From Code to Experience

How digital games come to meaning through indeterminacy and performativity

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Foreword and Dedications

Forewords are remarkable things: not only do they carry a notion of beginning, but one of ending and finality as well. To you, who reads this, these words mark the beginning of this thesis. Yet to me, the one who writes them, they mark the end of five months writing, three years of research, and those six years in which I was a student. As such, I am not without anxiety; anxious for an ending, and anxious for this beginning to what is now finally written. It's been a long time coming, and I am both happy for the journey as well as the destination.

But first things first (or last things last). The pages that follow are an attempt to answer the question of how digital games go from lines of code to genuine experiences—how they become something meaningful. In my search for an answer, I have been far from alone. As such, I would like to use this space to thank the many people who have helped me along this path. My mother and father, for their love and support, and giving a five-year old me an old IBM 268 with three floppies of games, in the intuitive belief that I would find some interest in those "computer games." Nineteen years later, I have come to belief they were correct. My grandmother and -father, for all they have given me. Marianne Pappelendam, who gave me love, coffee and more proofreading and support than could be sanely asked for. Laressa Smitshoek, who walked this path with me. You truly are my sister. Jelle Stiphout, Stijn de Mos and Jelle Koster, whose friendships make this world a better place: I owe you all a proper drink.

Much of this thesis was done in America, and I wish to give my gratitude to those who proved that it is the people who make the place. To Peter Lunenfeld, for guiding me during this adventure. To Celia Pearce, Clara Fernández-Vara and Frank Lantz, all gracious enough to grant me their time and words. And to Eddo Stern and all the people of the UCLA Game Lab, who took me into their midst as hosts and friends. For that, I cannot thank them enough. One day I'll return, and we'll finish that game of *Mice and Mystics* over some dish of adventurous food.

This thesis is the culmination of my education at Utrecht University, and I would like to give thanks to the people who provided it to me. My gratitude to Susanne Knittel, Ann Rigney and Kiene Brilenburg-Wurth, for all their support over the years. To Hans van Straten, who saw it fit to educate a group of comparative literature bachelor students on Iser and Gadamer during their first day. It proved to spark the ideas contained in this text. And, of course, to Chiel Kattenbelt, my supervisor and the only man to intuitively grasp what I was trying to say before I even did so myself.

The work is done, the pen soon put down. I am grateful for the result and the path that took me here. And to you, dear reader, I am grateful for reading these words. May what lies within these pages prove as satisfying to read as it was for me to write.

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Introduction

From its very beginning, the history of the computer has gone hand in hand with that of the game. Before the first word processor, before the first networks and even before the first *digital* computers, there were games. From Turing's computer chess program to *Spacewar* (1962), from Ferranti's NIMROD computer to the first MUDs: all were explorations of the computer's new possibilities. Games entered the digital format, and when the rise of the computer ushered in the dawn of the digital age, digital games were always right there with them. As the computer conquered the world, those games grew from experiments in technology at MIT to a billion dollar industry. Today, the digital game has become part of our everyday media-consumption alongside film, television and literature.

The rise of digital games has been accompanied by the field of game studies, the school of research which attempts to approach and understand them. Both because of the medium's relative novelty and its capability to bring many medial elements together, it is not uncommon to turn towards knowledge from established fields of research such as film, literature and theater when approaching digital games. In this thesis I, too, will undertake such an approach: by drawing on my background in the field of comparative literature, I hope to provide a perspective on digital games that allows us to understand how they become meaningful to us.

Playing a digital game entails more than pushing buttons or manipulating light patterns on a screen. We engage the game through a performance as players, and this engagement results in experiences which are somehow meaningful to us. How does this happen? This question is the concern of this thesis. *How do digital games go from lines of code to meaningful experiences, and how can we understand this process?* As games, digital games demand play, a particular type of performance. As such, the answer I aim to provide centers itself around the performance which brings experience about, and how this performance is demanded by games on a structural level. This requires us to see games as *structurally performative.* To this end, I suggest drawing on two great thinkers from the field of comparative literature: Wolfgang Iser and Derek Attridge.

Wolfgang Iser was one of the principal figures from the School of Konstanz, and played a fundamental role in the development of reader-response theory during the seventies. In his approach of literature, Iser positioned the text as inherently incomplete and thus to a certain extend undetermined. The act of reading consists of engaging the incompleteness of the text through a performance, thereby bringing it to meaning in a process called

"synthesis." To designate the positions of incompleteness within the structure of the text, Iser used the term "Leerstellen," a term I translate here as "open spaces" when used in the context of digital games.

Derek Attridge is a more contemporary figure. In *The Singularity of Literature*, Attridge studies the manner in which literature functions and becomes meaningful to us. Like Iser, Attridge draws on aesthetic thought in search of an answer, and situates the text as an *event* whose eventual manifestation is dependent on both the text's structure and the particular reader engaging it. Unlike Iser, however, Attridge positions the literary performance as something not only engaged in by the reader, but —through the effects of the structure— by the text itself as well.

My belief in the value of Iser and Attridge concerning an approach of digital games can be explained as follows. If digital games can be experienced in a meaningful manner, then this experience comes about through play. Because of this, games can be seen as inherently incomplete: they require the performance of a player to function as games. By drawing on Iser's concept of incompleteness as a structural property, we can study how digital games position the performance and experience of players on a structural level. But because games are *interactive* works which respond to our actions, any notion of performance which focusses solely on the player will prove to be incomplete. To this end, we find inspiration in Attridge's notion that performance is not only offered by the interpretant, but by the work itself as well. It is my hope that, together, Iser and Attridge may provide the starting point for a perspective from which we understand digital games as the generators of meaningful experiences, which come about through performances provided by player and game in concordance.

Of course, I am well aware that the above theories were specifically developed in the context of literature. We cannot apply them directly to digital games without encountering multiple incongruities. As such, I will first discuss the theories as presented by their originators before placing them in the context of digital games. When doing so, I will suggest slight modifications so we may make these theories and terms our own. In addition, I propose an approach in which we allow theory and subject to exist in a mutually informative relation. This not only entails acknowledging that our theory shapes our observation of the subject to some extent, but also allowing our subject to "perform" on our theory by shaping it in turn. With this, I mean that we let our theory develop over the course of this thesis. We observe what our theory and terminology tell us on digital games, but in doing so respond with further developments of our theory in turn. Through this process, I hope to achieve two goals. First of all, by granting our theory a dynamic

development, we may observe digital games with more precision than would otherwise be possible. Secondly, it is my hope that the theory proposed in this paper will, ultimately, take shape in a manner that suits digital games in particular. As such, this is not a strict application of Iser, Attridge a.o.; rather, we take inspiration from their concepts and allow these to approach digital games through a development of their own.

Before we move on, I wish to clarify how this thesis relates to the ever-growing body of research on digital games, starting with the positioning of our subject. This study argues that the experience of digital games is, in part, structurally determined, and that the properties of this structure directly correlate with the existence of these games in the digital format. As such, what follows is aimed at a description of *digital* games in particular. At the same time, because of the reasons outlined above, it aims at describing effects shared by *all* games within the digital format, ranging from *Angry Birds* (Rovio Entertainment, 2010) to *Battlefield 4* (EA DICE, 2013).

Furthermore, our interest in performativity and experience guarantee an encounter with the massive body of texts on performance studies concerning digital games. Where applicable, we will take inspiration from such texts (such as the work of Clara Fernández-Vara, Emma Westecott, Brenda Laurel and Chiel Kattenbelt) and enter into dialogue with them.

Until now, Iser has been applied surprisingly sparingly to digital games. Notable applications were provided by Gordon Calleja and Julian Kücklich, whose approach is fascinating but different from the one undertaken here. We will study their texts, and the manner in which they differ from us, in this thesis as well.

One central factor in my approach of digital games is that I intend to avoid an affect-centered approach. Such studies of affect are centered around the player. They acknowledge that engaging a work through play is essentially subjective, and search for variety between these subjective experiences. While such studies can be incredibly valuable and insightful, I aim for an approach centered around structure which recognizes that, while the player's experience may be singular and subjective, it is still structurally determined by the game itself. As such, I suggest a structural approach which draws on the fields of aesthetics, pragmatism, semiotics and performance studies. Ultimately, the goal of this thesis is to reach a perspective from which we can both acknowledge that games become meaningful to us through singular experiences, while at the same time recognizing that this experiential meaning is a *structural* effect. The functioning of this structure is a direct result of digital games' existence within the digital format.

Remains the question how this is to be done.The research undertaken in this thesis should be seen as a *process* of analysis. To this end, it is divided into two parts. In the first, we set up our field of research by determining its parameters and preparing the starting points of our theory and terminology. The second part then consists of bringing this theory and terminology into contact with our subject matter (digital games), so that our analysis may take shape. Ultimately, this should lead to a process in which we both come to an understanding on how digital games generate meaningful experiences with the help of our theory, as well as develop this theory into one specifically aimed at digital games so that it may come to understand them. Finally, the conclusion will see us offer some of the potential uses for the findings of this research.

Part I, “Approaching Terminology,” deals with setting up our perspective and tools. In the first chapter, we strive for a workable definition of “digital games” by first asking what a *game* is, and subsequently observing the effects of the digital format on its structure. I will argue that the existence of games within the digital format results in three constitutive properties which mark the digital game. As such, these three constitutive properties can be seen as a refinement of the argument that the digital game is constituted by its existence as a game in the digital format. Through this, I hope to paint a clear picture this research’s subject. Chapter II deals with our theoretical tools. We examine the theories of Iser and Attridge, and review some of the previous applications of Iser and notable theories from the field of performance studies concerning digital games. Ultimately, this will allow us to make these terms our own and define them in a manner applicable to this thesis. This should accurately prepare the field of our research.

Thus prepared, we engage our process of analysis in part II, in order to answer our main questions. Through application of the concepts of performance and the open space on digital games, we trace their journey from computer code to meaningful experience and observe how and why games become interpretable and generate meaning. To start, chapter III studies what I will refer to as the “differential phase”: the process which sees games go from raw data to interactive ludic structures. Understanding that this ludic structure is variable to a certain degree, and that its manifestation relies on a process, allows us to account for variables in the structure of the game we engage as players. Chapters IV till VI then study what I call the “singular phase,” in which players engage the game. The result of this is a meaningful experience; thus, to understand this experience, we would do well to first study the game’s structure and player’s performance in detail. Chapter IV studies the structure of digital games, which I will refer to as their “game

space.” We will see how this game space is inherently incomplete, and attempt to map this incompleteness with the help of Iser. I will argue that games contain five distinct types of open spaces, demanding performance. This performance is the subject of chapter V, in which we study how digital games demand that the player performs from three positions (that of actor, audience and critic) locked in a triadic relation. Finally, chapter VI brings the two together, and studies how the game space and player are engaged in a “shared performance” which ultimately results in meaningful experience.

The question is not whether games are meaningful. Rather, the it is how digital games become meaningful *to us*. This question is a puzzle: ultimately, it is my hope that what follows will prove to be a small piece of it.

Part I

Approaching Terminology

We start by preparing the playing field. A strong argumentation requires a clear terminology; thus, we will begin by taking a close look at the three terms most essential to this research. These are *digital games,* our subject, and *performance* and *the open space*, our tools. A strong definition and explanation of these terms' deployment is crucial.

To start, we must understand what we talk about when we are talking about digital games. What are their constitutive properties, and how does this set them apart from non-digital games? Then, having defined our subject of research, we must do the same concerning our tools. This is the subject of the second chapter, in which we review the writings of Iser and Attridge, with special attention to Iser's concepts of the inherently incomplete text and Leerstellen, and Attridge's notion of performance and singularity. Of course, Attridge and Iser were scholars of comparative literature; they did not write on digital games. As such, we attempt to adapt their terminology and make it our own. To do this, we first ask how their theories have been applied before. I then hope to explain how they can inspire us and in what manner they must be modified for use in this thesis. This modification takes place at the chapter's end, where I provide a clear definition of how these terms will be applied to digital games. The result of this are the terms *shared performance* and *open space*, through which we will study digital game's generation of meaningful experience.

Chapter I:
Digital Games

What, exactly, is a digital game? While this question may seem somewhat redundant, it is anything but. A simple answer might be that digital games are games which are played on a digital device, a.k.a. a computer. And while such an answer is technically correct, it still leaves us in the dark on a significant amount of subjects which need to be clarified if we are to say anything about these games which is neither exceedingly vague nor needlessly narrow. In fact, the question of defining and categorizing digital games is often a determining factor for many theories within digital game studies. Crucial is the question if a definition of digital games *as* digital games is useful and necessary in the first place. There are several positions to take in response to this, and it will be helpful to quickly discuss some of the more important ones here.

To start, there are those who would argue that the primary concern of *game* studies is the subject of games. From this perspective, the question if a game exists in a digital or non-digital format is of secondary concern to the question if the work in question is a game or not. This is the position we find in, for example, Salen and Zimmerman's *Rules of Play* and Pearce's "Towards a Game Theory of Game". While this perspective does not deny that there are certain affordances unique to digital games as a result of their format, they are still and foremost *games*. As a result, the theories which result from this position often make little distinction between the two categories. There are several arguments for this approach.

First of all, the field of game studies is still relatively young. Of fundamental importance to its shape today were a selection of key texts that helped usher in the field, and are still of paradigmatic importance today. We can think, for example, of Johan Huizinga and Roger Caillois.[1] These texts are also at the start of *digital* game studies, but they predate the first appearance of digital games.

Secondly, many of the academic departments conducting game studies teach not only analysis, but design as well. This is crucial, because the distinction between digital and non-digital games is wholly different for a developer than it is for an analyst. From a

[1] Furthermore, we might refer to Deleuze's writing on Lewis Carroll, or Wittgenstein's use of games as an example of "family resemblance," a subject that seems particularly fitting concerning this discussion on the categorization of games. And of course, the concepts of "play" and "games" were also concepts within the fields of comparative literature and philosophy, such as in the works of Derrida and Barthes.

design perspective, the distinction is of far less importance. Many of the works originating from such departments are thus meant not only to further the field of analysis but that of design as well, and as a result philosophies on categorical difference are of secondary importance to questions concerning games in general.[2]

Finally, dividing games into the categories "digital" and "non-digital" might not necessarily appear logical. The reason for this is that the term "digital games" describes anything but a homogeneous field. It includes *Tetris* (Pajitnov, 1984) and *Dark Souls* (FromSoftware, 2011). It contains games centered around complicated narratives, and games containing no story at all. It includes digital versions of Go as much as it does complicated simulacra such as flight simulators. It includes works which can't be anything else but games, and works which might not be games at all. As a result, it might make more sense to ask if we are talking about a game or not, rather than laying emphasis on its format.

The above perspective is that of a "wide" approach in which format is wholly secondary to ludicity. An alternative is found in the "narrow" approach. This, too, is build around a believe in the heterogeneity of works within the digital format. Centered around the believe that a theory of digital games which encompasses *all* digital games is doomed to fall into over-generalization, such theories designate a specific type and area of games for further analysis. Good examples of this are the works of Jesper Juul, Gordon Calleja and Henry Jenkins.[3] Whether such theories distinguish between digital and non-digital is less relevant of a question, since they often adhere closer to Wittgenstein's familial approach by designating a specific subset of games which by nature is digital. It often doesn't necessitate the expulsion of examples from other type of games such as LARPs and boardgames, but is very much focused on (a subset) of digital games nonetheless.

Of course, there are other types of approach as well, and many writers either take position somewhere near the middle of the above continuum, or switch between the two

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[2] Eddo Stern, Celia Pearce and Frank Lantz head such departments at UCLA, Northeastern University and NYU, respectively. When I asked them if they considered digital games to be a paradigmatic shift from their non-digital kin, both Stern and Lantz answered in the affirmative. However, both also added that this distinction was not of paramount importance when it came to the creation of an effective curriculum for students learning design.

[3] Juul's approach in *Half-Real*, Calleja's approach in *In-Game*, and Jenkin's writing on environmental storytelling, to be precise.

approaches depending on their subject of research.[4] It is not my intention to argue in favor of one approach over the other, nor to list all possible positions taken in the field. Instead, I wanted to highlight these two positions because they serve well as counterpoints to the position taken in this thesis, while simultaneously highlighting some of the complications we will have to account for.

It is my belief that there is a categorical and fundamental difference between games which are digital and games which are not. When I say that the aim of this thesis is to perform a study of digital games, this does not mean a specific subset of them, nor is the aim to discuss aspects which are *generally* found in them; my aim is to describe digital games, from *Pong* (Alcon, 1972) to *Assassin's Creed* (Ubisoft Montreal, 2007). Nor is it my attention to provide a theory which is applicable to *all* games: while there might be an overlap between the claims made here on digital games and the subject of non-digital ones, the focus here is on those games which exist within the digital format.

This approach, taking the above into account, raises two questions. First of all, considering the heterogeneity of the digital category, how will we avoid over-generalization? And secondly, what is the difference between digital and non-digital games, and why do I believe it is so important? The answer to both these questions, I believe, lies in our definition of "digital games." Yes, "digital games are games which are played on a digital device," but what does this mean? As a definition that merely points out the format, this does not tell us much. But it can also be seen as a declaration and a demand, if we ask how the nature of the format influences the natural structure of the work. How does the digital format constitute the digital game? My categorization of digital games, then, is build around the fact that these games are all present in the digital format, and that it is this format which determines specific key properties. In this manner, we are capable of both admitting that there is a massive difference between *Pong* and *Microsoft Flight Simulator X* (ACES Studio, 2006), while at the same time realizing that they *are* connected through their position on a certain common ground.[5]

Our task in this chapter, then, is twofold. First of all, we have to understand how games in

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[4] For example, while Pearce's approach of *games* falls square into the first category, her writings on online games could be seen as belonging in the second.

[5] An additional reason for this approach is that (even theoretical) categorizations within the digital medium itself are often hard to uphold: it is hardly uncommon for games to start out in wholly different categories, only to move over the course of their lifespan. For example, a puzzle game and an RPG are very different types of games. But at the same time, games such as *Puzzle Quest 2* (Infinite Interactive, 2010) combine the two into a single work. Such hybrids are, in fact, one of the driving forces in the history of games.

the digital format differ from those outside of it while still being games. Secondly, we have to understand both this difference and our subject of research by studying the *constitutive properties* of digital games. Our approach will be as follows. I will start with the general question: "What is a game?" By looking at some of the definitions given in the field and comparing them with certain digital games, we notice some of the ways in which digital games differ from non-digital ones. To further explain this difference, I will attempt to provide a definition of my own. This helps us define the second part of the term "digital games" as it relates to this thesis. From there, it is time to think about what it is that sets digital games apart. What are these properties granted to them by their format? Answering these questions not only provides us with a clear view of what our subject of research is, but also helps us understand that there is a unifying factor which unites digital games despite their difference. Understanding this unifying factor, namely the properties which determine our interaction and interpretation of them, will also allow us to take an approach which covers the entire field without becoming lost in over-generalization. Ultimately arguing that these structural characteristics determine the manner in which games generate meaning through experience, we also find a legitimization for applying the theories Iser and Attridge.

1.1. What is a game?

Earlier, we said that digital games are games which exist in the digital format, and that this format determines certain key properties which allow us to group them as a category. If we are to move towards a workable definition of digital games, then it is not enough to merely define the influence of the digital format: we must also understand why these works are games. We thus need a workable definition of *game* as well. Necessarily, our first question then becomes: “What is a game?”

Let me preface this by saying that I am well aware of the difficulties surrounding such a definition. It is a question which bridges semantics, philosophy, sociology and history, and I have no assumptions of providing a final answer here. Perhaps there is no better example of the difficulties we find in defining a game than Wittgenstein’s use of the word as an illustration for his concept of family resemblance. Yet it is this very slipperiness of the term that necessitates an approach of it here, even if the result of it is not so much an answer as an agreement of perspective concerning the approach of this thesis. Ultimately, we need a workable definition which can help us understand how digital games differ from their non-digital kin while simultaneously still situating them as *games*.

To this end, I will first present a selection of definitions concerning games and play. This selection is not made to be representative of the entire spectrum of definitions, but is chosen for its representativeness of the variety that such definition can take. How do these definitions differ, and what terms are given prominence? We can then apply these definitions to digital games and see if they accurately describe them. By noticing where the two correspond and differ, we can then approach and test a workable definition of our own.

In 1938, Johan Huizinga defined play ("spel") in his fundamental work *Homo Ludens* in the following manner:

> [Play is] 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.
>
> (13)[6]

Here, we should pay attention to the following points. First of all, there is the matter of translation: Huizinga's original text, written in Dutch, refers not so much to "game" and "play" but to the Dutch word "spel," which can incorporate both meanings. This has great implications for the definition of "game": it does not only adhere to the points made above, but it can also be seen as any structure in which play takes place. While this ambiguity is not always present within the Dutch language, there are deliberate traces of it in Huizinga's work. Of course, this should be seen in light of the political reality in which Huizinga wrote his work, on the edge of World War Two as Europe faced the political realities and dangers of fascism. Characteristics such as a lack of material interest and/or profit, and the emphasis on social formation and "pretend" are, as such, very much political. Huizinga's emphasis on the mentality and nature of play is useful in helping us understand the all-important relation between players and games, but it leaves us a bit in

[6] The above citation is taken from a reprint of the 1949 Routledge edition.

the dark when it comes to the structure of games; for Huizinga, the manner in which play penetrates all levels of the human experience and culture is of far greater importance.

