gameplay, 2015. Macmillan Dictionary.
- Genette, G., 1983. *Narrative Discourse: An Essay in Method*, 1st edition. Cornell University Press, Ithaca, NY.
- Genette, G., 1997a. *Paratexts: Thresholds of Interpretation*. Cambridge University Press, Cambridge, UK.
- Genette, G., 1997b. *Palimpsests: Literature in the Second Degree*, 8th edition. University of Nebraska Press, Lincoln.
- Gitelman, L., 2002. 'Materiality Has Always Been in Play': An Interview with N. Katherine Hayles. *Iowa Journal of Cultural Studies Issue 2*, 7–12.
- Glas, R., 2013. *Battlefields of Negotiation: Control, Agency, and Ownership in World of Warcraft*. Amsterdam University Press, Amsterdam.
- Gray, J., 2010. *Show Sold Separately: Promos, Spoilers, and Other Media Paratexts*. NYU Press, New York.
- Grodal, T., 2003. Stories for Eye, Ear and Muscles: Video Games, Media, and Embodied Experience, in: Wolf, M.J.P., Perron, B. (Eds.), *The Videogame Theory Reader*. Routledge, New York; London.
- Grossman, A. (Ed.), 2003. *Postmortems from Game Developer*. CMP Books, San Francisco, CA.
- GSC Gameworld, 2007. S.T.A.L.K.E.R.: Shadow of Chernobyl [DISC]. THQ, California.
- GTA Wiki, 2015. GTA Wiki [WWW Document]. GTA WIKI. URL http://gta.wikia.com/Main_Page (accessed 1.30.15).
- Haase, U., Large, W., 2001. *Maurice Blanchot*. Routledge, London; New York.
- Haraway, D., 2003. A Cyborg Manifesto: Science, Technology and Socialist Feminism in the Late Twentieth Century, in: Wardrip-Fruin, N., Montfort, N. (Eds.), *The New Media Reader*. MIT Press, Cambridge, MA; London.
- Hayles, N.K., 2001. Desiring Agency: Limiting Metaphors and Enabling Constraints in Dawkins and Deleuze/Guattari. *SubStance* 30, 144–159. doi:10.2307/3685509.
- Hayles, N.K., 2002. *Writing Machines*. MIT Press, Cambridge, MA; London.
- Hayles, N.K., 2005. *My Mother Was a Computer: Digital Subjects and Literary Texts*. University of Chicago Press, Chicago, IL; London.
- Hesse, H., 2002. *The Glass Bead Game*. Picador, New York.
- Hindes, D., 2014. Wolfenstein: The New Order Review [WWW Document]. GameSpot. URL <http://www.gamespot.com/reviews/wolfenstein-the-new-order-review/1900-6415765/> (accessed 2.8.15).
- Hocking, C., 2010. Ludonarrative Dissonance in BioShock, in: Davidson, D. (Ed.), *Well Played 1.0: Video Games, Value and Meaning*. lulu.com, Pittsburgh, PA.
- Holmes, D., 2012. *A Mind Forever Voyaging: A History of Storytelling in Video Games*. CreateSpace Independent Publishing Platform, S.I.
- Huizinga, J., 1971. *Homo Ludens: A Study of the Play-Element in Culture*. Beacon Press, Boston.

- Huntemann, N.B., Aslinger, B. (Eds.), 2012. *Gaming Globally: Production, Play, and Place*. Palgrave Macmillan, New York.
- id Software, 1992. Wolfenstein 3D [DISC]. Apogee Software, Texas.
- id Software, 1993. Doom [DISC]. GT Interactive, New York.
- id Software, 1997. Quake 2 [DISC]. Activision, Santa Monica, CA.
- id Software, 2004. Doom 3 [DISC]. Activision, Santa Monica, CA.
- IGN, 2007. STALKER Wiki Guide [WWW Document]. IGN. URL http://www.ign.com/wikis/stalker-shadow-of-chernobyl/Guide_part_5 (accessed 2.20.15).
- illusion, n.d. OED Online.
- Illusion Softworks, 2002. Mafia: City of Lost Heaven [DISC]. Gathering of Developers, Texas.
- Infocom, 1977. Zork [DISC]. Peronal Software.
- Interactive Games & Entertainment Association, 2013. 2013 Essential Facts about the Computer and Video Game Industry from the ESA [WWW Document]. iGEA. URL <http://www.igea.net/2013/06/2013-essential-facts-about-the-computer-and-video-game-industry-from-the-esa/> (accessed 1.28.15).
- Ion Storm, 2000, Deus Ex [DISC]. Eidos Interactive.
- Irrational Games, 1999. System Shock 2 [DISC]. Electronic Arts, Redwood City, CA.
- Iwatani, T., 1980. Pacman [DISC]. Namco, Tokyo.
- JarlWolf, 2012. The Right Forum Place for AAR/Let's Play Threads? [WWW Document]. Alpha Centauri Forum. URL <http://alphacentauri2.info/index.php?topic=2309.0> (accessed 2.14.15).
- Jenkins, H., 2007. Transmedia Storytelling 101. *Confessions of an Aca-Fan: The Official Weblog of Henry Jenkins*. URL http://henryjenkins.org/2007/03/transmedia_storytelling_101.html (accessed 29.01.15).
- Jiiiim, 2008. The Rise and Fall of the House of Jimius. *The Rise and Fall of the House of Jimius*. URL <https://houseofjimius.wordpress.com/> (accessed 29.01.15).
- Johnson, B.S., 1999. *The Unfortunates*. Picador, London.
- Jones, S.E., 2008. *The Meaning of Video Games: Gaming and Textual Strategies*. Routledge, New York.
- Jones, W., 1883. *The Indian Game of Chess*. Priv. printed for the Aungervyle society, Edinburgh.
- Jong, C., 2011. *The Let's Play Archive: Collecting Players, Performing Play*. Presented at the Under the Mask 2011, University of Bedfordshire, Luton.
- jordanmechner.com, 2015. Screenplay of Sands of Time [WWW Document]. jordanmechner.com. URL <http://www.jordanmechner.com/downloads/popsotscript.pdf> (accessed 2.15.15).
- Joyce, M., 1992. Perforations: Hypertext Narrative [WWW Document]. Hypertext Narrative. URL http://www.pd.org/Perforations/perf3/hypertext_narrative.html (accessed 2.7.15).
- Juul, J., 1999. *A Clash between Game and Narrative*. University of Copenhagen, Copenhagen.
- Juul, J., 2005. *Half-Real: Video Games between Real Rules and Fictional Worlds*. MIT Press, Cambridge, MA.
- Juul, J., 2006. Introduction to Game Time, in: Wardrip-Fruin, N., Harrigan, P. (Eds.), *First Person: New Media as Story, Performance, and Game*. The MIT Press, Cambridge, MA.

- Juul, J., 2008. Five Years of the Ludologist. *The Ludologist*. URL <http://www.jesperjuul.net/ludologist/?p=457> (accessed 29.01.15).
- Juul, J., 2011. Salman Rushdie on Video Games & Storytelling. *The Ludologist*.
- Kafka, F., 1996. *The Metamorphosis*, New edition. W. W. Norton & Company, New York. URL <http://www.jesperjuul.net/ludologist/salman-rushdie-on-video-games-storytelling> (accessed 29.01.2015).
- Kafka, F., 1998. *The Castle*. Schocken, New York.
- Kafka, F., 1999. *The Trial: A New Translation Based on the Restored Text*. Schocken, New York.
- Kan, M., 2010. 'What Is an Avatar? Creators Chip Morningstar and Randy Farmer Trace the Ancient Roots of the Latest Buzzword'. Heritage Keys Blog.