The approach of understanding games through understanding the nature of play is also recognizable in the writings of Robert Caillois, who defined play in *Man, Play and Games* as:

> **1. Free:** in which playing is not obligatory; if it were, it would at once lose its attractive and joyous quality as diversion;
> **1. Separate:** circumscribed within limits of space and time, defined and fixed in advance;
> **3. Uncertain:** the course of which cannot be determined, nor the result attained beforehand, and some latitude for innovation being left to the player's initiative;
> **4. Unproductive:** creating neither goods, nor wealth, nor new elements of any kind; and, except for the exchange of property among the players, ending in a situation identical to that prevailing at the beginning of the game;
> **5. Governed by rules:** under conventions that suspend ordinary laws, and for the moment establish new legislation, which alone counts;
> **6. Make-believe:** accompanied by a special awareness of a second reality or of a free unreality, as against real life.
>
> ("The Definition of Play",128)

Caillois wrote in continuation of Huizinga, and his description of play as an activity which is unproductive and separate shows almost direct correspondence to Huizinga's notions. Caillois also, however, characterizes play as uncertain, governed by rules and make-believe: these are *structural* characteristics. They define games as structures of rules which designate a "second reality" in which the player's actions work towards an outcome which is still uncertain at the onset of the game. The concept of games as *structures of rules* is something I wish to place special emphasis on here, as it seems to me that this above all categorizes games as not just areas of play, but places of design which can be interpreted.

Concerning the implications of such a structure, we can turn to the writing of Deleuze. In "Tenth Series of the Ideal Game" Deleuze explores the difference between a

conceptual and pure "ideal game" and the "normal game," games with which we are familiar. He describes the latter as follows:

> The games with which we are acquainted respond to a certain number of principles, which may make the object of a theory. This theory applies equally to games of skill and to games of chance; only the nature of the rules differs. 1) It is necessary that in every case a set of rules preexists the playing of the game, and, when one plays, this set takes on a categorical value; 2) these rules determine hypotheses which divide and apportion chance, that is, hypotheses of loss or gain (what happens if…); 3) these hypotheses organise the playing of the game according to a plurality of throws, which are really and numerically distinct. Each one of them brings about a fixed distribution corresponding to one case or another. (Even when the game is based on a single throw, this throw is good only because of the fixed distribution which it brings about and because of its numerical particularity); 4) the consequences of the throws range over the alternative “victory or defeat.” The characteristics of normal games are therefore the preexisting categorical rules, the distributing hypotheses, the fixed and numerically distinct distributions, and the ensuing results.
>
> (58-59)

The above quote is in many ways spectacular: short and concise, Deleuze points out the relationship between rules and the activity of play, how the one precedes the other and categorically determines value within the reality of the game. The above also describes how the rules structure games, how they relate to each other, and how this rule-based structure functions as a generator of meaning by categorizing the separate throws which make up a game until a distinct outcome is reached. Furthermore, Deleuze discusses that games "*retain chance only at certain points*, leaving the remainder to the mechanical development of consequences or to skill, understood as the art of causality." (59) Thus, games carry inherent meaning since they "refer to another type of activity, labor, or morality, whose caricature or counterpoint they are(...)" (59)

Deleuze’s description concerns the nature of games, but it does not yet define them. To that end, I now wish to present three short definitions. First of all, there is Bernard Suits. In *Grasshopper: Games, Life and Utopia*, Suits defines games as follows:

> To play a game is to attempt to achieve a specific state of affairs [prelusory goal], using only means permitted by rules [lusory means], where the rules prohibit use of more efficient in favour of less efficient means [constitutive rules], and where the rules are accepted just because they make possible such activity [lusory attitude]. I also offer the following simpler and, so to speak, more portable version of the above: playing a game is the voluntary attempt to overcome unnecessary obstacles.
>
> (41)

While not pronounced as such, a central role in Suits' definition is played by conflict. This conflict arises from the tension in trying to achieve a certain goal while confined within a structure of rules. While Suits' emphasis on the willing creation of artificial difficulty remains his own, the role assigned to conflict here is similar to that given to it by Sutton-Smith and Avedon. Avedon and Sutton-Smith define games as “an exercise of voluntary control systems in which there is an opposition between forces, confined by a procedure and rules in order to produce a disequilibria outcome.” (7) Similarly, Salen and Zimmerman distill the following definition in *Rules of Play:* "A *game* is a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome." (80)[7]

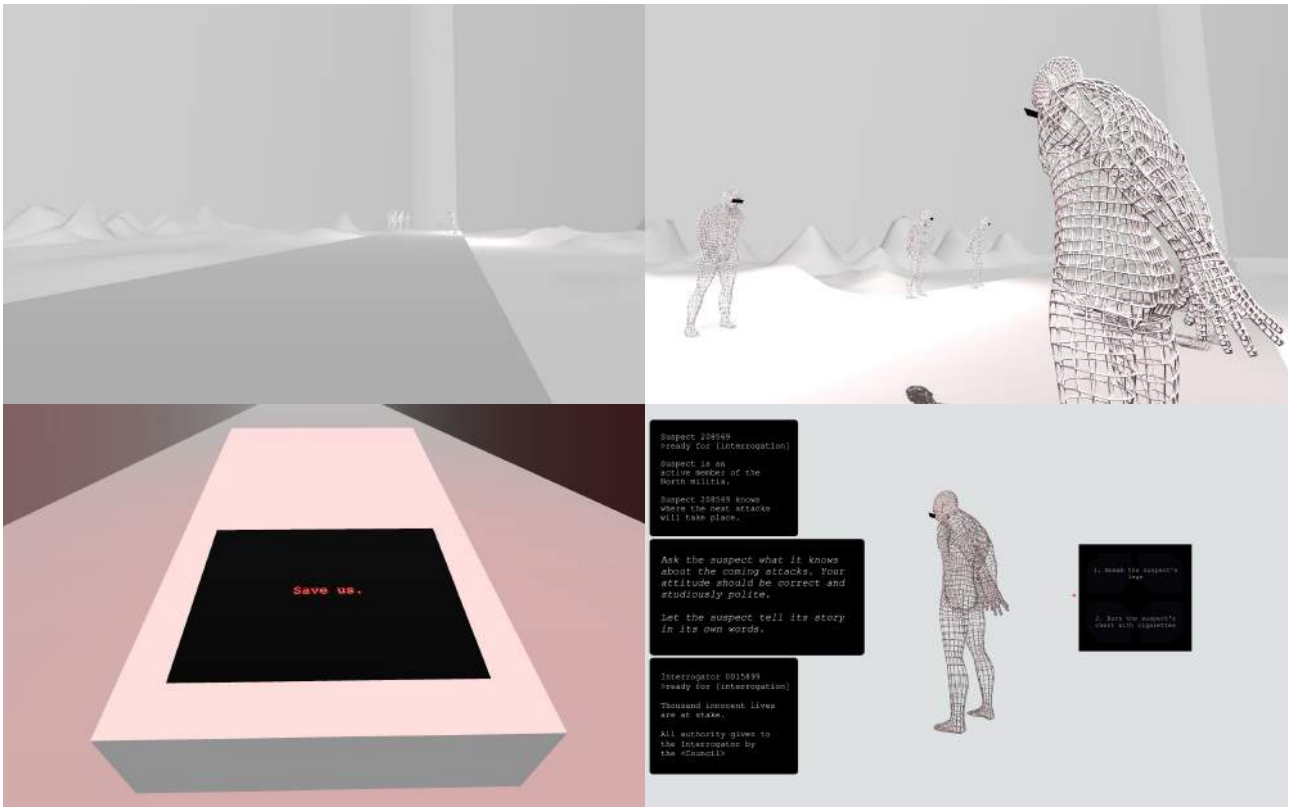
For Huizinga and Caillois, games are constructs that function as one of the possible places where play can manifest. Furthermore, Caillois, Deleuze, Suits, Sutton-Smith, Salen and Zimmerman all present games as structures of rules. Finally, barring Caillois and Huizinga, all place an emphasis on the importance of conflict, which grants the game purpose and unites the rules into a unified structure. Do these definitions stand up to digital games?

To answer this question, we first need a digital game to use as example. It would not be very productive to chose the digital version of a game with which we are already familiar in a non-digital format, since their structure would closely mirror that of non-digital games by design. The same could be said concerning games centered around a strong competitive element, such as shooters, fighting- or strategy games. Instead, I have chosen a game

[7] In order to reach their definition, Salen and Zimmerman draw inspiration from Huizinga, Caillois, Bernard Suits and Sutton Smith. While I was already familiar with the definitions of Huizinga and Caillois, *Rules of Play* brought me to seek ought the latter two definitions.

which lacks a strong competitive element and instead focusses on giving the player a predesigned experience in which conflict plays a different kind of role.

Dämmerung (2015) is a small independent title made by Outlands about the ethics and efficiency or futility of torture as a tool of interrogation. As such, it is very much part of a larger debate surrounding post-9/11 politics and rhetoric. This rhetoric is played with in the game: while a deliberately vague briefing tells you that your subjects of torture may or may not be part of some mysterious “North” that is planning “attacks” which could cost the lives of “thousands of people,” it is a lot more specific in its use of rhetoric when it concerns the subject of torture and your subjects. The latter are often described as superstitious and belonging to an exotic religion, and at one point the game tells you that “certain people just aren’t fit to accept the civilized ways of democracy.” This deliberately plays into a very familiar rhetoric of “us versus them” which we have grown only too familiar with in the last decade.



1.1.1. Dämmerung.

The manner in which *Dämmerung* constructs its message is unique to the medium of digital games. At the start, the player finds himself within a completely white, abstract landscape, surrounded by mountains. Angelic classical music plays, and we have to slowly traverse a straight road towards a console at the other side. We passes eight human figures in captivity, shown as wireframes with black bars in front of their eyes, their hands

bound. They, we soon learn, are our subjects. The console contains a single message: “SAVE US.” Interacting with it brings up a message, which informs us of the situation and our duty to prevent calamity by extracting information from the subjects. After this, we are brought to a screen where a subject is shown together with multiple menus containing information. The subject is referred to by its number, and the text addresses us in the second person. We are thus informed of the presence of an unknown third party, apparently functioning as our superiors. The official instructions tell us to interrogate with rhetoric: a menu on the right, presenting us with several options, offers us the choice between various torture techniques. As soon as we pick one, we read about its effects. Some scream, squirm or curse us. All of these descriptions feature dismissive commentary at their responses, and urge us not to trust them, not to take them seriously, and to continue our actions. After several of these options, we are left with only two, both of them lethal. Once such action is undertaken, the subject dies and we are informed that: “The subject remained silent.” We then start the process all over again, this time there being one less figure on the road between us and the console. As we progress, options become more desperate as the attack grows more imminent. Once we reach the last subject, all options are variations of desperate inquiries to talk. They, too, end in lethality. We are then again transported into the white realm, but this time the music has been replaced with an intimidating drone. We walk to the console, no more subjects left, and read: “YOU FAILED US.” The moment we interact with the console, the game abruptly ends and we are thrown back to our desktops.

The effectiveness of *Dämmerung* is not found in its narrative, its text or its visuals; if this were the case, it could just as well function as a book or film. What makes it work, however, is the manner in which it forces its audience to not just reflect on the horror of torture but to be completely complicit in it. Put differently, it generates its meaning through play. As a game, *Dämmerung* is relatively small and obscure. Yet I have chosen it as an example because the manner in which it tells a set narrative through play makes it representative for a far larger category of digital games, such as *Dear Esther* (The Chinese Room, 2012), *The Path* (Tale of Tales, 2009), *The Stanley Parable* (Galactic Cafe, 2013), *Journey* (Thatgamecompany, 2012) and *Fl0w* (Thatgamecompany, 2006). In this sense, it shares its application of play many adventure games as well.

There are several other characteristics *Dämmerung* shares with the titles mentioned above as well: it contains only a single, invariable outcome and features no obstacles that can be overcome through play or impede the player's progress. This makes it hard to determine whether or not the game contains actual *conflict*: certainly, there is conflict on

the level of plot, and there are several types of conflict experienced by the player—but nowhere does this conflict appear in the flow of play. Approaching *Dämmerung* as a game through the definitions mentioned earlier, we find them to be a bit ill-fitting. True, Suit's description of games as "bringing about a specific state of affairs, using only means permitted by rules, where the rules prohibit more efficient in favor of less efficient means" seems perversely fitting, but there appears to be a tension between the (lack of) obstacles in *Dämmerung's* play and Suit's characterization of it as an effort to "overcome unnecessary obstacles." Furthermore, the fact that *Dämmerung* has only one possible outcome is somewhat problematic. Here, our "throws" have absolutely no "range over the alternative “victory or defeat”" as described by Deleuze. And can we really speak of a "disequilibrial" (Sutton-Smith) or "quantifiable" outcome if it is set in advance regardless of our actions?

Without a doubt, *Dämmerung* contains a structure of rules that facilitate play. But is it a game? There are two possible answers to this question. First of all, we could say that the lack of conflict and categorical outcome make *Dämmerung* and its ilk ludic works which facilitate play but are not games themselves; instead, they are software which, as Wittgenstein would say, share a familial resemblance. While such an approach is not factually incorrect, I do not believe it is very productive here. After all, the line between what is and is not a game is porous and ever moving; furthermore, such an approach fractures the digital playing field in such a manner that it becomes far harder for us to analyze what these titles have in common with "obvious" digital games. Instead, I propose that we accept this difference for what it is and instead modify our definition of game so as to incorporate titles such as these. Such a definition would not be meant as an end-all answer to the question of defining games, but it would help us make digital games approachable in this thesis through a workable definition.

What could this definition look like? First of all, it should still recognize games as structures governed by rules which we interact with through play. While the definition must grant room for conflict and various outcomes, we must ensure that this outcome need not necessarily be quantifiable. Rather than originating from any inherent conflict, we can instead propose it results from play itself. I thus propose the following definition of "game" for use in this thesis:

> A game is a process and outcome, resulting from the actions of one or multiple players, taken according to a structure of rules.

There is still an emphasis on games as structured by rules, but I have attempted to free the outcome from categorical value by being dependent on only the *actions* taken by the player(s). It does not deny a certain autonomy to games by claiming they are wholly dependent on the player, because any action taken by such a player is taken according to the structure of rules which determine the game. Furthermore, this situating of an outcome, together with the description of games as "processes," asks us to view games as more then ludic structures made of rules: they are manifestations dependent on play, capable of existing as a structure but incomplete until they encounter a player who engages them.

Thus, if the experience of a digital game such as *Dämmerung* differs from that of non-digital ones, this definition can help us pinpoint this difference. Logically speaking, we should be searching for a difference in experience brought about by a difference in ludic structure. To ask what these differences are means asking what characterizes digital games in a structural manner. Or, put differently: how does the digital format constitute the digital game? Believing we ought to understand this before we attempt to approach the experience of digital games as meaningful, we study the constitutive properties that define digital games next.

1.2. Relevant constitutive properties of digital games

The fact that digital games are “games within the digital format” has far reaching implications, which may not be obvious at first sight. These implications reach beyond formal categorizations: it is the digital format which inescapably influences and determines matters of structure concerning games. Recalling our definition of “game,” we see that a change in structure is a change which ripples through the entire entity referred to as *game*, determining the relationship between ludic structure and player, and ultimately shaping the experience of play.

Here, we look closely at digital games in an attempt to understand some of their primary characteristics, their constitutive properties. Earlier, we said that digital games are games *constituted* by their existence in the digital format. Now, to be more precise, I will argue that the digital format determines the digital game in three manners, granting them three constitutive properties. First of all, their code-based nature ensures that digital games are *inherently limited, hermetic spaces* and which are *bound to a solid embodiment.* These formal properties directly determine their ludic structure in a manner that consequently leads to a particular type of relationship towards the player. The third

property of digital games concerns the way in which, owning to the digital format, these games *are capable of hosting various medial configurations within a fluid intermedial body.* Understanding these properties will not only help us gain an understanding of digital games' shape, but also allows us to better understand how we can approach the question of games generating meaning. Furthermore, they explain the inherent difference between digital and non-digital games.

Games are structures facilitating play through a construct of rules which precedes them. If we wish to understand how digital games are different from non-digital ones, we need only start with a simple question: in what form do the rules precede play? Or, put differently: what is a game before it is played?

Concerning non-digital games, this form of a game-before-the-game is often somewhat fluid. As a result, we should be wary of pointing to any material causes. Take, for example, football. The game of football contains three requirements that must be met before it can be played. First of all, there is a material basis: we need a playing area commonly referred to as “the field,” two goalposts, and a ball. Secondly, we need players. And thirdly, we need a set of rules that determine the game “football” by shaping the form of play that arrises from the players utilizing the material. Now, if we ask where “football” resides, it should be clear that it is not within any of the material assets: the football field cannot be equated with the football game. Rather, the field —just as the players— serve as an asset through which the game football manifests: only when a particular type of play makes use of these materials in a particular manner can we speak of a particular game. The determining factor of football lies within its *rules*: it are its rules which designate the required material and their use, the conduct of the players, and what is and isn’t equated to the game. Another good example of this can be found within card games. A deck of cards contains 52 cards. This set of materials designates no one game in particular: instead, it can serve as the material host for the manifestation of an almost uncountable variation of games, ranging from mau mau to poker, from solitaire to baccarat. Likewise, while a particular singular manifestation of a game is reliant on a particular set of players (Kasparov versus Kramnik in 2001, for example) these players play no determining factor concerning the concept of the game itself: in fact, a game which is reliant on a particular set of players would probably not make for a very good game. And even if it were, than this particular demand would still finds its roots within the rules of a game.

It is through this question concerning rules that we find a striking difference between digital and non-digital games, one which sets the former apart as fundamentally different

from the latter. Concerning non-digital games, the rules exist as social constructs. They exist because we, as players, agree on them. This does not mean that such rules are always open to change, or that they cannot be codified: it merely means that even the strictest codification (say, for example, the rules of football as upheld by the FIFA) are still social constructs represented in the shape of a codex. As such, non-digital games such as chess, football or tag exist because we, as a society of players, agree they exist. This also explains why such games often take a fluid form and why the "definitive" shape of a rule can be hard to pin down: the history of chess, for example, can be thousands of years old or relatively short depending on if we classify chess as a game which adheres to the exact rules as we know them now. Likewise, football can be played in an officially sanctioned stadium as well as in a parking lot, and many games are played according to "house rules." While no one would contest that these manifestations of games are different, neither would most people deny that they are still different manifestations *of the same game*. As such, the rules of non-digital games lack a solid embodiment, preceding the game as social constructs. As social constructs the rules precede play, but they require an enactment through play if they are to become manifest. Thus, the enactment of these rules by the players precedes their manifestation within the game.

When it comes to digital games, this situation is reversed. Because they exist within the digital format, the solid base of digital games, that which precedes any play, is a base of computer code. Without this code, there is no program; without this program, there is no digital game. This code is very much a stable construct: it is anything but random, and even a game which could modify its own code could only do so according to a process which is already coded in. While a game's code is far from its manifestation (for this, it again needs material in the form of a platform, and players in order to be a game) it *is* the place where the rules are contained — and it is a very solid basis. Even before we activate a digital game, its rules are already there within the code, awaiting activation and engagement. Furthermore, the code is not —in contrast to the social rules of non-digital games— open to interpretation. If there is any doubt on how the code is to be run, the result will be a runtime error which prevents the playing of the game. This does not mean that there is no room for interpretation of the rules on the side of the player, because our interpretation of a rules' effects are still open. But this interpretation changes nothing concerning the *execution* of the rule, since this is completely out of the player's hands: it is less a matter of interpretation than it is of judgement, and it takes place between code and machine. In digital games, the enactment and manifestation of rules *precede* play and any action taken by the player. This has several severe and important effects on the

constitutive properties of digital games. We will begin with discussing the issue of embodiment.

Non-digital games, as we have discussed, lack a solid embodiment, existing instead as more fluid social constructs. Because the rules and structure of digital games are contained within a stable code, they *do* find embodiment— firstly in the code itself, and secondly within the storage medium that this code is written on. This solid embodiment can be understood as follows. At its core, all software and all computer code exists as mathematical constructs. These math constructs are a solid base allowing a spectrum of variation: they are complicated formulas which await the insertion of various variables that determine outcomes. When we interact with a digital game, we are interacting with mathematics. Yet when we play, for example, *Call of Duty 4* (Infinity Ward, 2007), we do not say that we inserted variables *x* and *y* and thus reached outcome *z*: we say that we managed to snipe a headshot that won our team a point. The reason for this is that, while games may find their ultimate basis in mathematics and code, from this code manifests a ludic structure containing visuals, audio, spatial representations and rules; in other words, the construct we refer to when we talk about a particular digital game. What we refer to as a game thus stands as an interface between ourselves as players and the code.

The fact that digital games find a solid embodiment within code has several important effects on their structure and their relationship to rules. First of all, and perhaps most importantly, it changes the manner in which rules function. Earlier, we stated that non-digital games are bound to rules which govern play and exist as social constructs. The important question here is *how* they govern which actions are allowed, and which are not. First of all, the rules need to be enacted before manifesting, and require social agreement. More importantly, they govern action by categorizing a small selection of possibilities within the rules of the game, drawing on the full potential for action within human existence. For example, it is fully *possible* during football to take the ball and run off the field with it; doing so, however, would mean performing an action outside the structure of rules and thus be illegal within the space of the game. In a less extreme manner, the rules only manifest when enacted: it is thus fully possible during, say, a match of checkers that a better player allows his less-capable opponent to reverse one or two moves. Such an action is outside of the rules, but because the rules are not enacted at that moment the game still continues *as checkers*. Such actions are completely impossible within the structure of digital games.