- Kasavin, G., 2005. 'Everything Is Possible': Inside the Minds of Gaming's Master Storytellers [WWW Document]. GameSpot. URL <http://www.gamespot.com/articles/everything-is-possible-inside-the-minds-of-gamings-master-storytellers/1100-6120427/> (accessed 1.28.15).
- Kawabata, Y., 2006. *The Master of Go*. Yellow Jersey, London.
- Keegan, R.W., 2007. Q&A with James Cameron. *Time*.
- Kermode, F., 2000. *The Sense of an Ending: Studies in the Theory of Fiction*. Oxford University Press, Oxford.
- Kieslowski, K., 1987. *Blind Chance*, Poland, USA.
- King, G., Krzywinska, T., 2006. *Tomb Raiders and Space Invaders: Videogame Forms and Contexts*. I. B. Tauris, London; New York.
- Kittler, F.A., 1997. *Literature, Media, Information Systems: Essays, Critical Voices in Art, Theory and Culture*. GB Arts International, Amsterdam.
- Klevjer, R., 2002. *In Defence of Cutscenes*. Presented at the Computer Games and Digital Cultures Conference, Tampere.
- Koster, R., 2013. *Theory of Fun for Game Design*, 2nd edition. O'Reilly Media, California.
- Krotoski, A., 2008. Why Is the Book World Threatened by Gamers? The Guardian Games Blog.
- Kücklich, J., 2008. Marie Laure Ryan: Narrative as Virtual Reality a Review by Julian Kücklich [WWW Document]. URL <http://www.playability.de/Ryan.pdf> (accessed 7.20.08).
- Kurosawa, A., 1951. *Rashomon*, Daiei Film Co., Ltd., Japan.
- Lahti, M., 2003. As We Become Machines, in: Wolf, M.J.P., Perron, B. (Eds.), *The Videogame Theory Reader*. Routledge, New York; London.
- Landow, G.P., 2006. *Hypertext 3.0: Critical Theory and New Media in an Era of Globalization*, 3rd edition. Johns Hopkins University Press, Baltimore.
- Let's Play Archive, 2015. Frequently Asked Questions – The Let's Play Archive [WWW Document]. Let's Play Archive. URL <http://lparchive.org/faq> (accessed 2.14.15).
- Lévi-Strauss, C., 1983. *The Raw and the Cooked: Mythologiques*, Volume 1, reprint edition. Ed. University of Chicago Press, Chicago.
- Lewis, B., Hammock, L., Nihei, T., Faerber, J., Lee, E., 2010. *Halo Graphic Novel*. Marvel, New York; London.
- Lindley, C.A., 2002. The Gameplay Gestalt, Narrative, and Interactive Storytelling, in: Proceedings of the Computer Games and Digital Cultures Conference. pp. 6–8.

- Lionhead Studios, 2001. *Black and White [DISC]*. EA Games, Redwood City, CA.
- Lucasfilm Games, 1986. *Habitat [DISC]*. Quantum Link.
- Lunenfeld, P. (Ed.), 2000. *The Digital Dialectic: New Essays on New Media*. The MIT Press, Cambridge, MA.
- Machine Games, 2014. *Wolfenstein: The New Order [DISC]*. Bethesda Softworks, Rockville, MD.
- MacInnes, F., 2007. It's Only a Wii Bit of Violence [WWW Document]. The Escapist. URL http://www.escapistmagazine.com/articles/view/video-games/issues/issue_97/542-It-s-Only-a-Wii-Bit-of-Violence (accessed 2.20.15).
- Marcus, L., 2000. The Silence of the Archive and the Noise of Cyberspace, in: Sawday, J., Rhodes, N. (Eds.), *The Renaissance Computer: Knowledge Technology in the First Age of Print*. Routledge, London; New York.
- Marks, J., 1998. *Gilles Deleuze: Vitalism and Multiplicity*. Pluto Press, London.
- Marks, J., 2006. Information and Resistance: Deleuze, the Virtual and Cybernetics, in: Buchanan, I., Parr, A. (Eds.), *Deleuze and the Contemporary World*. Edinburgh University Press, Edinburgh.
- Matchett, F., 2013. *Krsna: Lord or Avatara?: The Relationship between Krsna and Visnu*, 1st edition. Routledge, London.
- Mateas, M., Stern, A., 2005. *Facade [DISC]*. Procedural Arts.
- Mateas, M., Stern, A., 2005. Procedural Authorship: A Case-Study of the Interactive Drama Façade. *Presented at the Digital Arts Conference*, Copenhagen.
- Maxis, 2000. *The Sims [DISC]*. Electronic Arts, Redwood City, CA.
- Maxis, 2008. *Spore [DISC]*. Electronic Arts, Redwood City, CA.
- May, T., 2004. Badiou and Deleuze on the One and Many, in: Hallward, P. (Ed.), *Think Again: Alain Badiou and the Future of Philosophy*. Mansell Publishing, London; New York.
- McCracken, E., 2013. Expanding Genette's Epitext/Peritext Model for Transitional Electronic Literature: Centrifugal and Centripetal Vectors on Kindles and iPads. *Narrative* 21, 105–124. doi:10.1353/nar.2013.0005.
- McGregor-Wise, J., 2005. On Assemblage, in: Stivale, C.J. (Ed.), *Gilles Deleuze: Key: Concepts*. Acumen, Chesham, 91–103.
- Mearis, M., 2014. The End of the Beginning | Dungeons & Dragons [WWW Document]. URL <https://dnd.wizards.com/articles/features/end-beginning> (accessed 2.11.15).
- Mechner, J., 1989. *Prince of Persia [DISC]*. Broderbund, Eugene, Oregon.
- Melville, H., 1981 (1851). *Moby-Dick*. Bantam Classics, New York.
- Metal Gear Informer, 2012. Hideo Kojima BAFTA Interview – Storytelling, Characters, and Game Design | Metal Gear Informer [WWW Document]. Metal Gear Informer. URL <http://www.metalgearinformer.com/?p=2775> (accessed 1.28.15).
- Millan, M., 2011. 'Sims' Creator: 'Games Are Not the Right Medium to Tell Stories' [WWW Document]. CNN. URL <http://edition.cnn.com/2011/TECH/gaming.gadgets/02/18/will.wright/> (accessed 1.28.15).
- Molyneux, P., 2003. Lionhead Studios' Black and White, in: Grossman, A. (Ed.), *Postmortems from Game Developer*. CMP Books, San Francisco, CA.
- Monolith Productions, 2005. *F.E.A.R (DISC)*. Vivendi Universal, Paris.
- Moriarty, M., 1991. *Roland Barthes*, 1st American edition. Stanford University Press, Stanford, CA.
- Murray, J., 1997. *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*. Free Press, New York; London.

- Newman, J., 2002. The Myth of the Ergodic Videogame: Some Thoughts on Player-Character Relationships in Videogames. *Game Studies* 2.
- Newman, J., 2008. *Playing with Videogames*, 1st edition. Routledge, London; New York.
- Newman, J., 2012. *Best Before: Videogames, Supersession and Obsolescence*, 1st edition. Routledge, Milton Park, Abingdon, Oxon; New York.
- Newman, J., 2013. *Videogames*, 2nd edition. Routledge, London; New York.
- Ocampo, J., 2004. Rome: Total War Review – GameSpot [WWW Document]. GameSpot. URL <http://www.gamespot.com/reviews/rome-total-war-review/1900-6108207/> (accessed 2.10.15).
- Ocampo, J., 2005. F.E.A.R. Review [WWW Document]. GameSpot. URL <http://www.gamespot.com/reviews/fear-review/1900-6135744/> (accessed 2.20.15).
- Ocampo, J., 2007a. S.T.A.L.K.E.R.: Shadow of Chernobyl Review – GameSpot [WWW Document]. Gamespot. URL <http://www.gamespot.com/reviews/stalker-shadow-of-chernobyl-review/1900-6167650/> (accessed 2.11.15).