Because the enactment of rules precedes play, they cannot be broken.[8] And rather than selecting action from an unlimited spectrum of possibilities, all possibilities within the game space originate from an aleatory point that is the game code. This is a difference between non-digital and digital games: because the latter is always bound to code, their potential spectrum of possibility is always smaller than it is to the former. Thus, there is a structural difference between a digital and a non-digital version of chess: where the latter's rules and structure allow for completely unforeseen innovation that stretches or breaks the rules but remains within the magic circle, the possibility for this in digital games is simply non-existent. In *Man, Play and Games*, Caillois places the various forms of play along a continuum between *ludos* (play which is rule-bound) and *paida* (free play). ("The Classification of Games" 130-48) Taking the above into account, we find an inherent difference between digital and non-digital games: concerning the possibility to break, ignore or alter the rules, the former always stands closer to ludos, whereas the latter is more within the domain of paida.[9]

Does this mean that the rules of a digital game are always upheld in the intended manner? No: deviation is seen, and it can take multiple forms. But the types of form it takes are different from those found in non-digital games. Take, for example, cheating. As stated before, cheating in a non-digital game entails the performance of an action which was supposed to be kept outside of the ludic structure by the enactment of the rules: once a player stops or differs in this enactment, cheating becomes possible. There is, as such, no limit on the forms cheats can take: when one cheats, anything goes. This is different from, for example, enabling *god mode* within a digital game, making the player invincible. While such an action breaks the rules of the game on the level of play, *it is only possible because the rules of the code allow for it*. Even subversions of play cannot escape the fundamentals of digital games. Of course, cheats can take a different form as well: take, for example, the infamous *aimbots* which often plague online shooters. An aimbot is a program which alters the actions a player is capable of performing in-game, allowing him or her to hit a perfect shot automatically. There is no code within the game itself which allows for this: aimbots function by writing additional code to the game's database. In such a scenario, we are dealing with modifications of the game which actively alter the game on

[8] Of course, players can still chose to act in a similar social manner, by allowing the opponent to restart a game going badly, for example. Such acts alter the social attitude *towards* rules. They change our acting within the game's structure, thus changing play, but leave the structure of the game itself intact.

[9] Interestingly enough, when it concerns the type of play *enabled* by these rules, the situation is different; we will return to this in chapter V.

a structural level. We will discuss this issue in more detail at a later point, but for now it suffices to note the following: an unforeseen variation within the game that was not allowed by the rules can only come to pass when the rules themselves are *altered* or modified. Even then, this still requires an enactment of these modified rules before they can manifest within the digital space. This is different from non-digital games, in which cheating *suspends* the enactment of rules all together.

There is something else we should note at this point, and it concerns the function of rules. In non-digital games, the rules determine a *selection* of possibilities to which they grant a categorical value, thus integrating them within the ludic structure. Breaking the rules means stepping outside this selection. In digital games, the rules *create* the possibilities, and all actions and outcomes are contained herein. This difference is, again, best explored through the use of an example.

What is the difference between a MotoGP race in real life, and one in the game *MotoGP 14*? (Milestone, 2014) Both are games, and both are races performed on motorcycles. Both, too, are structured by rules. In real life, these rules refer to what the competing teams and drivers can and cannot do, where the races will be held, and what conduct is acceptable on the tracks. They set the consequences for different behaviors of driving, determine the type of engines that can be used, and what separates winners and losers. Through this, they uphold the ludic structure, directly facilitating play. What these rules do not govern, however, is the color of the gravel besides the track, the texture of the asphalt, the physics which determine the behavior of the bike, the conduct of the drivers, or the cheers of the crowd. This is not the case in *MotoGP 14*: not only are the rules mentioned above hardcoded into the game, but they extend beyond it until they encompass the entirety of the ludic space. The color of gravel is a texture map loaded in its proper place, the texture of asphalt is a class assigned to that part of the map, the physics are a steady calculation done in the background, the drivers (with exception of the player) are driven by AI-routines, and the cheers of the crowd are animations played at the proper moment.

The rules of a digital game thus preform a double function: they not only determine the ludic structure in terms of goals and affordances, but govern its entire space. Thus, *digital games present a space which is inherently limited and hermetic*. With the use of the word ‘hermetic,’ I do not mean they offer no access points — they have to remain open for the insertion of the player, or there would not be a game. But they are hermetic in the sense that any possible action, outcome or element that can manifest within its space is

already contained in the basis of code; there can be no variation which goes beyond this basis. They are inherently limited because code itself is limited. The fact that the space of a digital game is inherently limited does not mean such games are *lacking*. Rather, while digital games are more limited spaces compared to the world outside of them, they are "whole" unto themselves in much the same way as Crawford describes them to be when he states a game is "a closed formal system that subjectively represents a subset of reality. By 'closed' I mean that the game is complete and self sufficient as a structure." (ch. 1) The difference here between digital and non-digital games is that the space of a non-digital game, its "magic circle," is always in part a designated time and space within the greater area of the "real" world. For digital games, the shape of this magic circle is different: while it encompasses the world outside of itself in so far as that this is where the player is located, it also always refers to a space completely its own. This latter space is digital, and whole unto itself.

This hermetic, limited nature has several important effects we should note before moving on. First of all, it grants digital games a stability and autonomy that is not incomparable with that found in literature and film. Just as we might speak of the limited space presented by a text, we can speak of the limited space presented by digital games. And just as there is an autonomy of the text, so is there an autonomy of the game. Of course, we will return to these points later when we approach digital games with the help of Iser; for now, it is enough to make note of them as a logical consequence of the above. After all, just as the literary work is a structure of language, so is the digital game: but its language is that of code, and its grammar is ludos.

Secondly, this autonomy of digital games ensures a particular relationship with the player that is fundamentally different from non-digital games. Because they are structures of code, because their space is limited but complete, and because they are constructs of rules which govern them completely and whose manifestation precedes play, they contain a level of autonomy and independence towards the player. We need not be aware of their complete shape before commencing play, and this grants play itself an aspect of discovery in which we explore a game that exists prior to and independent of our own actions and knowledge.

So far, we have discussed two constitutive properties of digital games: their solid embodiment within constructs of code, and the manner in which this code determines the space of the digital game as hermetic and inherently limited. These are structural effects of a game's existence within the digital format. The third property I wish to discuss now is a

formal one, and it concerns the medial configurations through which digital games present themselves. Because digital games are *digital*, they must draw on representation through chosen medial forms if they are to become known by the player. At the same time, the digital frees these games to chose from the full range of media which can exist within the digital realm—which ones it ultimately chooses to incorporate into its form differs from game to game. As such, digital games are positioned at the crossroads between media as intermedial shapes. To simply state, however, that they are intermedial because they offer us a configuration of media does not tell us anything particular specific to digital games. What discerns digital games from non-digital ones, however, is that their existence within the digital format allows them to present configurations of mediality which can not only be reconfigured during sessions of play, but whose composure and dynamics are limited only by the limits of digital representation itself. *Digital games are capable of hosting various medial configurations within a fluid intermedial body.* What is important here are not the specifics of these medial configurations, but their variety. Digital games are capable of not only hosting greatly varied and dynamic configurations within their own structure, but to players each component becomes part of a whole in their experience of play.

As we near the conclusion of this chapter, let us shortly restate what has been said thus far. Defining digital games as games which exist within the digital format, we attempted to better understand them by first asking for a workable definition of the term “game,” and then asking what it means for a game to be digital. For now, we have defined the term “game” as *a process and outcome, resulting from the actions of one or multiple players, taken according to a structure of rules*. When a game enters into the digital format —when it becomes a digital game— it adheres to three constitutive properties. These three constitutive properties of digital games are that, because of their code-based nature, *they have a solid embodiment* and *present a hermetic and inherently limited space* which demands engagement from the player. Furthermore, digital games are *fluid intermedial bodies capable of hosting varied and dynamic medial configurations.* To illustrate these three points one more time, we will now revisit our earlier example and take another look at *Dämmerung* to see how we can better understand it with the points discussed above.

1.3. Testing our definitions

When we last looked at *Dämmerung*, we stated that its effectiveness lies in how its treatment of torture forces the player into complicity. Having looked at the constitutive properties of digital games, we return to *Dämmerung* and observe how these properties

determine its functioning. *Dämmerung* utilizes the inherently limited digital game space to create a claustrophobic world in which both captor and captive are trapped in a futile cycle of violence. By limiting the actions of the player and his access to information, we become captives ourselves. To understand this, we pay attention to three points, adhering to the three constitutive properties discussed earlier.

Our first point concerns the medial configuration of the game's structure. *Dämmerung* uses two different visual modes for the two different modes of play. On the one hand, there are the parts where we can walk around a white landscape and see the prisoners. Here, the exploration of a three dimensional space confronts us with an impossible landscape whose design and function is not dissimilar from that of an installation piece. This is the only part of the game where we have direct one-on-one control, but the shape of this space creates distance and disorientation. Through the appearance of the world, we are placed in the mind of a torturer: our subjects are completely dehumanized, and the inherent horror and darkness of the situation is denied to us by the brightly lit, blank landscape. But at the same time, these visuals also deny us access to any information which we could use to orient ourselves: we only have our own projections to fall back on if we wish to interpret it. This, combined with the diminishing number of prisoners and slow movement speed, forces us to reflect during these moments of interlude. The dissonance between the ugliness of the situation and the clinical beauty of the environment is further enhanced by the use of sound here, in the form of our footsteps and angelic music. When the actual torture commences, we again find ourselves at a distance to the actual proceedings. Denying us the visceral shock of torture, *Dämmerung* instead chooses to focus on the inhumanity of the proceedings by presenting them in the form of a computer menu. This shape, combined with the corny music and sarcastic text, make the torture into a distant task which we go through as if routine. By denying us intimacy and access in both modes, *Dämmerung* focusses on the power of suggestion: it denies us the real so that we must imagine it ourselves, thus making us not only complicit in the realization of these actions but in their conceptualization as well. Furthermore, by stripping away anything that does not directly contribute to its message, *Dämmerung* employs a vicious focus on its subject matter that is brought about by a careful selection of medial forms.

In terms of its ludic structure, every action the player can take is focussed on the task of torture or an emphasis on the difference in power between captive and captor. During the intermissions, we are only allowed slow movement through a single path within the space. While we can see the captives, we cannot interact with them: besides moving, the only action we can take is interacting with the console, which will bring us into the torture

section. The brilliance of these sections is that they work on multiple levels. On the one hand, they reinforce the difference between us and our subjects: we always return, while they slowly disappear. We are mobile, they are static. We can perform an action, they cannot. Yet at the same time, captor and captive are both prisoners of their relationship: we can move, but only along a set path. We can interact, but only in one possible manner. We return, but not of our own volition. These sections work in a manner unique to digital games: they provide an environment and the rules which govern it, and leave the rest up to the player. While the entire space is structured in such a way that progress is controlled, the relationship between player and environment here demand not only play, but reflection on the player's side. *Dämmerung* takes the inherent limited game space and utilizes it as a metaphor for the relationship between the torturer and the tortured, exploring relationships of power by "trapping" the player in a role and structure which knows only one outcome. The same can be said about the progression of the torture sessions: while we are capable of choosing our method of "interrogation," none of them are ever effective and all end the same: with the death of the subject. These choices serve only one goal: they make the player complicit to the activities. It is of no importance to the progression of the game whether we, say, light a subject on fire or break his legs: the important thing is that whatever choice we make, that action is performed because *we* chose it, and this is what gives it meaning within the structure of the game. Here, again, *Dämmerung* plays with our conceptions of freedom: while we are not the ones tortured, we are at mercy of the game. We cannot chose anything but that which the game allows us to chose. *Dämmerung* even denies us the possibility of escape through "losing": the only option is a merciless progression towards failure. The situation is inherently futile: there is no benefit in torture, nor does anybody "win." *Dämmerung* makes this point by making defeat the only possible outcome: it transforms torture into a game which can only be lost. Furthermore, it questions our sense of responsibility. While we have no other options but the ones it puts on the table, at the end it holds *us* responsible for failure. The ending strips us of all power, leaving us just as powerless as those we tortured, but still demanding we are responsible for our own actions because we performed them. The only way to come away clean from *Dämmerung* is to never start the game in the first place.

As such, *Dämmerung* serves as a good example of the constitutive properties discussed so far. It tells its message through play, in which the player is a captive of the game's structure. It uses the inherently limited and hermetic space of digital games to trap us, while it sends us on a set path of progression by having the execution of the rules and

their structure exist independently from the player; in fact, we might say that us not knowing the full extent of these rules (to be more precise, the fact that they prevent us from ever "winning" the game) is crucial to the experience. Finally, it underlines these themes through its presentation, for which it makes use of a fusion of different media into a ludic world that demands our interpretation.

As we have seen, there is a direct link between the structure of a digital game such as *Dämmerung* and the manner in which it generates meaning. But where is it that this meaning manifests? Or, put differently, if a digital game generates meaning through the interaction of its various elements and parts, where is it that all these parts come together into a meaningful whole? It is in the experience of the player, an experience born through interaction with the ludic structure, born through play and reflection. Thus, if we wish to understand the generation of meaning concerning digital games, we must ask how this experience comes about, what determines it and shapes it, and how this experience is born between both player and game. These are the questions we will attempt to answer in this thesis. And to do so, I believe it will be helpful to take a look at the concepts of the *open space* and *shared performance*.

Chapter II:
Performance and the Open Space

To say that games become meaningful through their experience is to say that their meaning is dependent on an interplay between player and game. While this interplay takes a particular shape concerning digital games, the concept of such an interplay itself is far from unique to them. In fact, looking at the performative turn in the arts, we might say that the interplay between work and spectator is a defining factor in the generation of meaning concerning all works. When we are discussing this interplay, it is *performance* we are discussing. To better understand the manner in which digital games become meaningful to us, we find our first place of inquiry in this performance. To start, we take a step back and see how performativity determines the relationship we have with works.

The term performance can govern a wide array of meanings and conducts, depending on the context in which it is used. Thus, if we are to utilize this term in an effective manner, we need to specify our own use of it first. We start with the following quote from Chiel Kattenbelt:

> “A performative utterance, whether it be in word, image (gesture) and/or sound, is an act that constitutes what it presents. It brings into existence what – at least in the first instance – it refers to. A performative utterance is an event, an occurrence of which the practical relevance is primarily related to its taking place in the here and now, in its need to be carried out and presented and, in consequence, in its need to be perceived in this very moment. A performative utterance is an intentional act (cf. Seel 2001, 49), which is not just performed in the (literal) sense of being executed, but something that is being staged. The act of staging implies, on the one hand, a performer, the one who presents herself and by doing so constitutes her self, her (gender) identity (Butler 1990; 1993) and, on the other hand, a spectator (the one who supports the role of the performer by taking up the position of being a member of the audience. Staging oneself in front of an audience brings us to the concept of a performative situation, or performance.”
>
> (“Intermediality” 30)

> Because of its constituting (i.e., world making) and staging aspect, a performance by definition refers to, and reflects on, itself and on the event in

> which the performance occurs. Audiences are aware, even during the most naturalistic of presentations, that they are witnessing a staged ‘reality’, not actuality itself. Self-reference and self-reflexivity are not only characteristics of the performance itself, however, but also of the perceiver who assumes the position of the spectator, of the audience. The performative orientation and, even more so, the aesthetic orientation are very much self- referential and self-reflexive. The aesthetic orientation facilitates a liberating confrontation with one’s own experience, which is made perceivable through engagement with the aesthetic object.
>
> (“Intermediality” 32)

Through the aesthetic and performative orientation, engagement with the aesthetic artifact becomes possible. Through this engagement, the work becomes known to us through its effect, manifesting as an aesthetic object. To understand the concept of performance in context of a work, then, means realizing that no work produces meaning arbitrarily, nor is meaning an *a priori* characteristic of the work itself. Any particular work exists in a certain form, contains certain content, is presented in a certain context, etc. To say that meaning arises from this is to say that meaning is the *sum* of these parts, and the moment in which they come together (a.k.a. the moment in which we engage the work and activate it as an object of aesthetics) is that in which they are *performed*. A work of art stages its own performance, and in this process it becomes accessible to us as a particular work. Of course, this also means that no work exists in a vacuum, since a performance implies an audience. Because it is this audience which engages the interaction, they, too, *perform* the work in front of them, allowing it to come to meaning. Of course, this description is still very much a crude one; we will hone in on a more specific understanding later.

In “Intermediality in Performance and as a Mode of Performativity,” Kattenbelt draws a link between performance concerning the aesthetic object and intermediality. Responding to Fischer-Lichte’s statement that there has been a “performative turn” in arts starting with the postwar avant-garde, Kattenbelt argues that art may be “by definition performative” (p. 33) and the performative turn in contemporary arts is “a *radicalisation* of the performative aspects of art.” Art’s inherent performativity and modern radicalization is tied to the concept of intermediality:

> In my last contribution to theoretical and aesthetic discourses on intermediality (Kattenbelt 2008), I proposed using the concept with respect to those co- or inter- relations between media that result in a redefinition of the media, which by impacting upon each other, provoke in turn a resensibilised perception. This means that pre-existing medium-specific conventions have been altered, allowing for the exploration of new dimensions of perception and experience. Viewed this way, intermediality is more closely connected to the idea of hypermediacy (diversity, discrepancy) than immediacy (unity, harmony, and media transparency) of Bolter and Grusin (1999). Intermediality thus conceived assumes interrelations in terms of mutual affects.
>
> (“Intermediality” 35)

Modernity’s increased intermediality concerning the art work sees their performativity radicalized. Kattenbelt’s argument concerns us in two manners. First of all, his argument that performativity is an aspect inherent in art brings us closer to the lines of thought that we will encounter later on, when we engage theories from the field of comparative literature. Secondly, the linking of performativity and intermediality should be of extreme interest to us. In the argument that a work stages its own intermedial connections and thus brings them to new meaning through performance, we find a more refined wording of our own earlier argument: that games, as fluid and dynamic intermedial constructs, become a meaningful whole in the experience of the player, which results from performance.

It is little wonder, then, that approaching games through performance is often seen as fruitful. Kattenbelt again offers us a good starting point with the article “Computer Games and the Complexity of Experience,” written in collaboration with Joost Raessens. Applying a combination of performance study and film theory, Kattenbelt and Raessens argue for the recognition of a more complex experience provided by games than that of “an action-driven, Aristotelean dramaturgy” which “does not only concern the possible world which is represented in the game, but also the playing of the game itself.” (1) We will return to the alternative offered by Kattenbelt and Raessens later when discussing the position of the player; for now, it is important to note that the space for this alternative is opened up through the notion of performance, which frees games from the constraints of a more traditional approach.

Concerning the application of performativity to digital games, let me start by admitting that it a subject far to wide and varied to be discussed in its entirety here. In

general, however, performance-centered studies are broadly distributed amongst the following three categories.[10]

First of all, there is an approach which employs the notion of performance to form qualitative judgements. Comparable to the application of the term in Jon McKenzie's *Perform or Else*, such studies concern themselves with gauging the effectiveness of players' approaches to games, the factors which drive their behavior, the relationship between game design, player-action and affordances, etc. Examples of studies like this are "Making Sense of Game-Play" by Iacovides a.o. and Linderoth's "Beyond the Digital Divide".[11]

Secondly, there are studies that focus on the social aspects of performance on the side of the player and the game's facilitation of this. Rather than studying how behavior is guided and manifested through a strictly ludic lens, attention here is given to how players and game perform a social scenario which leads to a staging of the game world. We can think, for example, of Pearce's writings on communities of players within online communities of MMORPG's, Eddo Stern's description of *World of Warcraft* as a heterotopia, de Kort, IJsselstijn and Gajadhar's "People, Places and Play", Hamari and Tuunanen's "Player Types", and many other studies into the social aspects of play.

Finally, there are studies which apply the notion of performance to study the generation of meaning through the interaction between player and game. The above mentioned article of Kattenbelt and Raessens is a good example of this. Often, these type of studies draw inspiration from older forms of explicitly performative art, such as theatre or (in the case of Emma Westecott) puppetry. It is this application of performance which is closest to our own. One particularly interesting example of such theory is the work of Clara Fernández-Vara.

In much of her work, Fernández-Vara applies concepts and theories from theatrical performances to the medium of digital games. As such, her work can be seen as a continuation Brenda Laurel's approach in *Computers as Theater.* Where Laurel, however, mainly focussed on using Aristotelean concepts to understand the interactive process

[10] Of course, this does not mean that studies are confined to these three categories; cross-contamination is often and frequent, and different studies occur all the time. My goal here, however, is to emphasize some of the common differences in order to illustrate the variety of approaches offered to us by the term performance, and relate our study in this thesis to them.

[11] For an interesting collection of recent texts on this subject, see Mortensen, Linderoth and Brown's *The Dark Side of Game Play*, a research into "dark play," the manner in which players explore controversial subjects and positions through play in games.

between man and interface —games forming only a small subset of the possible forms such interactions can take— Fernández-Vara focusses specifically on games. And while Aristotelean dramaturgy undeniably plays an important role in her work, its prominence has been replaced with a focus on the *experience* of performance that can take a greater variety of shapes. In “Play’s the Thing”, Fernández-Vara uses the performative nature of games as described by Schechner a.o. as a means to understanding the effects of digital games by using metaphors based on theatre. Performance becomes the bridge through which three three-part models are combined and overlaid. The first of these is a theatre model based on Patrice Pavis and Richard Schechner, and consists of 1) Dramatic Text 2) Performance and 3) Mise-en-Scene. This overlaps with that of digital media, which is taken from Aarseth and consists of 1) Code 2) Runtime and 3) Interaction. The third model, taken from the MDA framework, applies to digital games and consists of 1) Mechanics 2) Dynamics and 3) Aesthetics. These three performative models bring us to a closer understanding of how digital games become meaningful to us. This framework is then used to better understand the position and actions of the player, the idea of games as a spectated event, and the role of the player as performer. This last part is a running theme throughout much of her work, starting with “The Tribulations of Adventure Games.” Here, Fernández-Vara compares the role of the player in adventure games with that of both audience and interactor, thus coming to a better understanding of how such games generate meaning.

Fernández-Vara’s work is inspiring, and will be referred to multiple times in this thesis. However, there is a very important difference between her application of performance and the my own in this thesis. Fernández-Vara’s application of the term is similar to that of Aarseth and Brenda Laurel in that it approaches digital games’ performativity *as is*. What I mean by this is that they recognize the performative nature of digital games, but their approach consists of positioning games as already-formed objects whose effects can be understood through metaphor and comparison. Such an approach is certainly valid, and it can lead to extremely insightful results. Here, however, I would argue for a somewhat different approach which is closer to that demonstrated by Kattenbelt earlier: one which applies performance to both better understand the *inherent* performativity of digital games, and continues from there until it reaches experience as a staged event between player and game. In order to do this, we require a definition of performance that not only effectively describes action on the side of the player, but also recognizes performativity as a structurally inherent feature of digital games. At this point, I

would argue that we might find inspiration in theories from comparative literature. To start, we turn to the work of Derek Attridge.

2.1. Derek Attridge and the literary performance

In *The Singularity of Literature*, Derek Attridge asks what makes literature literary. What transforms the written word into a literary object, what causes the literary to come about, and what are its effects? In his approach of literature, Attridge employs what may not be so much a return to- as a revisit of- the aesthetic school of thought. As he himself puts it:

> What is needed (…) to complement the instrumentalist achievements of recent criticism and to build on the lasting, if partial, insights of the aesthetic tradition is a mode of attention to the specificity and singularity of literary writing as it manifests itself through the deployment of form (a term which will require redefinition), as well as the unpredictability of literary accomplishment that seems connected with that deployment—an approach that at the same time fully acknowledges the problematic status of all claims to universality, self-presence, and historical transcendence.
>
> (13)

There is no sense in restating Attridge's work here in full, especially since this would entail those parts which concern the specificity of *literature* when our approach is aimed at understanding digital games. Yet as he himself states in his introduction:

> This could have been a book about art in its widest sense, and I hope it will be read with profit by some whose particular interest is in an artform other than literature. (…) It would not, I believe, be an especially difficult task to extrapolate from the main points of my characterisation of literature to the wider arena, including those developments in electronic media that may—who knows?—spell the end or at least the transformation of the verbal arts as we presently understand them.
>
> (3)

As such, I feel validated in my argument that Attridge's work may prove useful to our own approach.

For Attridge, the existence of a literary work cannot be understood as a clearly differentiated, sequential *chain of events* (the writer writes a text, the text exists, the text is read, interpretation is formed). Instead, it exists as *one lasting event*, in which multiple smaller ones interlock in a continuous process. The writer, for instance, also functions as the reader of his own work: as he works towards the completion of a text, constantly reading and rewriting, these two processes interlock. Yet the event of writing does not end when he puts down his pen, for the moment we pick up the book we enter into a communicative process in which we virtually reconstitute the process of writing.

The literary event takes place within a "cultural matrix," in which both the reader and work have a position of their own. When the author writes, he draws on this cultural matrix and reconfigures its components in such a way that the result is the production of something "new," a.k.a. the literary work. Of course, this "newness," —or, as Attridge refers to it, the "inventiveness of the work"— is a relative factor, which increases if the work manages to reconfigure the cultural matrix in such a manner that its reconfiguration brings about an "otherness." The greater the inventiveness of the work, the greater will be its literary factor.[12] This does not mean that inventiveness or value are set in stone, for they are very much dependent on the acts of the reader. This reader is himself a part of the cultural matrix as well, occupying a unique position that Attridge refers to as the reader's "idioculture." It is in the meeting of this unique idioculture and the literary work's cultural reconfiguration that the act of reading takes place, and an interpretation is formed. As such, while the reading, effects and interpretation of a literary work are never arbitrary, they *are* always singular. Even the same reader re-reading the same book will not experience the same event, as his previous reading will have caused a change in his own idioculture.[13]

When the author writes, he enters into a communicative process where content is transferred into the linguistic medium through a selection that gives the work a certain form. This linguistic form becomes the centre of the work, but not yet its manifestation: within it, all meaningful connections to the cultural matrix are contained, not just

[12] There is a potentially interesting application of this line of thought towards the field of digital games, which I will not explore further in this thesis but deserves to be mentioned here. If we return to our notion of digital games as intermedial configurations, it would be interesting to apply Attridge's notions of reconfiguration and inventiveness to them with an eye for their reconfiguration of a *medial* matrix. We could ask if one determining factor in the inventiveness and perhaps cultural value of a game is how it reconfigures various medial types and conventions in its own form.

[13] In this manner, the literary work not only reconfigures the cultural matrix within its own shape, but its very existence reconfigures the cultural matrix itself as well since it now has to accommodate the work. As such, the inventiveness of a work itself is not set in stone either, although Attridge does argue that it is possible for a work of particular strength to retain its stature even if the shape of it changes as time goes by.

linguistically but also formally and, through form, temporally. At this point, the author is replaced by his own figure: we accept that the text has a specific meaningful design, that it is *authored*, and we might incorporate the figure of the author into the cultural context the work refers to, but the literary event itself now takes place between text and reader. If the work is to be activated, the reader must *perform* it: not just glaze his eyes over the text to interpret the words, but activate the form of the written and thus activate the connections which give the work its meaning. To do this, the reader draws on his own idioculture. The resulting performance is not one-sided: just as the reader activates the text through a performance, this performance itself is guided by the form of the text. Thus, the literary work is something which manifests between reader and text, and comes about through a mutually influential performance on both sides—we read the text in a manner influenced by the text itself. Because this performance depends on both text and the idioculture of the reader, there is no single form it is to take: it is always singular. Through the shape of this performance, Attridge transforms the event of reading into a process of interaction where the work "performs back" through its structure.

Attridge's use of the word "singularity" does not indicate a complete uniqueness: if our experience of the literary work would be *completely* singular, we could not communicate on it. Rather, the very notion of singularity depends on an experience which can, in part, be related to other experiences of the same work—this being because those other experiences were brought about by the same structure of signs and codes which make up the text. In this manner, we might note that Attridge's notion of singularity is not that far removed from Seel's concept of intersubjectivity.

For literature, the work is encoded within a linguistic structure. Reading means engaging these linguistics in their entirety. As such, because an interpretive process is inherent in the process of reading, there need not be a particular space for it. There is never a question of *where* performance takes place, since it spans the entirety of the text. This is different for games. While our interpretation of them can certainly span the entirety of their structure, such performance is very much bound to particular spaces within the structure itself. Thus, if we wish to apply Attridge's concept of performance to digital games, we also need something that can help us locate the performative and interpretive spaces. To this end, we return to the field of comparative literature, this time for a somewhat older and different theory: that of reader-response as developed by Wolfgang Iser.

2.2. Wolfgang Iser and the Leerstellen

A central figure in the School of Konstanz, Wolfgang Iser was one of the most prominent theorists and critics from the school of reader-response theory during the seventies and eighties. Iser focussed on how the literary work comes to meaning through interactions between reader and text. Central to this process are the concept of “die Leerstellen,” often translated as “gaps.” To understand this concept, and apply it to digital games, we must first take a quick look at Iser’s theory and understand how it applies to literature.

Central to Iser’s theory is the thought that a literary work exists as a sequential structure that stretches out temporally during the process of reading. As such, the text cannot be grasped wholly at any one moment: a reflection on the text afterwards focusses on our own interpretation of it, and the act of reading grasps at interpretation as it moves along. Central to any work is not its internal similarities but its differences, which are to be brought together as the reader seeks meaning. Thus, “[a]s the reader passes through the various perspectives offered by the text and relates the different views and patterns to each other he sets the work in motion, and so sets himself in motion, too.” (*The Act of Reading* 21) The internal difference within a text demands an interaction, since “[t]he text can never be grasped as a whole—only as a series of changing viewpoints, each one restricted in itself and so necessitating further perspectives. This is the process by which the reader “realizes” an overall situation.” (*The Act of Reading* 68) Thus, various perspectives are brought together within the reader. Iser calls this constantly changing perspective from which the reader grasps at the text the “wandering viewpoint.” The functioning of this viewpoint is best understood through the following quote:

> The reader’s wandering viewpoint is, at one and the same time, caught up in and transcended by the object it is to apprehend. Apperception can only take place in phases, each of which contains aspects of the object to be constituted, but none of which can claim to be representative of it. Thus the aesthetic object cannot be identified with any of its manifestations during the time-flow of the reading. The *incompleteness* of each manifestation necessitates *synthesis*, which in turn brings about the transfer of the text to the reader’s consciousness. The synthesising process, however, is not produced—it continues throughout every phase of the journey of the wandering viewpoint.[14]
>
> (*The Act of Reading* 109)

[14] Emphasis mine.

The two words that draw our attention here are “incompleteness” and “synthesis.” We will return to that crucial former later, but start with the latter. As the wandering viewpoint moves through the text, and the reader brings its differences together within interpretation, the work emerges as a meaningful whole. This whole, a coming-together, is thus born of a process described as *synthesis*. But synthesis requires that the reader deals with the inherent *incompleteness* of the work. It is in describing the shape of this incompleteness, and its effects on interaction, that Iser’s genius shines through.

Taking inspiration from Insgarden’s concept of “die Unbestimmtheidsstellen,” Iser proposes an approach of a text’s incompleteness through *Leerstellen*. Leerstellen can take two forms: “blanks” and “vacancies.” As the reader’s wandering viewpoint travels across the temporal and structural construct of the text, it attempts interpretation and understanding by creating a “horizon” of experiences and expectations. While part of this horizon is formed by information provided through the text, it is also dependent on the reader’s own singularity. As such, reading is a process of interaction. Defining this interaction further requires looking at what happens with the reader’s horizon during the text itself. No text can ever provide full information; it is never “complete.” In part, this is because the linguistic medium can never provide *full* information. Imagine, for example, “an old man.” We might say he is “an old man with grey hair,” or “an old man with grey hair and blue eyes.” We could extend our description of this old man into infinity, yet *still* find parts missing in our description. That this does not interrupt our process of reading signifies that our own horizon of experience is capable of filling in these “blanks” and thus reach a level of synthesis. The above example is what Iser would describe as a “banal” one, but it is a good illustration. Leerstellen such as these blanks are inherent to literature, and they not only cover descriptive passages such as the one in our example but also questions of plot, meaning, etc. Blanks differ from *vacancies*, which indicate the lack of something where it is expected to be according to the horizon and becomes meaningful through its absence. Leerstellen can be opened and closed as the reading progresses, and through this process the structure of the text is capable of forming meaning through interaction with the reader.[15]

[15] I am well aware that this explanation of Iser is extremely narrow and lacks the refinement and details contained within his original work. However, I feel this information will, for now, suffice for our project. Those interested in a more detailed examination of Iser’s theory can refer to Apendix I, where I have placed an extensive quote from *The Act of Reading* which provides further information. While extremely informative, this quote was sadly far too long to be included in the main text.

Iser's concept of Leerstellen proves of value to us, because they allow us to understand the notion of performance discussed above in a more aimed and applied manner. While it might seem odd to combine these two lines of thoughts, separated by time, space and context, I would argue that they are much closer than they initially appear. In part, this is because Attridge and Iser both draw on aesthetic thought. Comparing the two, we find remarkable similarities: Iser's horizon corresponds with Attridge's idioculture, both incorporate the notion of temporality in similar manners, and both recognize the concept of "unique" readings dependent on the reader without making such readings arbitrary as they are guided by a set textual structure. Iser does this through the concept of an "implied reader" (a theoretical construct which refers to those places where synthesis is required by a reader, but the manner in which this happens remains open) while Attridge takes note of literature's singularity. Furthermore, both also refer to performativity as essential to the work's coming-into-being; the difference here, however, is that Attridge's notion of the work *performing back* will aid us greatly in understanding the interactivity of digital games. As such, I believe these two can form mutually informative theories when applied to digital games, especially if we succeed in making their terms our own. But before we do this, I first want to look at some of the ways Iser has been applied to the study of digital games by other researchers.

2.3. Previous applications of Iser

While Iser has been applied to digital games in the past, it has not happened as much as might be expected. There are two such applications I wish to quickly discuss here, since they will help in providing a context for this thesis. These two applications are those of Julian Kücklich and Gordon Calleja.

In "Towards a Holistic Theory of Fiction", Kücklich attempts to demonstrate "that literary theory can contribute more to the emerging field of game studies than just narratological analysis." (107) To this aim, he turns to Iser's concept of interactions between the reader and the text, starting with the concept of a *Textspiel* developed in *The Fictive and the Imaginary:* "an integral part of Iser's theory of fictionality in which literary texts are regarded as embedded in a triadic relation between the fictive, the real and the imaginary." (100) Combined with Iser's concept of *selection* ("the process of choosing and integrating elements of the real world into a fictional setting in order to make it believable." (100)), Kücklich describes a difference between fictional texts and simulations. First of all, in simulations, "not only individual elects of the reference world are selected, but also the interrelations between them. Therefore, we often find 'emergent behavior' in

simulations, i.e. events that were not foreseen by the simulations's creators." (100) Secondly:

> …in fictional texts, the procedural activity is something external to the text, something that takes place in the reader's mind rather than within the text itself. In this sense, fictional texts are more interactive than simulations, because they absolutely require the participation of a reader. Simulations, on the other hand, are mostly self-sufficient enough to 'run' at least for some time without external input.
>
> (100)

Digital games, for Kücklich, are often both simulation *and* fiction. "The physical aspects of the game world are simulated by the game's physics engine, while the aesthetic aspects are the product of a process of fiction-making that takes place between the player and the game itself." (100) Before we move on to the rest of Kücklich's argumentation, we should first note that he touches on a very valuable point here.[16] Kücklich's point that simulations are in part "self-sufficient" enough to run "for some time without external input," can be combined with Barry Atkins' statement that:

> The essential characteristic of what is termed interactivity in relation to the computer game is that it *must* watch the reader. We act. It reacts. We act again. It reacts again. It rewards our attention with attention of its own. This might be presented to us in 'real-time' but we are locked in a complex dialogue or dance with the machine that amounts to a sequence of exchange that goes both ways. Even not to act is an act, and signifies. And in that dialogue of absence and action rests the fundamental claim to interactivity of the computer game.
>
> (146-7)

If part of the simulation's characteristics taken on by digital games is that they *can* run for some time without input, but this lack of input itself is still within the communicative space between player and game, the communicative process between game and player —the

[16] Although we might add, however, that while Kücklich's argument concerning games as both fiction and stimulation is a strong one, it might be stronger is we disband it from particular reasons such as physics engines and return it to more general properties of digital games such as their existence as coded structures.

questions of performance, of interaction and of meaning— *are* very much a structural property which we can study to better understand how digital games generate meaning.

Kücklich's continues with a quick look at "fiction-making" in digital games before moving on to speculate on a "literary theory of interactivity." Combining the notion of the *Textspiel* with Iser's description of the communicative process as outlined in *The Act of Reading*, Kücklich states that Iser "seems to offer us a suitable model for the analysis of game-fictions" (103). Such a model, however, requires a foundation for the concept of "game," in order to "stabilize Iser's model." (103) For this, Kücklich turns to Marie-Laure Ryan's argumentation for applying possible-world theory to the study of electronic texts, which enables him to present a six-stage model of interlocked "worlds" which make up the experience of a game, before returning to Iser one more by linking the concepts of intratextual semiosis, intertextual semiosis and extra textual semiosis with Iser's notions of the fictive, the imaginary and the real. This proposed model is a first step to understanding some of the interactions between player and game in a manner that Kücklich hopes is applicable to an understanding of other media as well by situating them as "games."

Where Kücklich is interested in the semiotic relation between player and game, Gordon Calleja utilizes Iser to describe an interactive process of narrativity in digital games. First presented in his article "Experiential Narrative in Game Environments" and later returned to in the book *In-Game*, Calleja argues for an approach of fictionality and narrativity that recognizes them as generated and "grounded in the interaction between the player's cognitive faculties and the semiotic and mechanical qualities of the game environment." ("Experiential Narrative" 1) Calleja's theory is not aimed at describing *all* digital games; in his own words, "the computer's ability to stimulate any object, place, entity or behavior that can be coded opens up the danger of following common usage of the term "game" by referring to all forms of software designed with entertainment as such." ("Experiential Narrative" 1) There is no need to go into discussion on this point; Calleja's perspective on this matter differs from the one outlined in this thesis. Calleja focusses on games that offer "virtual environments", which are "computer generated domains which create a perception of traversable space and afford the exertion of player agency. They are populated by objects and often human or AI controlled entities with whom players can interact with." ("Experiential Narrative" 2) Within such virtual environments, the narrative concept Calleja introduces is that of the "alterbiography," which refers "to the here and now interactions with the game environment that generate story through the player's interpretation of events occurring within the game environment, their interaction with the

game rules, human and AI entities and objects." ("Experiential Narrative" 1) An alterbiography can take three forms: that of the Miniature, the Entity or the Self, although we can switch between these modes within a single game. ("Experiential Narrative" 4) Put very shortly, the alterbiography explains emergent narratives as resulting from the inherent "incompleteness" of games, drawing on Iser. To be more precise, the alterbiography refers to narrative as it emerges from a game through interaction, and as such not only embodies the narrative as explicitly presented by the game itself, but also the events as they emerge from play. It is the result of synthesis between three points in triadic relation: the Sign, the Player and the Rules. Here, the Sign refers to the audio-visual aspects of a game and the narrative it explicitly presents, the Rules refer to the ludic structure that governs the game, and the side of the Player refers to his interactions and interpretations on a base level. When synthesis between these three is reached, the result is a particular, singular narrative event: the alterbiography.

While these are valuable and inspiring propositions, our approach differs from that of Kücklich and Calleja in several important aspects. Starting with Calleja, we should recognize that the concept of alterbiography is a valuable term in approaching narrative as it is experienced on the side of the player. Yet there are three important differences between how Calleja applies Iser, and the manner I suggest here. First of all, and already mentioned, I disagree with Calleja's assessment that the subject of research should be limited to a specific type of digital games or risk becoming vague and imprecise. My reasons for this have already been stated, and need not be repeated here. Secondly, it is precisely this imprecision which Calleja fears that seems to return in his own concept of alterbiography on the side of the Player. This is an example of alterbiography provided by Calleja, in which the player's side plays a strong role:

> An example of this would be the background story of my character in *World of Warcraft*. I might imagine that my Night Elf Muun is leaving his homeland of Taldrassil because of an embarrassing situation with the Head Tailor's younger daughter. Aside from the basic geography of Azeroth and the existence of tailors, the game system does not support this aspect of alterbiography, yet I am free to create it and even act upon it. It is worthwhile noticing that although the Player corner of the triangle can be relatively free form, it is still emerging from, and at times influencing in return, the fictional world of the game.
>
> ("Experiential Narrative" 6)

Indeed, we “are free to create and even act upon” such narrative aspects, but the fact remains that the results are, indeed, not supported by the game system. I do not deny that the relative free form of the Player’s share in an alterbiography is a real influence on the experience of digital games’ narratives, but by denying a distinction between free and structural narrative aspects, it becomes almost impossible to create any structural analysis of narrative based on alterbiography; it is limited to the domain of affect studies.[17] Finally, Calleja does not apply Iser to anything more than the *narrative* structure of games, his model displacing any other structural aspects under the header “Rules.” As such, it becomes difficult to approach meaning *outside* of a purely narratological context, and approach it as *experiential.*

In this regard, Kücklich is different and perhaps closer to our own approach: by approaching the *fictionality* rather than the *narrativity* of digital games, there is far more room for an approach of experiential meaning. However, besides the turn towards possible world theory, there is one other important difference between us and Kücklich— and in some ways this difference stands between us and Calleja as well. Just as earlier noted concerning the work of Fernández-Vara, the game itself is presented here *as is*. Thus, while there is a detailed study of the interactions between work and observer, the internal tensions and connections —which predetermine the work beforehand, enable the interactive process, and become part of it themselves— remain largely out of view. This, then, is what I aim to achieve by combining Iser’s theory with the notion of performativity as explained by Attridge: to offer a picture of digital games’ totality, approaching the generation of meaning through interactivity with the notion of a performance that is inherent in the work, while allowing us to understand this structurally through the application of Iser. This, however, requires a quick return to the terms discussed so far so that we may make them our own.