- Ocampo, J., 2007b. Crysis Review [WWW Document]. GameSpot. URL <http://www.gamespot.com/reviews/crysis-review/1900-6182739/> (accessed 2.20.15).
- Pajitnov, A., 1984. *Tetris [DISC]*. Infogrames, Paris.
- Panikkar, R., 1981. *The Unknown Christ of Hinduism: Towards an Ecumenical Christophany*, Subsequent edition. Orbis Books, Maryknoll, NY.
- parable, 2011. *American Heritage® Dictionary of the English Language*, 5th edition, Houghton Mifflin, Boston.
- Parrinder, E.G., 1997. *Avatar and Incarnation: The Divine in Human Form in the World's Religions*. Oneworld Publications, Oxford, England; Rockford, MA.
- Pavic, M., 2012. *Dictionary of the Khazars – Androgynous Edition*, Androgynous Edition. PlaviKit.com.
- Pearce, C., 2002a. Story as Play Space: Narrative in Games, in: King, L. (Ed.), *Game On*. Laurence King Publishing Ltd., London.
- Pearce, C., 2002b. The Player with Many Faces: A Conversation with Louis Castle. *Game Studies* 2.
- Pearce, C., 2004. Towards a Game Theory of Game | Electronic Book Review [WWW Document]. Electronic Book Review. URL <http://www.electronicbookreview.com/thread/firstperson/tamagotchi> (accessed 1.29.15).
- Persuasive Games, 2015. Persuasive Games [WWW Document]. Persuasive Games. URL <http://www.persuasivegames.com/> (accessed 2.2.15).
- Phillips, J., 2006. Agencement/Assemblage. *Theory, Culture & Society* 23, 108–109. doi:10.1177/026327640602300219.
- Plato, n.d. Phaedrus.
- Poole, S., 2000. *Trigger Happy: Videogames and the Entertainment Revolution*, 1st edition. Arcade Publishing, New York.
- Poremba, C., 2006. Against Embedded Agency: Subversion and Emergence in GTA3, in: Garrelts, N. (Ed.), *The Meaning and Culture of Grand Theft Auto: Critical Essays*. McFarland & Co., Jefferson, NC; London.
- Postigo, H., 2014. The Socio-technical Architecture of Digital Labor: Converting Play into YouTube Money. *New Media Society* 1461444814541527. doi:10.1177/1461444814541527.
- Powell, A., 2007. *Deleuze, Altered States and Film*. Edinburgh University Press, Edinburgh.
- Prescott, M., 2011. Re: Conference Paper Request.

- Prosch, R., 2008. *A Week in Review: Playing with Fear*. Ludus ex Machina.
- Quantic Dream, 2005. *Fahrenheit [DISC]*. Atari, New York.
- Quantic Dream, 2010. *Heavy Rain [DISC]*. Sony Computer Entertainment, New York.
- Queneau, R., Le Lionnais, F., 2009. *Cent Mille Millions de Poèmes*. Gallimard, Paris.
- Radde-Antweiler, K., Walmathe, M., Zeiler, X., 2014. Video Gaming Let's Plays and Religion: The Relevance of Researching. *Gamevironments*. URL <http://elib.suub.uni-bremen.de/edocs/00104169-1.pdf> (accessed 29.01.15).
- Ray, S., 1997. *Select Nonsense of Sukumar Ray*, 3rd edition. Oxford University Press, New Delhi; New York.
- Ray, S., 1977. *The Chess Players*, India.
- Reed, K., 2007. Eurogamer: BioShock [WWW Document]. Eurogamer.net. URL http://www.eurogamer.net/articles/R_bioshock_pc360?page=3 (accessed 2.20.15).
- Reparaz, M., 2009. The Secret History of Wolfenstein | GamesRadar [WWW Document]. The Secret History of Wolfenstein. URL <http://www.gamesradar.com/the-secret-history-of-wolfenstein/> (accessed 2.8.15).