2.4. Defining our terms

Before we close this chapter, there remains one question to be answered: if we are to bridge the gap between comparative literature and digital games, how do we apply the theories discussed so far in an effective manner? Here, I provide explanation of their

[17] In fact, this free-form could be said to accommodate subjective positions from an affective perspective. This seems quite contrary to Iser’s application of Leerstellen, as he states in a retrospective note on “Indeterminacy and the Reader’s Response:” “…the impression is conveyed that meaning projection might be left entirely to the discretion of individual reader. [sic] The description and comments that create that impression were not meant as a plea for subjectivism.” (30)

application in this thesis, and attempt to clear up any semiotic confusion. To do this, I will offer a selection of terms. These terms serve as shorthands for their reformulated source theories, but do not cover them fully; this would be unnecessary, since we can always refer back to the original theories when the moment calls for it.

We start with Attridge. Our main challenge here is to provide an overview of his three types of performance that both does justice to their enabling of an "event" while somehow getting around their confinement to literature. First of all, it seems useful to de-emphasize the first performance between author and work. While it is certainly important to keep in mind that games, too, are "authored" in that we see them as designed works enabling a meaningful process of communication, the role and context of the author is different and far more minor concerning digital games. Thus, without doing away with it outright, it seems fitting that we lay a greater emphasis on that double performance in which both work and audience engage each other. To thus differentiate between the process outlined by Attridge concerning the literary work and the process outlined in this thesis concerning the digital game, I will use the term *shared performance*. With this term, I refer to that process in which a space in the work calls for an outside performance[18] which is then provided by an agency from a different sphere, whose performative actions remain guided and structured by the work itself as it "performs back." The result of this is a performativity in which there are at least two acting agencies, and the resulting performance cannot be fully comprehended from the context of either one alone. Through the shared performance, a digital game plays back; even if it sometimes is only through the structuring of a player's acts.

To structurally approach the digital game as an interactive generator of meaning, we must then be able to locate the sites of these performances. This is where we refer back to Iser's Leerstellen, only with one very important difference: where Iser spoke only of *interpretative* acts resulting from the act of reading, the digital game is an intermedial ludic structure and, as such, requires not just literary interpretation but other types of direct performative acts as well. Because such acts, too, are meaningful and become part of a player's horizon, I would argue that they can be placed and understood with the help of Iser's concept; however, for the sake of precision, we have to state clearly now that this

[18] Outside, because it is outside the space that requires it. This does not mean, as I will soon demonstrate, that the performance cannot be provided *to* the work *by* the work itself—only that the acting agency always inhabits a different "sphere."

application of Iser's theory is and will be different from his own.[19] To acknowledge this difference, I will refer to Iser's Leerstellen by their original German name, while I call their implementation in the context of digital games *open spaces*.[20]

The above terms and theory provide the starting point of our analysis in the next part. Through their application on the subject of digital games, we will come to both a better understanding of how these games generate meaning and experience, as well as see these terms and theories grow into a perspective from which such games can be better understood.

[19] In a manner, this can be seen as a response to Aarseth when he states that their is a difference between Iser's gaps as applied to literature and performance-centerer applications that stand in the way of a direct applications. (*Cybertext* 110-111) By acknowledging this difference here, we can work around his objections and find use in Iser's terminology in a precise manner. Furthermore, Aarseth wrote this comment specifically in the context of adventure games with a focus on narrativity; we are focussed on experiential meaning in the wider context of digital games.

[20] This also differs from the English translation of Iser's work, in which they are referred to as "gaps."

Part II
The Meaning of Digital Games

Having prepared the parameters of our research, our subject and our theoretical tools, we now bring these together so as to start our process of analysis and move towards answering our main question: how do digital games become meaningful to us? As seen, digital games manifest meaning through the experience between player and ludic structure. Thus, our answer requires understanding both these entities before moving on to study their interplay: game, player and the experience of play, in that order.

We start by asking what the shape of a game's structure is, and how it manifests. I will argue that digital games come to meaning through two phases: the *differential phase*, in which the game manifests from code into program and from program into game, and the *singular phase*, in which the game is engaged by the player and meaning is generated. In the first phase the game manifests *itself*, and in the second phase we interact with the resulting structure.

After a quick exploration of these phases, chapter III starts with an examination of the differential phase. Understanding the interactions between player and game on a structural level requires understanding what brings this structure about, and how one game can have diverse manifestations which influence our engagements. To this end, we examine the manner in which digital games, as performative works, stage themselves prior to the playful interaction. To better understand what precedes play, we can find use in the terms *open space* and *shared performance*.

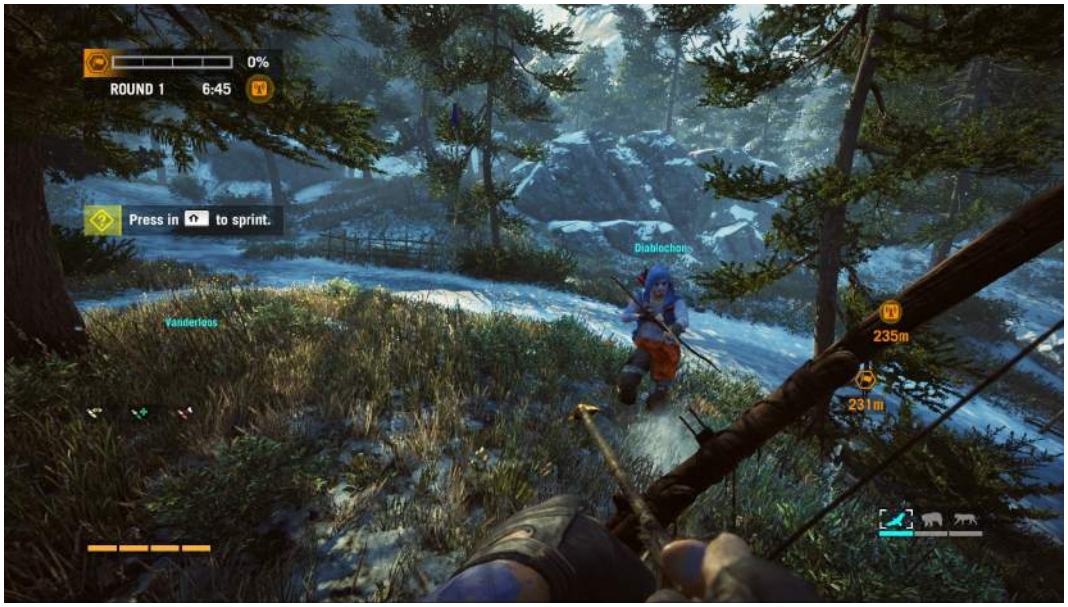
The rest of Part II concerns a close examination of how games come to meaning through a study of the interactions between player and game: the events of the singular phase. Chapter IV utilizes the open space as a method of understanding the semiotic and aesthetic structure of digital games, and how this structure demands performance.

Yet the effects of this structure cannot be properly understood without an understanding of the player, too. So as not to get lost in an affect-oriented view, chapter V utilizes the concepts of shared performance and experiential horizon to better understand the player as both an interpreting and acting entity. I will argue that the player performs from three "positions" when engaging a game (that of actor, audience and observer). These positions determine the performance and interpretation of the player, and are brought about by the game's structure. Finally, chapter VI sees us bring player and game together and act as the culmination of this research: a structural understanding of digital games' generation of meaning.

Chapter III:
From Code to Game

What is a game before it is played? Leaving aside any philosophical interpretations, the answer might be a question of embodiment and manifestation. In the last part, we discussed issues of embodiment as a crucial difference between digital and non-digital games, and discussed how the digital medium predetermines the structure and properties of the former. In order to discuss how digital games generate meaning through the interaction between their structure and the player, we should first ask what determines this structure, how it manifests, and what its shape is. Or, again: what is a game before it is played?

The game is *Far Cry IV* (Ubisoft Montreal, 2014), and four players are engaged in competition against each other. The first player is seeking entertainment: he has recently bought a new computer, and wishes to test its capabilities. Running the game with all graphical options turned up, he battles while amazed by the design and the graphic



3.0.1. Far Cry 4's multiplayer mode

wizardry of the virtual mountain landscape he now moves in. He plays averagely. The second player is playing to win. While she has good hardware, she has chosen to turn down any graphical options but the resolution and view distance, doing away with any cosmetic distraction the game might offer her. Anything not concerning the geography and players is unnecessary to her. The third player had hoped his aging machine could still run the game, but was mistaken. The world on his screen is not as beautiful as hoped, and his

computer isn't keeping up at all. He is going to be at the bottom of this match's ranking: he is not a bad player, but the slowdown caused by his antique machine is keeping him back. Meanwhile, the fourth player is right at the top of the list, undefeated because she is running every cheat she could find. The cheats give her a ruleset of her own.

All four are playing *Far Cry IV*, but are they playing the same game? Perhaps, put differently, all four are playing the same game but have engaged different *manifestations*. The difference between the first and second player is that both have opted for a manifestation hat better suits their desired experience: as a result, those experiences now differ. Meanwhile, the third player's experience is determined by his hardware, while the fourth player might be engaging the most radically different manifestation of all since she has altered the game at a code level.[21] Clearly, something prior to the players' engagements with the game *as players* has caused the game to manifest differently, and as a result these differing structures now lead to different experiences. All these experiences, however, are still guided by the game's structure. To understand how structure generates meaning, this difference must first be understood.

A variety of manifestations is not necessarily a hindrance to analysis, as long as it can be somehow accounted for.[22] Much has been written on questions concerning games' manifestations and experiences, often from the fields of platform studies and game historicism. It is not my wish to recount what has been said concerning the matter here, nor will I attempt to maneuver this thesis onto those studies' grounds. Instead, I argue that a theoretical framework for understanding meaning as experiential and guided by structure should seek to somehow incorporate the manner through which structure manifests within that same theoretical framework. As such, my goal is not to overrule, invalidate nor disagree with the many other writings that have been offered on this subject: it is merely to utilize our toolset to offer an alternative, so that our work might not be blindsided by these questions later.

To that end, I suggest differentiating between two phases that determine the experience of digital games. The first of these we call the *differential phase*, and it spans the process in which a game manifests as an interactive ludic structure. It is what

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[21] In this example, we are going to presume that the type of cheating she performs is done through third-party modifications such as trainers and exploits.

[22] After all, digital games are far from the only medium containing these issues. After all, films can be watched on any number of media devices, from IMAX screens to mobile phones, leading to different experiences. Yet this does not mean that there is one "true" way of watching a film, nor does it mean that we cannot form coherent arguments about its experience or meaning. The same is true of literary texts, which often manifest themselves in different types of codex, and can be digitalized and/or translated. And concerning theatre, each performance is always unique and singular in its own manner.

preceded our example of *Far Cry 4*. The differential phase is followed by the *singular phase*, in which play takes place and meaning is generated. In this chapter, we will look at the differential phase.

3.1. The differential phase

A game can take on a multitude of forms when it manifests. Take, for example, the classic game *Quake* (id Software, 1996). Compare the two screenshots below: on the left, we see the game as it would have looked in 1996. On the right is the same scene, played in the modern “DarkPlaces” engine with the “Quake Epsilon” package:

3.1.1. Quake. Left: Original engine. Right: DarkPlaces with Epsilon-package.

It goes without saying that our interpretation of the game will differ depending on which version we are playing. Their difference goes beyond the surface imagery: since this imagery directly influences our flow of available information and interpretation, our very method of play is affected as well. Furthermore, source-ports like “DarkPlaces” often also offer new control options, AI-routines, or tweak the balance. Hence the question: are we still playing the same game? The same question concerns ports, remakes, and games

which have been modded as well. How much can be changed about a game before it is no longer that particular game?

Even without alteration, the manifestation of a digital game can differ. For example, we discussed *Far Cry 4*'s multiplayer mode, but the game contains a single player campaign as well. In single player, players engage a story-driven campaign where they freely traverse a Nepal-inspired environment during a civil war. These two experiences — combat between players in small and limited environments without a narrative[23] versus a narrative played out around a single player in an open environment— are completely different, yet they are both based around a similar set of rules and are both part of the game referred to as *Far Cry 4*.[24]

In general terms, we could say that the different manifestations of digital games are dependent on three factors: hardware, software and configuration. Because the digital game is only accessible through the machine, it is mediated by the hardware itself. Differences in hardware can lead to different experiences: in our example, hardware was what differentiated the third player from the rest. Concerning the software, I refer to the coded form that is the basis of every digital game. It is here that the fourth player differed from her peers in our example; by modifying the code, she changed the structure of the game to her advantage. Between hardware and software, a multitude of manifestations can take shape. Yet these two factors themselves do not explain the entire range of manifestations, because they do not account for the agency of the player prior to play. This is what I refer to with the term "configuration": an exercise of agency determining the manifestation taken by the game. Different configurations differentiated the first and second player in our example, just as much as all four players are separated from someone who chooses to play the single player campaign.

By themselves, these three factors do not yet explain the variety of manifestations a single game can take. For example, the fourth player who cheats can be said to differ as much in the factor "software" as she differs in "configuration." What we need is an overview which can host these factors simultaneously. Here, we find use in the terms *performance* and *open space*. To this end, I present the following schema in image 3.1.2.

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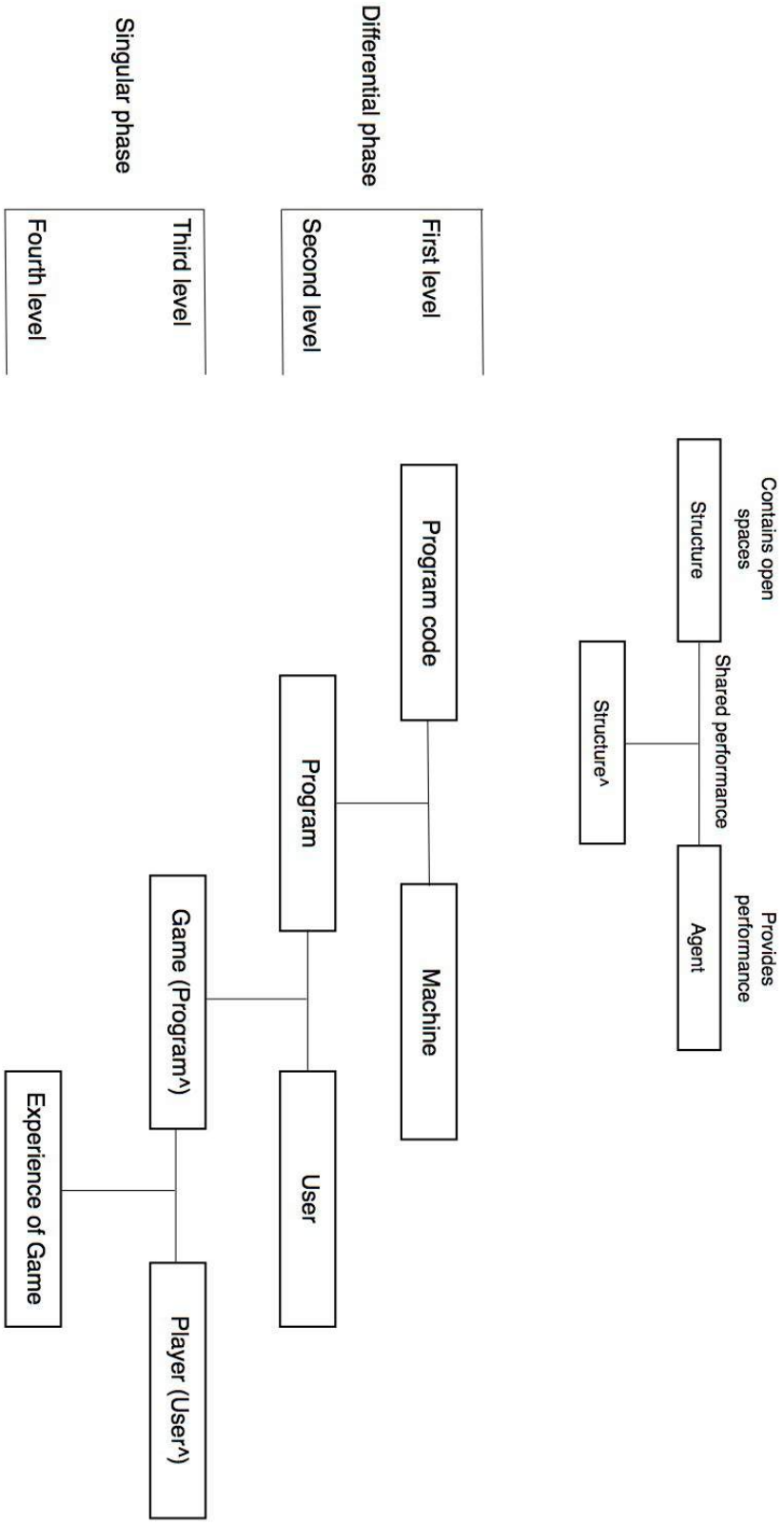
[23] For the sake of accuracy, there is a micro-narrative offered concerning the multiplayer mode, but it has practically no to little effect on play itself: there is no story developed by the games played, just a setting explained that provides an excuse for two teams of enemy combatants.

[24] To say nothing about the fact that the game also offers a co-op mode, in which two players can work together within the world of the single player campaign—an experience that is again different from the other two mentioned.



3.1.2. Schematic overview of the differential- and singular phase.

Here, entries on the left represent structures containing various open spaces which demand interaction. This interaction is provided through a shared performance by entries on the right side. This performance results in a new structure on the next level. The process then repeats itself.

On the first level, we find the *program code* and *machine*. As programs, games cannot be hermetically sealed: they need access points if they are to be accessed by hardware and ran. We could say that code contains open spaces demanding performance. This performance is provided by the hardware which runs the program, and these two factors —the structure of open spaces within the code and the performance offered by the hardware— determine the program's resulting shape. The term "shared performance" here is accurate, because the performance is initially provided by the machine, but its shape is dependent on the code responding in turn. Here, *machine* covers the entirety of the hardware: for example, if we have a computer to which a controller is connected, and the game's programming is capable of recognizing that controller, this action takes place on the first level. Of course, this schematic overview is heavily simplified: what I have deliberately left out of account is that there is often a software-based interface between the program code and the machine such as an OS. Furthermore, what is referred to as "program code" actually consists of various levels and objects: binary code, scripting language, various modules (such as the game data and engine) that make up the game, etc. Accounting for these factors would be technically more correct, but would not necessarily help in making sense from a semiotic perspective.

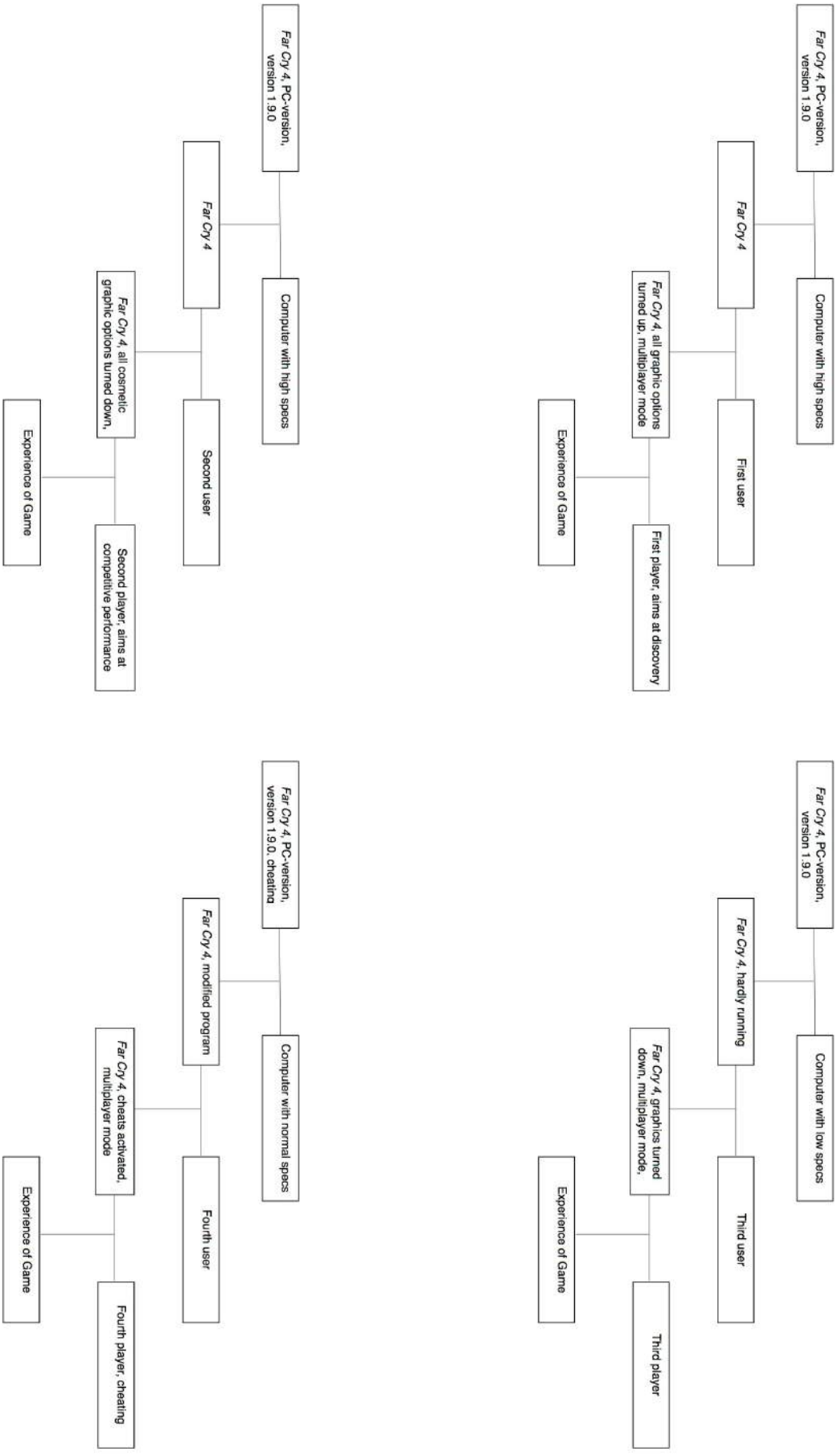
The shared performance between program code and machine leads to the digital game ran as *program* on the second level. Here, the game exists as a computer program, which is still to stage itself as a game. This requires interaction with what is likely to become the player on the next level, the *user*. During this staging, the exact shape of the eventual manifestation is not yet set. There are again open spaces —indeterminacies— requiring the user's input. Good examples of this are opening a configuration menu to select our preferred control setting, fiddle with the graphic options, or set the difficulty. Or the choice to play in single- or multiplayer-mode. Our choices as users determine our experience as players on the next level: the shared performance between program and user configures the structure of the *game (program^)*. The eventual experience of play then takes place between *game* and *player (user^),* as we enter the singular phase.

While the levels in this schema are cumulative, they are not linear. Though we cannot engage the game on the second or third level without prior performances on the preceding levels, these levels themselves are all connected through mutually influential

relations. This is because the structures on each level are the cumulative effects of the shared performances preceding them: they remain connected. As such, actions on the third level could influence the shared performance on the first level. For example, the performance between code and machine may be such that, on the second level, I have configured the game to be played with all graphical options set on full. In addition, I have selected for the game to be extra difficult. The result of this is that I now face more enemies on the third level and, because of my chosen graphical options, my machine is starting to protest and the game starts to sputter: here, we see all three levels acting in congruence. According to this schema, the differences between our earlier-mentioned *Far Cry 4*-players would be as shown in image 3.1.3.

As seen, our experience of a digital game does not result from a fully predetermined structure: while the structure of a game is designed, its manifestation is a fluid process. Digital games are not only performative when engaged as games: they are performative to themselves as well, software that stages itself *as games* well before we engage them as players. While the above is far from a definitive answer to questions of form and manifestation, it will suffice for now. It does not provide an answer to the question of what the *essence* of a game is, its “true form.” Rather, it forces us to acknowledge that digital games are performative and fluid: they offer us a great variety of differing forms which are not random, but connected to an aleatory point which knows no “set” incarnation. This is the reason I refer to this as the *differential* phase: it is the moment where the incarnation of a game brings about its potential difference, but through structure and performance.

How much can we change a game before it is no longer the same game? There is no set answer to this but to state that the same game is often not even the same game to itself. What matters is that we think about the experience, and what brings this experience about. To that end, we now move towards the interactions between game and player on the third level, and see how games generate experiential meaning in the singular phase.



3.1.3. The different differential phases in our example of Far Cry 4.

Chapter IV:
The Structure of Digital Games

When the digital game has staged itself as game and we engage it as players, we enter into the singular phase. Here, a shared performance takes place through which meaning is generated — and in its study we will find answers to the questions driving this thesis. Our subject concerns a large process, and as such it will serve clarity to approach it through a three-step approach. In this chapter, we study the structure of the game itself. In the next, we examine the player's role in this process. Finally, having observed both player and game, the experience between the two can be fully displayed in the last chapter.

Concerning our study of digital games' structures, we will take the following approach. To understand the structure of digital games during the singular phase more clearly, we first introduce the term "game space," followed by a discussion of its inherent incompleteness. Our next task is to map out this game space, for which we turn towards the concept of the open space. I will argue that, during the singular phase, digital games contain five types of open spaces. Four of these are distributed amongst the categories *blanks* and *vacancies*, and *interpretation* and *agency*. The fifth enables games as a guided process. Through a close study of these spaces, we come to understand their effects and interactions, giving us an overview of the digital game's structure and how it manifests as an aesthetic object.

4.1. The inherently incomplete game space

During the singular phase, the digital game and player enter a mutual engagement. So far, we have used different terms in reference to the game's side of things: we have spoken of a "ludic structure," of a "manifestation" or "form," and sometimes simply of "the game." A clarity of terms is needed. To this end, I propose utilizing the term *game space*.

My use of the term "game space" here covers the entirety of the digital game as it is staged during the singular phase, with the exception of an acting player. It is not a topographical space: while topographical features such as a game's maps, boards or world are part of the game space, it encompasses every non-topographical feature as well —rules, audio-visuals, narratives, text, cutscenes, etc. It is the entirety of the game with exception of the player—and thus not yet a game. Shortly put, the game space is where play takes place: if play is performative, then the game space is the stage on which it occurs. As such, the game space both encompasses every element that makes up a particular digital game, and serves as an aleatory point for its potential outcomes.

Approaching the digital game's structure means approaching its game space. How does it function, what shapes its coherence, and how does it force the player to perform, thereby staging itself as a game? To start, we refer back to the constitutive properties of digital games. When we stated that digital games present us with a hermetic and inherently limited space, we provided our first statement on the game space's form and coherence. Put differently, the game space is simultaneously complete and incomplete. Complete, because it is a system of signs forming a coherent aesthetic artifact — yet also incomplete, because these signs require activation by an outside party. Furthermore, their sum offers nothing but a stage: to complete the digital game *as game*, a performance in the form of play is needed. We will examine both sides of the game space in detail, but begin with this notion of incompleteness.

4.2. The four types of open spaces

Let me begin by offering an example of a game space's experience. *Gun Godz* (Vlambeer, 2013) is a first-person shooter which emulates classic shooters. The game opens *in medias res*, with the player in a prison cell, holding a gun which goes off and blasts away the door and an alien guard standing behind it. All this takes place in tenths of a second. After this, we are free to step out of the door into the prison complex beyond. For now, however, this opening is worth a look by itself.

As the game opens, we see the aforementioned action:

4.2.1. Gun Godz. Opening.

In this opening, the game directly makes a call on our interpretive facilities to answer the questions: what, where and how? The first-person perspective immediately gives away our place in the world, while the gun in our hand tells us our role (we are escaping, and holding a gun with intent to use it); we identify the room around us as a prison cell because of its visual signs. Furthermore, the monstrous form of the guard tells us that this is not a normal prison.[25] Even though the game world is primitive in form and in no way resembles reality, it is not incomprehensible to us: when we play, we treat this representation of a space *as a space*. Playing means engaging the incompleteness of the game space by engaging its signs, closing its open spaces and completing the world. We need not complete it in every detail, but we must reach a certain level that enables us to act within it. Yet interpretation by itself is not enough: until we seize control as players, our character simply remains put in his cell. From our environment, we can deduce that to progress we must walk out of the cell; if and how this is done, however, is up to the player. Through this process, the game progresses.

To engage the game space is to engage its open spaces, both by interpreting its signs and heeding its call to perform by undertaking actions. Until now, there was no need for a distinction between these two acts: both were categorized as shared performances. Yet now, such a distinction which is needed to accurately describe the singular phase. Studying the game space's structure without it would limit us to a description consisting of a long yet ultimately lacking list of various open spaces, without the capability to pinpoint their differences, coherence or cumulative effects. We now need a preciser understanding of the open space that will allow us to do just that. Iser discerned between two main types of Leerstellen: blanks and vacancies. To these categories, I now suggest adding two distinctions: *interpretive* and *agency* open spaces.

Interpretive open spaces act much in the same manner as Iser's Leerstellen: they refer to the game space's tapestry of signs, which we are to complete and interpret when encountered. They demand an interpretative performance, through which we experience the game space. Yet a game offering only interpretive open spaces could not function as a game since —outside of interpretation— we would never be required to act, and could thus never engage in play. This brings us to the second category of open spaces: those of agency. These are open spaces which demand a performance of the player in the shape

[25] According to Vlambeer, *Gun Godz* is a game about gangster rap on Venus. This also explains the soundtrack, consisting of rap music in a made-up Venusian language. (Ismail & Nijman)

of an act. Together, these acts form the activity of play. In our above example of *Gun Godz*, the acts through which we infer information about our environment, role, status, etc. are all engagements of interpretive open spaces. Our pallet of possible actions, such as movement and combat, covers our engagement with the open spaces of agency.

If we add these two distinctions to the categories of Iser, the blanks and vacancies, we can order the open spaces into the following matrix:

Open spaces within the game space	Blanks	Vacancies
Interpretive open spaces	Interpretive blanks	Interpretive vacancies
Open spaces of agency	Agency blanks	Agency vacancies

In the next sections, we look closely at each type of open space so as to better understand their functioning and potential forms. We can then study their interplay and coherence, ultimately leading to an understanding of how the game space's structure functions.

4.3. Interpretive blanks

To understand how interpretive blanks function within the game space's structure requires first understanding how the game space itself functions as a structure of signs. Referring back to the constitutive properties of digital games —their embodiment in code, fluid intermediality, and their hermetic and limited (game) space— enables us to make the following statements:

1) As an intermedial entity within the digital realm, the game space exists as a configuration of signs from various media.
2) The construct of these signs cannot be experienced directly; there is always an intermediary between the player and the game space in the form of the machine, an interface—screens, controllers, keyboards, visualizers, etc.
3) In the configuration of its signs, the game space arises as a hermetic and limited construct.
4) Play exists as actions undertaken within this game space, in interaction with its signs.
5) Our experience of a digital game is centered around our experience of its game space, which arises from our interaction with its signs.

To understand our interaction with the signs that make up the game space, we must start with the earlier-mentioned notion of incompleteness. As part of a construct, each element of the game space functions as a sign. By themselves, these signs are inherently incomplete. In addition, they carry the potential for a *double* incompleteness. This must be clearly understood before moving forward.

To start, by situating the various components of the game space as signs, our treatment of these signs themselves moves towards the viewpoint of pragmatics. To explain the (double) incompleteness of these signs, the following quote by Iser is a good starting point:

> The pragmatic use of signs always involves some kind of manipulation, as a response is to be elicited from the recipient of the signs. “Such terms as ‘interpreter’, ‘interpretant’, ‘convention’ (when applied to signs), ‘taking-account-of’ (when a function of signs)…are terms of pragmatics, while many strictly semiotical terms such as ‘sign’, ‘language’, ‘truth’, and ‘knowledge’ have important pragmatical components.” (Morris) Clearly, then, pragmatics, as usage of signs, cannot be abstracted from syntax—the interrelation of signs, or semantics—the relation of signs to objects. Indeed, pragmatics generally presupposes syntax and semantics, for these are implicit in the relation between the signs and the interpretant.
>
> (*The Act of Reading* 54)

Because the game space consists of signs existing in coherence, they are inherently incomplete on the syntactic level. But because the game space can also act as a referent towards the real world,[26] signs can be doubly incomplete when they require interpretation on a semantic level as well. Both forms of incompleteness require interpretive acts on the side of the player, acts which are part of the method through which he brings the game space to life in play and experience.

This can be better understood if, for the moment, we constitute the game space as it becomes known to us as an aesthetic object. Drawing on Habermas and Seel, Kattenbelt constitutes the interaction between the aesthetic orientation on the side of an observer and staging of the aesthetic object as follows:

[26] A feature which generally increases as a game moves towards the status of simulacra.

> An aesthetic orientation concerns an emotionally intensified, affective perception and a reflexive orientation toward one's own subjectivity within the context of a presupposed communality in the life experiences of contemporaries who belong to the same, that is to say intersubjectively shared, lifeworld. Because it is in some way framed, or staged, an object that is perceived from an aesthetic orientation occurs relatively independently of the external world in which it exists. Paradoxically, it incorporates its own context.
>
> ("Intermediality in Performance" 31)

We will return to the aesthetic orientation in detail when discussing the position of the player; for now, it are those final two sentences which interest us here. When we engage the artifact of the game space and activate it as an aesthetic object, we witness how it "incorporates its own context": it offers us a tapestry of signs which connect to a world outside its own, while simultaneously remaining inherently coherent. As an example, I offer the following slice of game space from *Max Payne 2: The Fall of Max Payne* (Remedy Entertainment, 2003):

4.3.1 Max Payne 2: The Fall of Max Payne

The above image consists of various signs. Some of them are relatively "closed," and derive their meaning directly from their context in the game space—they need hardly reference the world outside of it to become meaningful. The icons on the screen, indicating the chosen weapon, health, painkillers and "bullet time,"[27] are good examples of this. Additionally, the game space consists of various objects in interaction: closest to us is our

[27] A special ability of the player character, Max, to slow down time.

character, Max, while further away we see two computer-controlled opponents. Between them are various objects serving as cover, and the scene itself takes place within an indoor space. As signs, these objects exist within an internal context to which they are coherent: their function is set and can be interpreted simply through their existence within the game space. By themselves, they are incomplete; in context of the game space and a player to interpret them as such, they fulfill their function. Thus, their activation as signs is both dependent on their placement within the structure of the game space and on a performance on the side of the player who brings them to meaning.

Yet there is another incompleteness of the signs here which has not yet been discussed. We interpret the above image of *Max Payne 2* not simply as three entities engaging in combat in a certain space, but as the image of a leather-clad hero exchanging bullets with two goons in a dinky building. Put differently, we have not yet discussed how these signs function on an aesthetic level, where we encounter a second incompleteness. This, then, is the cause for the "double incompleteness" of signs within the game space: they exist simultaneously on two levels. First of all, they exist in the manner discussed above: as signs on a *ludic* level. But because these signs exist through representation, they simultaneously exist on an *aesthetic* level as well. I should clarify my use of the word "aesthetic" here. Of course, the totality of the game space is an aesthetic artifact which requires activation to become an aesthetic object. When I am talking of a dichotomy between the ludic and aesthetic here, I do not intend to say that the ludic is not part of this greater aesthetic experience. Rather, I aim to designate the functioning of the sign by designating a difference between rule and staging, without denying that the entirety of the sign as an encompassing aesthetic function.

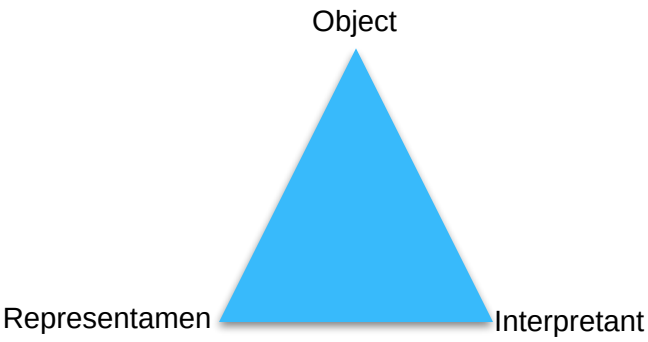
On both levels, the signs are aimed simultaneously inward and outward: inwards, they aim at cohesiveness within the game space, and outwards they refer to the idioculture of the player who relates the game space to the world outside of it. In our example, it is this outward aim at an aesthetic level that sets in motion our process of interpretation. The signs form an incomplete representation: they are in no way an actual building in which actual people undertake action. Yet we can interpret it as such and experience it as an intended space, when we respond to the aesthetic incompleteness with an interpretive performance of our own.

On both a ludic and aesthetic level, the functioning of signs within the game space can be even closer understood if we refer to Pierce's definition of the sign, which he constitutes as "a triadic relation…between a representamen, an object and an interpretant." In this relation, "the representamen determines that the interpretant refers to

the same object." (Kattenbelt, "Denken in Drieën" 9-10)[28] This relation is summarized by Kattenbelt as follows:

> The representamen is the material carrier of the sign, the object the material or immaterial entity to which the sign refers (a thing, an event, an act, a thought, an idea, et cetera) and the "interpretant" is the signified effect of the representamen, in other words that which it brings about, summons up in the observer, the interpreter.
>
> ("Denken in Drieën" 10)

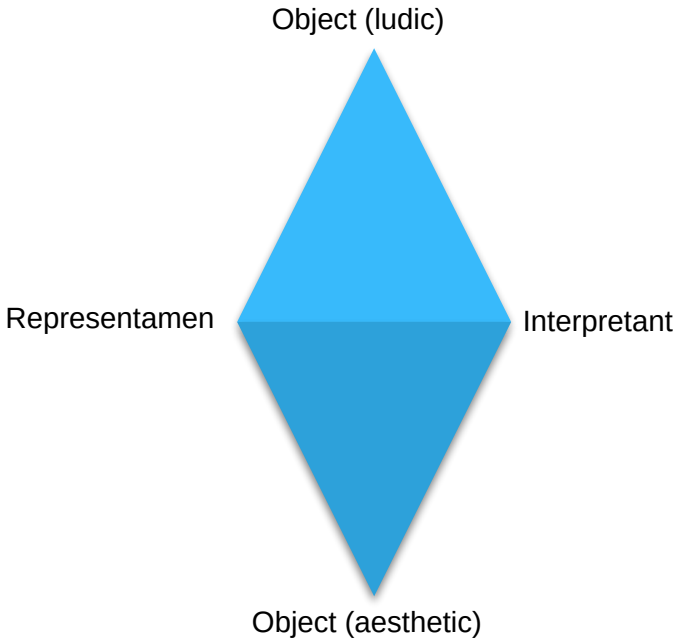
Furthermore, "this concept of the signs implies the necessary presence of an interpreting organism … which, as an interceding instance, brings about the relation between representamen and object." ("Denken in Drieën" 10) Kattenbelt provides the following schematic of this triadic relation:



4.3.2. Kattenbelt, "Denken in Drieën"

Concerning the double functioning of the signs within the game space, we could modify this schematic to the following:

[28] Kattenbelt's article "Denken in Drieën" was originally written in Dutch. For this thesis, I have taken the liberty of translating the original text to English.



4.3.3. Quadric relation of the sign

Here, the triadic relation has been modified to a quadric one, which positions the player as the "interpreting organism": it is only through our performance of the sign that it can fulfil its double function on both ludic and aesthetic level, and so come to full significance. Furthermore, it is important to note that the object here can be linked to the representamen through both an inwards and outwards aimed reference.

While all elements constituting the game space can be fitted into the above schema, they do not fill its shape uniformly. For example, the actors and environment from *Max Payne 2* contain a ludic object that is aimed inwards and consists of their place as constituents of the *game*. They contain a double aesthetic object, one aimed inwards and one aimed outwards: inwards, as it strives towards coherence with the rest of the game space's visual representation, and outwards as it refers to our own world, from which we draw when performing the signs and bringing the game space "to life." Meanwhile, the icons on screen contain a strong reference to the ludic object, but a far weaker one to the aesthetic.[29]

Leaving the visual space behind, we turn to the sound that accompanies this scene. As guns are fired, the sound of gunshots rings. These sound effect contain a rather direct

[29] I should refer here to Begy's "Experiential Metaphors in Abstract Games." Begy, too, approaches signs in games with the help of Pierce, dividing them into "rules-signs" and "fiction-signs." While Begy's approach and mine are similar, they ultimately cannot be equated. Begy's application of the term "fiction-sign" concerns the signs functioning as a direct staging of fictionality. As such, he argues that in abstract games, the game objects are —on a fictional level— "are not signs at all." (4) This is a major difference between the game object as a fiction-sign and as a sign with an aesthetic object, since, while the strength of the reference may vary, the reference towards the aesthetic object is *always* present.

and “complete” reference to the ludic object as informational agents which punctuate actions in the game space, a very strong inwards reference to the aesthetic object, and a much weaker one aimed outwards. Within the game space, they become a coherent part of the aesthetic tapestry and our interpretation thereof. But, depending on our particular idioculture, we may recognize these sounds as stylized or unreal when compared to the sound guns make in reality. The incompleteness and shape of the sign directly shapes our performance of it, and thereby our experience of the game space. Another example can be found in *Max Payne 2*’s music. The music does not feature a strong and direct referent to a ludic object (although there can be said to be an indirect one, when it influences our play) but does contain a very pronounced inwards aimed aesthetic object. Our experience of the game’s music will, in the case of *Max Payne 2’*s orchestral sounds, require very little completion on our side: our experience requires no outside references. As such, its outward-aimed aesthetic object is weak to non-existent.[30] Finally, there is the narrative surrounding this scene. The plot, which frames our actions, again consists of a system of signs, but most of them will be aimed more towards the aesthetic than the ludic.

The signs constituting the game space function in this manner. They have a structure, but are incomplete by themselves. Because of this, their performance requires the acts of an interpreter, the player: this shared performance allows interpretation and experience. Signs function on both a ludic and aesthetic level, and can refer inwards (in which case their performance requires the interpreter to activate their connections *within* the game space) and outwards (in which case they are “incomplete” in their presentation, and the interpreter completes them through her own idioculture). Through a shared performance the player interprets the game space by dealing with the incompleteness of the present signs.