- Rescher, N., 1979. The Ontology of the Possible, in: Loux, M.J. (Ed.), *The Possible and the Actual: Readings in the Metaphysics of Modality*. Cornell University Press, Ithaca, NY.
- Rhys, J., 1992. *Wide Sargasso Sea: A Novel*, Reissue edition. W. W. Norton & Company, New York.
- Rimmon-Kenan, S., 2002. *Narrative Fiction: Contemporary Poetics*, 2nd edition. Routledge, London.
- rycotton, 2010. Charles Dickens Football Manager. *Kickabout with the Gents: Football Blogging*. URL <https://kickaboutwiththegents.wordpress.com/tag/charles-dickens-football-manager/> (accessed 29.01.15).
- Robbe-Grillet, A., 1966. *The Erasers*. Calder & Boyars, London.
- Rockstar North, 2004. *Grand Theft Auto: San Andreas [DISC]*. Rockstar Games, New York.
- Rockstar North, 2013. *Grand Theft Auto V [DISC]*. Rockstar Games, New York.
- Rockstar San Diego, 2010. *Red Dead Redemption [DISC]*. Rockstar Games, New York.
- Rodriguez, H., 2006. The Playful and the Serious: An approximation to Huizinga's Homo Ludens. *Game Studies* 6.
- Rogue Entertainment, 2000. *American McGee's Alice [DISC]*. Electronic Arts, Redwood City, CA.
- Rollings, A., Adams, E., 2003. *Andrew Rollings and Ernest Adams on Game Design*, 1st edition. New Riders, Indianapolis, IN.
- Rollings, A., Morris, D., 2003. *Game Architecture and Design: A New Edition*, 1st edition. New Riders, Indianapolis, IN.
- Royle, N., 2003. *Jacques Derrida*. Routledge, London.
- Rushdie, S., 2010a. *Video Games and the Future of Storytelling*. URL <http://bigthink.com/videos/video-games-and-the-future-of-storytellinghttps://kickaboutwiththegents.wordpress.com/tag/charles-dickens-football-manager/> (accessed 29.01.15).
- Rushdie, S., 2010b. *Luka and the Fire of Life: A Novel*, 1st edition. Random House, New York.
- Russell, S., 1982. *SpaceWar [DISC]*.

- Ryan, M.-L., 1999. Immersion vs. Interactivity: Virtual Reality and Literary Theory. *SubStance* 28, 110–137.
- Ryan, M.-L., 2001. *Narrative as Virtual Reality: Immersion and Interactivity in Literature and Electronic Media*. Johns Hopkins University Press, Baltimore.
- Ryan, M.-L., 2006. *Avatars of Story*, 1st edition. University of Minnesota Press, Minneapolis.
- Salen, K. and Zimmerman, E., 2003. *Rules of Play: Game Design Fundamentals*. The MIT Press, Cambridge, MA.
- Saporta, M., 2011. *Composition No. 1*, Box Unbnd edition. Visual Editions Ltd, London.
- Schlieter, J., 2012. Simulating Liberation: The Tibetan Buddhist Game ‘Ascending the [Spiritual] Levels,’ in: Bornet, P., Burger, M. (Eds.), *Religions in Play: Games, Rituals, and Virtual Worlds*. Theologischer Verlag Zürich.
- Scott, R., 1982. *Blade Runner*.
- Sega AM2, 1999. *Shenmue [DISC]*. Sega, Tokyo.
- Siemens, R., Schreibman, S. (Eds.), 2013. *A Companion to Digital Literary Studies*, 1st edition. Wiley-Blackwell, Chichester, West Sussex.
- Simonite, T., 2007. A Wii Bit of Trouble – New Scientist. *New Scientist Technology Blog*. URL <http://www.newscientist.com/blog/technology/2007/05/wii-bit-of-trouble.html> (accessed 29.01.15).
- Sinha, I., 1999. *The Cybergypsies*. Scribner, London.