The signs of the game space are coherent, but what are the effects of this coherency? How do these signs accumulate, and what are their cumulative effects? Answering these questions requires us to position these signs in such a manner that our performance of their inherent but variable incompleteness becomes visible. We can do so by positioning our encounter of signs as dealings with *interpretive blanks*. By placing the game space’s tapestry of incomplete signs as a structure of open spaces, we can study its effects.

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[30] Of course, this is a simplification: a deeper analysis of *Max Payne 2* would surely note the manner in which the music recalls the scores which accompanied classic *film noirs*, from which it draws its inspirations. To talk of an outwards aimed aesthetic sign in this case would thus mainly concern its, for lack of a better word, intertextuality.

The interpretive blank functions as follows. Because of its incompleteness, encountering of the game space's signs means encountering its interpretive blanks. These blanks are structured: together, they make up the entirety of the game space, transforming it into an interpretable whole. From plot to narrative to objects to sound to geography, all are structures composed of blanks. By completing the open spaces, our interpretation of the game space takes shape. This is a performative *event*, and as our interaction with the game space continues, our dealings with the interpretive blanks become part of our horizon, influencing the course our interpretation will take—but because it is structurally guided, this experience is never random.

4.4. Interpretive vacancies

We interpret the game space engaging the interpretive blanks. When these blanks are configured so that explicit attention is drawn to that which is not there —to that which becomes significant through its *lack* of present— we speak of interpretive vacancies. To explain the mechanics and forms of the interpretive vacancy, examples will prove helpful.

In *Dark Souls*, the player explores a grim fantasy world. While heavy on atmosphere, *Dark Souls* provides the player with relatively little narrative or context. Players, however, can find additional information if they carefully explore the world for clues. Doing so will often result in small scraps of narratives, anecdotes or histories. However, the player must piece this fragmented narrative together himself. Furthermore, because the game never explicitly tells the player how this is to be done, there is never full closure or resolution. As a result, players gripped by the narrative often replay the game multiple times, searching for clues they may have missed, and form active online communities where details of the plot are shared and speculated upon. The game draws aesthetic effect from emphasizing that which is not there; this is an example of an *interpretive vacancy*. Other good examples are games such as *Deus Ex* (Ion Storm, 2000), *Alpha Protocol* (Obsidian Entertainment, 2010), the *Thief*-series (Looking Glass Studios and Ion Storm, 1998-2000-2004),[31] *Dishonored* (Arkane Studios, 2012) and *Bioshock* (2K Boston, 2007). In these games, players confront conspirational themes by collecting little scraps of information and micro-narratives scattered around their worlds; all examples of interpretive vacancies.[32]

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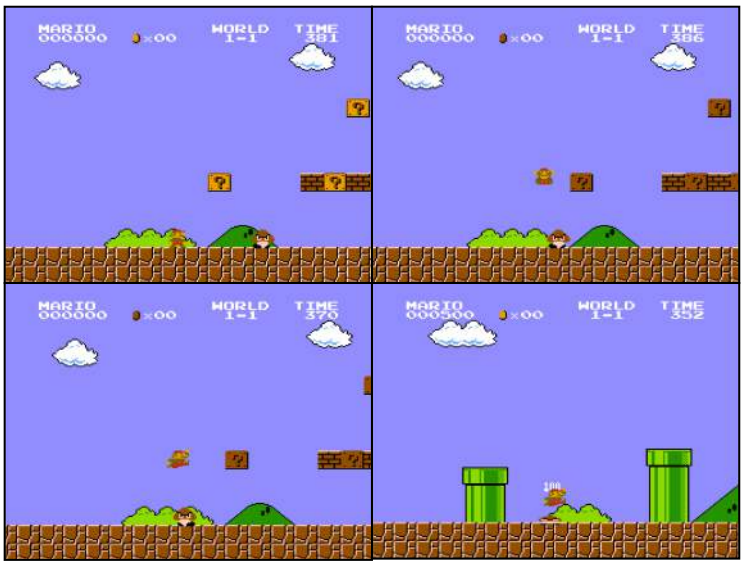
[31] Here, I am leaving the fourth *Thief*-game out of consideration.

[32] In the cases above, we are dealing with what is commonly referred to as "environmental storytelling." See Jenkins, 2004, e.o.

The above is our first example of an interpretive vacancy —of the pronounced presence of that which is not present. Yet if this were all, the interpretive vacancy would only exist as a narratological feature. That this is not the case becomes clear through the following example.

Much has been said and written on the level design of the classic *Super Mario Bros.* (Nintendo R&D4, 1985), and with good reason. Even today, it still stands as a fantastic example of learning a player the intricacies of play purely through level design. As has been noted by many,[33] the environment of *Super Mario Bros.'* first levels carefully clues players into what is expected of them and what they are capable of; playing them means learning the extent of our options, preparing us for the latter part of the game. In the first level, we first encounter another creature occupying the game world besides Mario: the *goomba*, Mario's now-iconic enemies who cause him to die and lose a life if touched. But imagine playing *Mario* for the first time without foreknowledge: we would not know what this creature is, nor what it could do. We might run right into it and die. Now we try again. Knowing that the goomba is not to be touched, we jump over it, and live to progress. We encounter our next enemy. Perhaps this time, we miss the jump over it and land on its head: the goomba dies, we live.



4.4.1. Super Mario Bros.

This example illustrates two points. First of all, it demonstrates an effect that the digital game space can have on our play. In the first part of the thesis, we discussed how

[33] Examples of such analysis abound. See Parish's "Learning Through Level Design With Mario" and Penner's fantastic "Breaking the Law of Minamoto" for some particularly informative explorations of this subject.

digital games offer us a ludic structure of rules existing independently from us. We concluded that, compared to non-digital games, digital games are always closer to *ludos* than *paida*. However, here we encounter another effect of the ludic structure's independence: because we are not the ones upholding the rules, they can be in effect without us knowing them. This can allow us to learn the rules *through* play. We need not know the rules to play. When digital games make use of this ability, such as *Super Mario Bros*. does, they can offer us play immediately; we learn the rules as we go along. In this manner, paradoxically enough, the fact that the structure of digital games is closer to *ludos* than *paida* enables a type of play which is just the opposite. Furthermore, when this enables a learning process such as in the above example, we are again confronted with an interpretive vacancy. After all, this learning process is a process of interpretation. Our lack of information when first encountering a goomba was an open space, which we filled with a projection. When we acted accordingly, this projection was proven false. Thus, the lack became pronounced when our first interpretation was proven incorrect, and we learn. That this is an interpretive vacancy and not a blank is proven when we realize that, in order to learn, there first had to be a *pronounced* non-presence of information hindering our interpretive process.

We have discussed the interpretive vacancy in two of its forms, narrative and play. But there is one more form to discuss—and it is the most important one, which demonstrates how the interpretive vacancy is crucial to our interpretive process. This form of an interpretive vacancy is the second point illustrated by our above example. When we encountered the goomba, first we died. Then we learned. Then we encountered the same goomba again, and we lived. Our interpretation of this second outcome cannot negate the existence of the first. Or, put differently: we are aware of an alternative to our current situation, and it is the non-presence of this alternative and the current presence in our present situation which informs both. When we encounter that goomba the second time and live, we do not merely interpret it as "we live"; we interpret it as "*we live because we did not die,*" fully aware that dying was a potential outcome now absent. As such, our interpretation of these events in the game space relies not only on what is there in presence, but just as much on what is pronounced through its non-presence. This pronouncement of that which is not there, determining our interpretation, can be called no

other than an interpretive vacancy. This type of interpretive vacancy is the most common and perhaps most important.[34]

The above example is a relatively simple one, but these kind of interpretive vacancies can take many forms and their width can span entire games. The earlier-mentioned *Bioshock*, *Dishonored*, *Alpha Protocol* and *Deus Ex* are, again, good examples. These games are all known for offering their players choice in matters of play and narrative, and a great width of approach. In *Deus Ex*, for example, a player might want to adapt a pacifist stance on matters: she can reflect this stance through her responses in dialogues with other characters, and in her play (she might, for example, avoid enemies rather than fighting them, or use only non-lethal methods to dispatch them). These choices not only influence the outcome and progression of the narrative, but also the situations and options this player will encounter. For example, she might puzzle over how to sneak past two guards, where another player decides to simply pull out a gun and blow them away. These decisions and their consequences are meaningful because they exist amidst a range of alternatives: that these alternative situations can be imagined (or, if we play again, made real) but are *not* present in part determines our interpretation of the situation that *is*. By the time we reach the end of the game, the ending is meaningful not only because it results from the choices we made, but also because it exists in the absence of its alternatives, of the choices we *didn't* make.

While the above examples emphasize the interpretive vacancy through an emphasis on choice, it is inherent to the nature of digital games: what we do gains meaning because it exists besides the non-presence of what we *didn't* do. The interpretive vacancy is a direct result from digital games being *games*, which we defined as: "a process and outcome, resulting from the actions of one or multiple players, taken according to a structure of rules." The digital game can only function as a game if there is an outcome resulting from actions. Where there is an action, there is a variety of outcomes: even in our earliest example of *Dämmerung*, where the outcome was already set, it could only come about because we partook in the only options it offered us. The alternative, in this case, would have been to *do nothing*, to stop playing the game. The act provides the outcome, and as such always stands by the shadow of its alternative, the scenario of an act-not-taken. Even in a game such as *Pong*, our interpretation of what

[34] If we were to continue this line of thinking towards the topic of narratology in games, then the interpretive vacancy stands as a counter-argument against Juul's point of view in "Games Telling Stories?" when he argues against the pronounced presence of narrative in digital games due to their characteristic to have the "proper" plot be only one of many outcomes, all alternatives ending in failure or death.

happens when our opponent scores a point incorporates the absent alternative scenario of us blocking his shot: our interpretation of failure incorporates the interpretive vacancy of success. As such, the interpretive vacancy is an inherent component in the structure of the digital game space; its pronouncement, however, is variable. Which shape this pronouncement takes is crucial to our resulting interpretation of the game space and experience thereof.

4.5. Agency blanks

So far, we have discussed our interaction with the game space through open spaces which enable an interpretive process. But our interactions with the game space require more direct performative acts as well: they require play. As phenomenologists would phrase it: it is only through play that the game manifests itself *as a game*. As discussed in the first chapter, this play is never random: it consists of “actions taken according to a structure of rules.” And, concerning the digital game space, these rules are embodied within a coded structure. As such, play is incorporated within the structure of the game space. To imagine play’s existence within this structure, we can refer to the *agency blanks*.

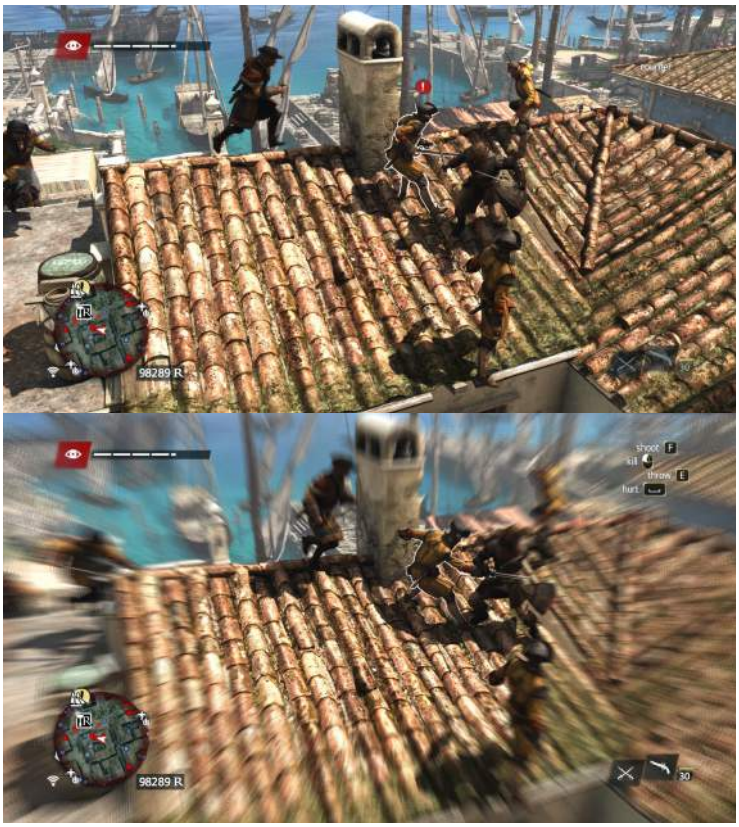
When we interact with the game space, we are asked to perform. Without our input, Mario remains put at the beginning of the level, the blocks in *Tetris* stack straight up, and the game cannot manifest because there is no play. Play is a performance which finds the game space as stage, and consists in part of the sequential undertaking of actions. These actions are neither fully free nor set: on one side they adhere to a set of rules which limit their range, on the other their sequence remains open since there has to be room for the player to insert herself into the structure of the game space—to *perform*, to *play*.

Another way to put this is that the game space shapes an open space in which performance can take place: an open space of *agency*, in which we are required to act. The shape of this open space dictates what acts are available to us: by choosing from this palette, we act on the open space and perform, which results in play. In order to structure our performance, this open space of agency is itself subdivided into *agency blanks* and *agency vacancies*. An agency blank represents a blank within the game space which we complete through a particular performance.

The structure of agency blanks can be seen as an aleatory point for the full potential range of play. Their openness provides us freedom of play, while their borders limit the potential actions we can take. They thus shape our performance. Take, for example, *Doom* (id Software, 1993). There is no *set* way to play the game: each and every player develops

his own style and approach. This is possible because of the open space represented by the agency blanks. But because these agency blanks reside within the structure of the game space, they also limit the range of this performance. *Doom* will always, at its heart, be a shooter; as *Edge* lamented in its (now somewhat comic) review, “if only you could talk to these creatures, then perhaps you could try and make friends with them, form alliances…Now, that *would* be interesting.” (“Doom: Evil Unleashed” 63) Thus, the agency blanks both enable our performance, while simultaneously guiding the shape it takes within the game space. If the game space is our performance’s stage, then the agency blanks are its “script.”

Finally, we should add that the agency blanks can be highly dynamic. While their presence within the game space *can* be static (for example, in *Pong* or *Tetris,* our potential range of actions remains the same throughout our engagement with the game space), many games utilize a dynamic presence of the agency blank as crucial building blocks of their gameplay. What I mean here by *dynamic* is that agency blanks can appear and disappear within the game space, or change their shape and thereby demand different actions. A good example of this can be found in fighting games featuring a counter-mechanic. We can see such a mechanic in action below:



4.5.1. Assassin’s Creed IV. Above: An enemy initiates an attack on our character, indicated by the red icon above his head. If we act fast, we can initiate a counter. Below: The counter is successfully executed, leaving the enemy open to attack.

The above screenshots are taken from *Assassin's Creed IV* (Ubisoft Montreal, 2013). When in combat, holding the B-button allows the player to take a defensive stance and deflect blows. If, however, the player lowers his defense and an enemy attacks, there is a very short span in which the player can *tap* the B-button and not only deflect the blow, but counter the enemy's move with one of his own. There is a temporary change in the tapestry of agency blanks: the moment an enemy engages us, a new blank temporarily appears, allowing us to counter. If we miss our window of opportunity, this blank disappears again and the possibility to counter is removed from our palette of action until it reappears. By determining the shape of performance, its requirements and its width, the agency blanks provide a place for play within the game space's structure.

4.6. Agency vacancies

When agency blanks are structured in a certain manner, they can result in agency vacancies. Unlike interpretive open spaces and agency blanks, agency vacancies are the only type of open space that is not an *inherent* component of all possible game spaces. When they are, however, they can greatly influence our experience.

To understand how agency vacancies function, we begin by restating the nature of a vacancy: an emphasis on that which is not present. The agency vacancy is a configuration of agency blanks which structures the player's potential options in such a manner that his *lack* of options is emphasized. It is the game space drawing attention to its own mediality by foregrounding the player's role as a performer within a digital structure, through deliberately and clearly limiting our options so that attention is drawn to their absence. As seen in the following example, such vacancies can be used to great effect.

Bioshock takes place in an underwater dystopia called Rapture, whose remnants are ruled with an iron fist by its founder, Andrew Ryan. We play a character who finds himself stuck there after a plane crash: in a bid for escape and survival, we follow the advice offered to us by another inhabitant over a radio. Eventually, when we confront Ryan, it is revealed that we are not who we thought we were: our character's history is mixed up with that of Rapture, and he was brainwashed into following any command prefaced by the words: "Would you kindly…" Unknowingly, we have been following the commands of the voice on the radio all this time. The strength of this plot twist lies in the fact that *Bioshock* has, up till this reveal, offered us a somewhat linear experience. Where we first accepted it as part of the game space, the game now draws attention to how little agency its play actually gives us. This point is further underlined when Ryan orders us to take his life: illustrating that we have no choice in the matter, the game takes away *all*

control until the deed is done. *Bioshock* translates a narratological inevitability to an inevitability within play through the use of agency vacancies. We may also recognize this effect from *Dämmerung*'s game space, where agency vacancies were put to similar use.

4.6.1. Bioshock. Andrew Ryan is beaten to death with a golf club by the player's character.

Agency vacancies have other uses besides narratological ones. An example can be found in *Metroid Prime* (Retro Studios, 2002). The game starts with a small prelude, in which our character has many abilities. Eventually, these abilities are lost in a cutscene: at the start of the game proper, we have become familiarized with skills we no longer have. By offering the player a full range of capabilities before taking them away, the game draws attention to our lack of possible actions while we have been configured to interpret the game world with an eye that still incorporates them. We see an item is out of reach, but can imagine reaching it if we had our old capabilities; once we restore them one by one later, we know how to act and the sequence is complete.

An even more subtle application of the agency vacancy can be found when it functions as a guiding factor in our interactions with the agency blanks. *Quake*, and many other shooters, offer good example. At a certain point, we may find opponents which are very tough to defeat: while we are free to attempt it and might succeed, the sudden spike in difficulty signals that we are suddenly *lacking* in our capabilities. A possible solution might be to search for a better weapon. In this manner, the agency vacancy structures our performance through play in a very subtle manner.

4.7. The shape of the game space

As seen in the above examples, the open spaces do not operate in isolation: not only are they coherent through shared existence within the game space, but their interactions with the player directly influences his interactions with other open spaces. To better understand the game space's structure and mechanics, we now ask how the configuration of these various open spaces determine our experience. First of all, a meaningful relation with the

game space requires a process of interpretation: it must appear to us as more than pixels on a screen. This, as we have seen, is made possible by the interpretive blanks. The game space is build on a configuration of signs, and these signs themselves function through their incompleteness, their configuration of interpretive blanks. The configuration of the interpretive blanks determines the shape that the interpretive vacancies will take, which, again, guide our interpretive process. Because a game is not only a process of interpretation, but of play/performance as well, we must act. Acts take place within the agency blanks, which determine the configuration of the ludic structure. These acts are not random: they result from our decisions, which are made by acting on our interpretation of the game space. From this, we can draw two conclusions.

First of all, what separates playing of a digital game from randomly pressing buttons on the controller is the interpretive process which accompanies it, and positions play as a form of performance. Secondly, our interactions with the agency blanks are shaped by our interactions with the interpretive open spaces, since they determine the interpretation which precedes and accompanies our actions. The moment we act, we are confronted with the mediation of the machine: we act to the machine, and through this our actions are translated into the game space. Because the game space itself is a space of representation, our actions are transformed into signs, which again require interpretation. At the same time, our chosen actions influence our process of interpretation, too. Thus, our interactions with the interpretive open spaces (interpretive performances) lead to particular performances within the agency open spaces, where the resulting actions become new signs that bring about new interpretive open spaces, informing our next performance.

The above, however, is a simplified explanation of the open spaces' configuration. Moving into detail, we find these configurations to be far more complicated: interacting with the game space is a process in which all the events described above happen not only in sequence, but simultaneously as well. In addition, the effects of one action can remain ongoing while the process starts anew somewhere else as we perform multiple tasks at once. This complexity is perhaps exactly why our experiences with digital games can feel so rich and satisfactory.

How, then, are we to imagine the structure of the game space? Let us start with the following observations:

1. Our actions are determined by our interpretations, and require interpretation in turn. In addition, our choice of action influences our process of interpretation. Thus, our interpretive and active performances are related, mutually and simultaneously informative.
2. Within the structure of the game space, each component can fulfill various structural functions simultaneously. Actions are signs, signs are actions, etc.
3. The components of the game space fulfill dynamic functions which not only influence themselves, but other components as well.
4. The structure of the game space shapes the performance of the player, whose performance in turn shapes the structure of the game space.

The game space exists as a structure which is organized but fluid, determined though dynamic, infinitely connected yet never random. To imagine a game space's structure, we can imagine a network of uncountable connections, a network which relies as much on that which is there as that which isn't. What *is* there, are the objects constituting the game space. For these objects to function —as signs, as rules, an *anything*— within the game space on entry of the player, they rely on an inherent incompleteness and/or indeterminacy: the open space, that which *isn't* there. Through these two types of connection, each object is potentially connected to every other object. As such, the shape of the game space is one of uncountable interrelations. Because of this, and because this uncountability of connections is reliant on the open space, and furthermore because it is through the activation of these connections that the game space comes to meaning, we can say that the shape of the game space as it applies to our experience is an *interrelated structure of open spaces.*

With this statement on the game space's shape and its dependence on four types of open spaces, is our assessment of it complete? No: there is one more type of open space to discuss, one which is both the driving force behind the process described above as well as its result. It is the most nebulous in form, all the more so because it does not fit into the quadric relationship outlined above; rather, it surrounds it. I am talking about the open space of *progress*.