- Softpedia, 2008. Spore E3 2008 Trailer [WWW Document]. softpedia. URL <http://games.softpedia.com/get/Mods-Addons/Spore-E3-2008-Trailer.shtml> (accessed 2.13.15).
- Sony Online Entertainment, 2007. *Vanguard: Saga of Heroes [DISC]*. Sony Online Entertainment, San Diego, CA.
- Spector, W., 2006. Gamasutra – Postmortem: Ion Storm’s Deus Ex [WWW Document]. GamaSutra.com. URL http://www.gamasutra.com/view/feature/3114/postmortem_ion_storms_deus_ex.php (accessed 2.10.15).
- Spinellis, D., 2006. *Code Quality: The Open Source Perspective*, 1st edition. Addison-Wesley Professional, Upper Saddle River, NJ.
- Steam Community Counter Strike 1.6 Fans, 2015. Steam Community:: Group:: Counter Strike 1.6 Fans [WWW Document]. Steam Community:: Group:: Counter Strike 1.6 Fans. URL <http://steamcommunity.com/groups/counterstrikefans> (accessed 2.9.15).
- Stephenson, N., 2000. *Snow Crash*. Spectra, New York.
- Sterne, L., 2003 (1759). *The Life and Opinions of Tristram Shandy, Gentleman*, Reissue edition. Penguin Classics, London; New York.
- Stern, M., 2008. *Spacewar*. URL <http://www.wheels.org/spacewar/> (accessed 29.01.15).
- Strelok, n.d.. Russian – English Short Dictionary, Lingoes Translation Software, v.2.4.5.
- Strugatsky, A., Strugatsky, B., 1978. *Roadside Picnic, Tale of the Troika*. Pocket Books, New York, NY.
- Sudnow, D., 1983. *Pilgrim in the Microworld*. Heinemann, London.
- Sutton-Smith, B., 1997. *The Ambiguity of Play*. Harvard University Press, Cambridge, MA; London.

- Tanenbaum, K., Tanenbaum, J., 2010. 'Agency as Commitment to Meaning: Communicative Competence in Games.' *Digital Creativity* 21.1: 11–17.
- Tarkovsky, A., 1980. *Stalker*, Moscow, Soviet Union.
- Tarkovsky, A., 1989. *Sculpting in Time: Tarkovsky the Great Russian Filmmaker Discusses His Art*, Reprint edition. University of Texas Press, Austin, TX.
- Taylor, A., 2007. *SXSW: Will Wright Keynote – Wonderland*. Wonderland. URL http://www.wonderlandblog.com/wonderland/2007/03/sxsw_will_wright.html (accessed 29.01.15).
- Taylor, L., 2003. When Seams Fall Apart: Video Game Space and the Player. *Game Studies* 3.
- Text, 1990. Oxford English Dictionary.
- The Creative Assembly, 2009. *Empire: Total War* [DISC]. Sega, Tokyo.
- The GTA Network, 2015. *GTA San Andreas: Walkthrough/Guide* [WWW Document]. GTASanAn.com. URL <http://www.gtasanandreas.net/walkthrough/beginning.php> (accessed 1.28.15).
- The Stanley Parable.com, n.d. *The Stanley Parable* [WWW Document]. The Stanley Parable.com. URL <http://stanleyparable.com> (accessed 2.13.15).
- tomcat, 2013. *The Zone of Influence: How Paratext Can Change Our Experience with Games* [WWW Document]. GameSpot. URL <http://www.gamespot.com/articles/the-zone-of-influence-how-paratext-can-change-our-experience-with-games/1100-6407541/> (accessed 2.13.15).
- Topsfield, A., 2007. *The Art of Play: Board and Card Games of India*. Marg Foundation, Mumbai.
- Tosca, S.P., 2005. Implanted Memories, or the Illusion of Free Action, in: Brooker, W. (Ed.), *The Blade Runner Experience: The Legacy of a Science Fiction Classic*. Wallflower, London.
- Tykwer, T., 1999. *Run Lola Run*, Germany.
- Ubisoft, 2002. *Tom Clancy's Splinter Cell* [DISC]. Ubisoft, Montreal.
- Ubisoft Montreal, 2003. *Prince of Persia: The Sands of Time* [DISC]. Ubisoft, Montreal.
- Ubisoft Montreal, 2004. *Prince of Persia: Warrior Within* [DISC]. Ubisoft, Montreuil, France.
- Ubisoft Montreal, 2005. *Prince of Persia: The Two Thrones* [DISC]. Ubisoft, Montreuil, France.
- Ubisoft Montreal, 2008. *Far Cry 2* [DISC]. Ubisoft, Montreal.
- Ubisoft Montreal, 2009. *Assassin's Creed II* [DISC]. Ubisoft, Montreuil, France.
- Ubisoft Montreal, 2011. *Assassin's Creed: Revelations* [DISC]. Ubisoft, Montreuil, France.
- Ubisoft Montreal, 2012. *Assassin's Creed III* [DISC]. Ubisoft, Montreuil, France.
- Ubisoft Montreal, 2013. *Assassin's Creed IV: Black Flag* [DISC]. Ubisoft, Montreuil, France.
- Ubisoft Montreal, 2014. *Far Cry 4* [DISC]. Ubisoft, Montreal.
- UnderSiege, 2006. *Undersiege, Underash2, REAL LIFE 3D Game Shooter* [WWW Document]. UnderSiege. URL http://www.underash.net/en_download.htm (accessed 2.2.15).
- United States Army, 2002. *American Army* [DISC]. United States Army.
- Valve Corporation, 1998. *Half-Life* [DISC]. Sierra Entertainment, Fresno, California.

- Valve Corporation, 1999. Counter-Strike [DISC]. Valve Corporation, Bellevue, Washington.
- Valve Corporation, 2004. Half Life 2 [DISC]. Valve Corporation, Bellevue, Washington.
- Venn, C., 2006. *The Postcolonial Challenge: Towards Alternative Worlds*. SAGE Publications Ltd, London; Thousand Oaks, CA.
- Wachowski, A., Wachowski, L., 1999. *The Matrix*, U.S.A, Australia.
- Weber, S., 1987. *Institution and Interpretation, Theory and History of Literature*. University of Minnesota Press, Minneapolis.
- Webster, A., 2008. Bioware: With Wii you're competing outside the game [WWW Document]. Ars Technica. URL <http://arstechnica.com/gaming/2008/04/bioware-with-wii-youre-competing-outside-the-game/> (accessed 2.20.15).
- Well Played Journal, 2011. Well Played Journal | ETC Press [WWW Document]. URL <http://press.etc.cmu.edu/wellplayed> (accessed 2.13.15).
- Westwood Studios, 1997. *Blade Runner* [DISC]. Virgin Interactive Entertainment, London.
- Wiener, N., 2003. Men, Machines and the World About, in: Wardrip-Fruin, N., Montfort, N. (Eds.), *The New Media Reader*. MIT Press, Cambridge, MA; London.
- Wilson, R.R., 1986. Rules/Conventions: Three Paradoxes in the Game/Text Analogy. *South Central Review* 3, 15–27. doi:10.2307/3189681.
- World 1–1, n.d. S.T.A.L.K.E.R.: Shadow of Chernobyl. World 1–1.
- Wreden, D., 2013. *The Stanley Parable* [Microsoft Windows, OSX].
- Wright, T., Boria, E., Breidenbach, P., 2002. Creative Player Actions in FPS Online Video Games: Playing Counter-Strike. *Game Studies* 2.
- Zimmerman, E., Chaplin, H., 2013. Manifesto: The 21st Century Will Be Defined by Games [WWW Document]. Kotaku. URL <http://kotaku.com/manifesto-the-21st-century-will-be-defined-by-games-1275355204> (accessed 2.9.15).

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