Play and its experience require a space in time allowing it to set forth a path of progression. Without such a space, there is no game because there can be no play: there would simply be no room for an outcome. To perform within the game space, the presence of performance requires both a space in which it can manifest as well as a reaction to its

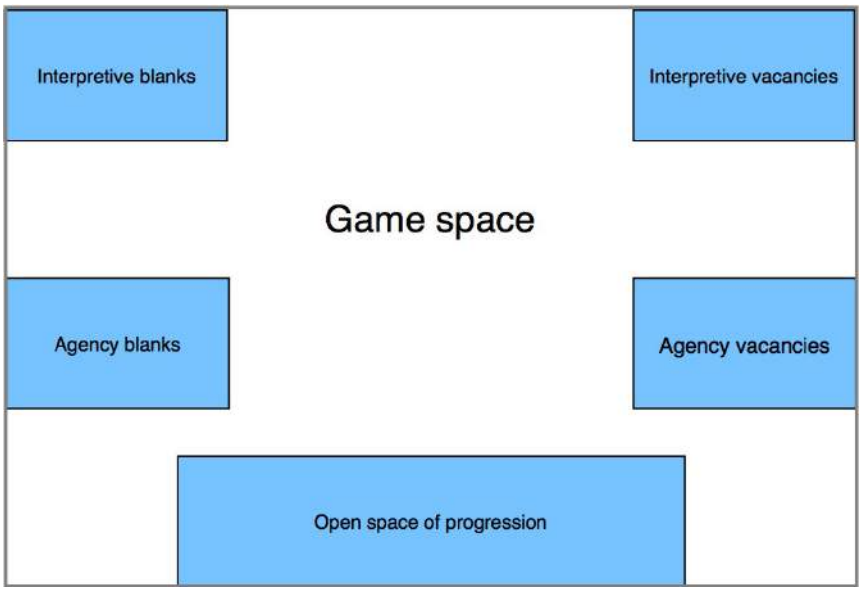
presence if it is to be fully accommodated. This reaction, then, requires space as well: here, we find the open space of progress. At any moment within the span of play, our current situation is a result of the performance that has led up to this point. For this to be possible, there must have been an opening within the game space that has kept the current moment “undetermined” until we reached it, allowing our current experience to be of particular configuration. Similarly, our current performance will shape our future moments within the game space. This openness is what we refer to as the open space of progress. Its shape and size determine the weight of consequence, and when it closes the game is finished.

The simplest example of this can be found in games where the player can win or lose. During play, our performance takes shape according to the quadric relationship of open spaces: the end result of this performance remains open until it is reached, and its closure will determine if we’ve won or lost. At this point, it would be tempting to say that the open space of progression is a result of rules, a purely ludic entity. Yet it is not: while it incorporates the purely ludic consequences of categorical outcomes such as those described above, they are not a requirement and its sum is far more. If, for example, *Dämmerung* offers us only a single outcome, this does not mean that the open space of progress is not present: if this were the case, the game would either remain frozen in time or consist of a media landscape which does not require our presence as players at all. Rather, *Dämmerung’s* path of progression is a result of progression’s open space being given a particular shape and form, one which remains open until the end; there, it can (and will) only be filled in a single possible manner. The opposite can be imagined as well: a player who engages *Minecraft* (Mojang, 2011) in free-play will not be given any goal at all, yet play is still experienced through progress. Here, then, progression’s open space is wide enough to never be closed completely, and can be satisfied with all manners of performance.

Furthermore, we would be mistaken to see this open space as something which only awaits us at the end of play. Rather, the open space of progression *surrounds* us: it is always one step ahead of us, awaiting our performance so as to accommodate it, as well as one step behind us, driving us forward in our play session (even if we rewind time within the game space by, say, reloading) by situating our current situation as the sum of all that preceded it.

As such, the open space of progression is a dynamic component of the game space, whose shape and space changes as play progresses through it. It is where we begin play and learn, where we find the small or large consequences of our actions as

they inform a current situation, and the moment where our progress eventually comes to an end. The open space of progression, then, is both shaped by the interpretive and agency open spaces, and shapes them in return. It provides space, guidance and consequence to our performance, while responding to it in turn. Our final map of the game space's open structure thus looks like this:



4.7.2. The inherently incomplete game space

Through this understanding of the game space's structure, we move closer to an understanding of how digital games generate meaning through experience. The game space "performs" itself on us through its structure, but for this to take effect it requires a performance from us in return; this is possible because of the open spaces. It is through the shared performance between player and game that meaning and experience ultimately arrises. But even though we now know how this performance is staged, we still need to further understand this performance itself. In addition, the cumulative effects of the game space on our experience can be better understood through Iser's concept of the wandering viewpoint and horizon. To these ends, we now turn towards the role of the player.

Chapter V:
The Player and the Performance

In our discussion of the game space, we noted how it is built around an inherent incompleteness which opens it up as an interactive object. We confront this incompleteness through performance, and so enable a process in which effects accumulate into meaningful experience. Thus, if we wish to understand how digital games come to meaning, mapping the structure of the game space is not enough: we need a better understanding of the player's performance as well, since it is only through this performance that the game reaches "completion." In this chapter, this performance is our subject of research.

A study of performance in this context requires acknowledging two points first. To start, as we saw in the last chapter, the effects of the game space are not instantaneous; instead, they accumulate. Likewise, the performance enabling these effects is an ongoing process. To understand digital games and the staging of play, we must understand the experience of the digital game as an *event*. Understanding the performative in games is thus not so different from Iser's understanding of literature as a performative activity when he speaks of the "*act* of reading," nor from Attridge's claim that the literary carries with it an "eventness." Likewise, we move close to Seel and Gadamer's notion of the aesthetic staging. Any description we offer on the performative in digital games will be incomplete unless it accounts for their inherent eventness, the very thing which enables their performative nature.

Secondly, understanding performance within digital games requires acknowledging that it takes place on multiple levels at once. Engaging a digital game as a player requires us to take up multiple positions simultaneously: we are "outside" of the game, staring at- and interpreting events on the screen in front of us, while simultaneously "inside" the game, taking up position within the game space through performance. In games, "the player is an active performer because she is also an interactor; but she is also the audience of the performance, since she is the one who makes sense of the system and interacts accordingly." (Fernández-Vara, "Play's the Thing", 6) Our approach of this performance, then, must both acknowledge that it is not uniform in shape, while simultaneously finding a coherence therein which sees the player's different positions as related and recognizes their mutual influence.

Furthermore, performance in digital games has been the subject of volumes. It is impossible to take account of all that has been written on the subject here; it would also be

unnecessary, since it is not performance by itself which concerns us here. Instead, we ask for an understanding that will allow us to complete the perspective we have begun etching out through our description of the game space. Sadly, this means we will have to be extremely selective: what follows is far from all there is to say concerning the subject, but I hope it will fulfill its purpose by completing the description of digital game's mechanics we have offered thus far.

First, we ask how performance in digital games is situated by taking note of their "eventness." For this, we again turn towards Iser, drawing on his concepts of the horizon and wandering viewpoint. This will not only allow us to understand performance as an ongoing event, but also demonstrate how the player's different positions exist in coherence with the game space's various types of incompleteness. I will argue that the player's performance is simultaneously undertaken from three positions: that of *actor*, of *audience*, and of *critic*. Understanding performance in coherence with the game space can be done through a study of this triadic relationship; furthermore, this will help us better understand how the player comes to make sense of his experience. Ultimately, this brings us back to Iser's concept of the wandering viewpoint, and prepares us to tackle the interaction between the player's performance and the game space's intricate structure in the next chapter.

5.1. The player as actor, audience and critic

To understand how our performance takes shape within the game space's open spaces, it is helpful to start with referring back to how Iser described the performance of literature as guided by blanks. Interaction with the blanks sets in motion the reader's "wandering viewpoint" as it traverses the text, performs it, and through interaction with the blanks, forms connections between its various elements. This sets the text "in motion." As the wandering viewpoint moves through the text, it orders its components into horizons. The composition of these horizons influence how we look back on the read and anticipate what comes next; as such, it is a dynamic construct.

The wandering viewpoint and horizons frame the literary performance in relation to the Leerstellen. If performance in digital games refers not only to interpretive acts but to those of agency as well, and these are structured by the corresponding open spaces, then the shape of this performance might be better understood if we can apply the concepts of the wandering viewpoint and horizons to the structure discussed in the previous chapter. This not only enables us to approach performance and its effects as an event, but also

allows us to place performance in light of the game space. First of all, if the wandering viewpoint shapes horizons through the open spaces it encounters, then here we find our first glimpse of how the multiple types of performance (as observers and as participants) come together. After all, the player's performance must adhere to both open spaces of interpretation as those of agency; in addition, it must be capable of engaging signs of the game space both aimed inwards and outwards. As such, the complete performance of the player must occupy several positions simultaneously to function.

That players take up multiple positions simultaneously is nothing new: the recognition that players are both the performers of acts and their audience can be found in a majority of writings on digital games. However, it is interesting note how these multiple positions have been approached in studies of performance.

In the second chapter, we took a short look at the writings of Clara Fernández-Vara. In her attempt to understand performance within games, she draws a parallel between the actor on the stage and the player within the game. It is not hard to see why such a comparison can prove illuminating and productive; after all, both actors and players are engaged in "play" which takes place on a make-believe stage, and can be broken down to the sequential taking of actions which derive their meaning from being staged within a particular time and place. Furthermore, Fernández-Vara makes use of Juul's concept of *games of progress* (games which the player can complete by the undertaking a correct sequence of actions) and *games of emergence* (which offer a playground where play emerges from a free engagement with the structure of rules) by setting them as the extremes that mark the border of play's territory:

> Progression and emergence mark the ends of the spectrum, and although we have given examples from the extremes, most games are somewhere in between. (Juul, 2005) Thus, the performance of the player is a negotiation between scripted behaviours and improvisation based on the system. Scripted behaviours give more control to the game designers, the mechanics are dictating the dynamics and aesthetics as much as a playwright determines the mise-en-scene. Complex mechanics that the player can experiment with, on the other hand, give more room for the player to generate her own experience.
>
> ("Play's the Thing", 7-8)

Here, the comparison to performative theatre seems clear: games which are closer to progression see the player as actors following a script, whereas games of emergence tend more towards an experimental performance. Of course, the concept of a performance presumes the presence of an audience. While digital games can have an audience of many, such as when spectators are present (Fernández-Vara, “Play’s the Thing”, 7), they always have an audience of one: “the player is an active performer because she is also an interactor; but she is also the audience of the performance, since she is the one who makes sense of the system and interacts accordingly.” (Fernández-Vara, “Play’s the Thing”, 6) This situating of the player as (inter)actor *and* audience can, in a way, be seen as a continuation of Brenda Laurel’s argument in *Computers as Theatre*.

There is a subtle but important difference between the above and the earlier-discussed position taken up by Calleja and Kücklich. If we take another close look at Fernández-Vara’s words, we see that the notion of *performance* is firmly grounded in the player’s role as interactor; as an audience, she makes “sense of the system” but no longer performs it, even though there is still an “interaction” through the role of interactor. For Calleja and Kücklich, however, there seems to be no such distinction: because they focus on a performance which is guided by the game space’s signs, there is a performance from the player’s auditive position as well. A side-effect of this, however, is that a clear focus on the player’s performance *as actor* becomes somewhat lost or unpronounced. An interesting middle ground is offered by Emma Westecott, who draws a parallel between our engagement of a digital game and the performance of puppetry, arguing that “the metaphor of the puppet offers a useful frame for the central figure of our game-play focus by allowing a kind of ‘double-vision’ (Tillis) that enables a player character to be seen in two ways at once, ‘as a perceived object and as an imagined life’ (Tillis)” (1) By positioning the player as a puppeteer, Westecott seems to find a natural balance between the player as audience and as performer; a limitation, however, is that this model seems less useful for games which do not feature a pronounced player character.

If we wish to understand performance in light of the game space as defined thus far, our approach will have to incorporate both positions —that of interactor and audience— as performative acts. Making use of a metaphor from theater, we may begin by stating that the player performs from the positions of *actor* and *audience*.

Actor

When speaking of a player’s performance as actor, we refer to the acts taken in —and in accordance with— the game space. It is the control of our character, the movement of

Pong's paddle, the issuing of commands in a strategy game. As actors, we perform as *the one who acts* in all meanings of this word. Our performance as actor governs our interactions with the agency open spaces, and relates to the interpretive open spaces mainly through the inwards-aimed signs. As actors, we relate to the game space by performing —or, more precisely, *acting*— in the open space it allots us. These acts, once performed, become part of the game space itself.

To perform as actor means engaging in play. As such, our performance is never truly free nor random: it adheres to the game space's ordering of open spaces. In a way, the game space functions thus not only as a stage, but also as a *script*: through the functioning of the agency open spaces, it determines the total possibility of actions and sequences our performance will bring forth. Yet it is still up to us, the actors, to bring these actions about through play. This "scriptedness" of our performance even holds true in what Juul referred to as "games of emergence" ("Half-Real"), since their open-endedness is determined by their rules and goals: the performance as actor, however, adheres to the open spaces of agency, which (as we've explained) can exist quite independently from the rules Juul refers to. Even incredibly open-ended games such as *Minecraft* and *Dwarf Fortress* (Tarn Adams, 2006) still exist as game spaces with a structure of agency open spaces: as such, they will always "script" our performance to a certain degree, because it can only manifest within these openings.

Encountering the signs of the game space through a performance as actors means interpreting them with a focus on the game space itself and the position occupied by us therein, relating them to our own performance. For example, when playing *Prince of Persia: The Sands of Time* (Ubisoft Montreal, 2003), we might enter a new room within the game's fairy tale-inspired environments. As an audience, we might relate this to the stories from *1001 Arabian Nights*, to architecture we have seen ourselves, and/or wonder how the titular Prince (the character under the player's control) will navigate them. As actors, however, we encounter this environment as a new extension of the space we occupy, as a place we now inhabit, that we may relate to what we know of the character and our performance as such thus far, and gaze upon it with an eye that wonders how *we* are going to make it through there. Likewise, when we encounter a new weapon in *Max Payne* (Remedy Entertainment, 2001), as an audience we interpret the event as Max finding a new gun, and wonder what this will lead to. As actors, we perform *as* Max and find a new tool, causing us to think on how this can be put to use in whatever lies ahead. In both examples, while there is an emphasis on the signs as they refer inwards, we engage their outwards references as well—we have to, if we are to make sense of the game space's

incompleteness in a manner that allows us to perform in the first place. What differs these interpretations from those made as audiences, however, is that we directly refer any outside interpretation back towards its relation to our place *within* the game space. Taking a metaphor from theatre, there is the example of an actor playing Macbeth, wielding a wooden knife. As he performs his role by killing the king, he knows he is not holding a real knife. Yet he reads its signs and can interpret it as such, which allows him to refer this interpretation back to the stage and wield it *as a knife*, and *as Macbeth*. As actors, our performances orient towards the game space in a manner that both results from- and shapes our performance within- its open spaces.[35]

Audience

Our performance as audience covers our interpretation of the game space as witnessed through our devices. It is a performance of the signs that make up the events taking place therein: through this performance, the game space becomes interpretable to us as we "complete" it. This performance is mainly centered around the interpretive open spaces. It relates to our performance as actors through the system of signs which represent it on screen. As such, while every player is by necessity his own audience, not every performance as audience necessitates a performance as actor. Those who spectate the playing of digital games, for example, still engage their signs through an performance as audience. This also means that, while the main engagement is taken up by performance within the interpretive open spaces, as audiences we *can* interpret and engage agency vacancies: because each action finds its corresponding representation (or pronounced lack thereof, when it is *not* taken) within the game space, we can encounter agency vacancies when they are transformed into signs. This, of course, is an encounter by proxy; as such, we will not engage these open spaces to their full effect, but they will play a part in our interpretive process. For example, if we watched the previously discussed confrontation of Andrew Ryan in *Bioshock*, the demonstration that certain actions *cannot* be taken transforms this lack of option into a sign we can interpret.

When we encounter signs through a performance as actors, we ultimately referred outside-aimed signification back towards the game space. As audience, the opposite takes place: the signs which point inwards become known to us as signs we interpret as

[35] The examples given above all relate to games with player characters and what Calleja would refer to as "virtual environments"; however, the same principles hold true in more abstract game spaces. In *Tetris,* we are just as much performing as actors: we interpret the blocks falling as relating to our performance as a puzzler within the game space, and act upon this.

outsiders, and as such we perform them as part of the greater whole of the game space that we interpret. Referring back to our earlier metaphor of *Macbeth*: we *know* it is a wooden knife, but we interpret it as a real one within the context of what is staged before us. What happens in our encounter with the game space's signs has already been discussed in the examples above; all that is left to restate here is that this process is only possible because we not only *witness* the events on screen, but *perform* them as signs. The result of this is that what we witness becomes meaningful and interpretable to us in relation to who we are in our everyday lives.

So far, we have stated that our performance as players takes place from multiple positions. Remains the question: do "actor" and "audience" cover the extent of our performance? At first, it appears so: after all, they adhere quite closely to the traditional distinction between audience and interactor. However, as demonstrated in the following example, this is not the case.

Saints Row 2 (Volition, 2008) is an open-world action game in which the player takes on the role of a violent criminal, comparable to the *Grand Theft Auto*-series. The game allows the player to freely roam, discover and often terrorize a fictional city called Steelport. Players can create their own character, designing his or her body, choosing clothes, and choosing from a selection of voices and attitudes. By participating in various story-missions and side-activities, players can progress the game's story. The story is not just told through the missions which advance it, but also through cutscenes that accompany them. Through these cutscenes, dialog spoken and missions undertaken, the game builds up the player's character, often referred to simply as "the Boss."

5.1.1. Saints Row 2

The Boss is a character of which we never know sure what she[36] will do next, since almost nothing seems out of bounds. This has a particular effect on the nature of our performances as audience and actor. The game offers us a characterization of the Boss which matches the performance players often engage in as actors within the game space: our tendency to approach an open-world crime game as our personal playground in which we are free to engage in amoral behavior matches our avatar's personality and worldview as presented to us as an audience, easily facilitating a performance that seems "fitting." After all, if the Boss is want to do *anything*, then *nothing* we do as actors conflicts the characterization presented to us. We might say that this design shows a particularly effective employment of the open spaces: open spaces of agency are deployed in such a manner that our play is likely to follow particular patterns, whose implications are reinforced by that which is explicitly stated on an interpretive level. Simultaneously, on both an agency and interpretive level the *exact* nature of the Boss is left unstated: as a result, we are free to fill this open space ourselves (through customization, acts undertaken, interpretation, etc.) and "complete" her character. As a result, the Boss is very much a defined and "written" character, yet always feels particularly unique to us because we are required to manifest her fully through our performance.

The above process of characterization adheres to the game space's structure as previously discussed, yet it cannot be fully explained through the positions of audience and actor. The personality of the Boss is not a given at the game's start: our knowledge of it builds over time, both through our own performance and the characterization explicitly offered to us by the game. In this manner, it is not just *us* who perform the Boss: the game performs her back, and thus the character is born of a shared performance. At this point, it becomes hard to differentiate between a performance as actor and audience. To better explain this, a close reading of the mission "Bank Error in Your Favor" will prove helpful.

The mission takes place at a point in the story where our gang, the Saints, are engaged in a vicious war against a competing gang. It starts with a cutscene in which the Boss is informed by one of her lieutenants that the girlfriend of the Brotherhood's leader, Jessica, has been spotted entering a bank with a suitcase full of money. Seeing opportunity, the Boss decides to head over there. We gain control over our character, our objective being to drive towards the bank. As audiences we are fully capable of following events. As actors, we understand *what* we are performing when driving to the bank: the

[36] *Saints Row 2* allows us to create characters which are male, female, or anything in between; in addition, they can always be changed mid-game. My use of female pronouns here is thus rather arbitrary, but based on personal experience.

Boss' motivations are interpretable, and we know what we are doing and why. Once arrived, a new objective comes up: "Go inside and take Jessica hostage." Here, the game starts laying out a particular path of approach that will shape our performance, and while we might not know the full extent of the Boss' plan we know how this action will further her agenda. When we take Jessica hostage, an alarm goes off; the game informs us that this has sealed the doors (information which we would not immediately have at our disposal, but our character does), that we should force Jessica to shut off the alarm, and how to do this. When this is done, all that stands between us and escape/successful kidnapping is a group of cops who have arrived. We fight ourselves a way out (heeding the game's call that "The doors are open. Take Jessica to her car.") and follow the game's instructions to walk her over to the trunk, where we see the Boss deposit Jessica inside. At this point, something interesting happens. Up till now, we thought we understood the Boss' plan, and why we were doing what we were doing. But why did we have to take Jessica's own car? Likewise, when we are in the car, why does the game tell us to drive towards a sport stadium with the cops still hot on our tail? There is a discrepancy between the knowledge of our character and ourselves, causing a narrative tension. The positions of audience and actor start to blend together: we are performing as a character, but can only guess at the nature of this performance as an audience. Where one ends and the other begins is no longer clear. The Boss' plan is only revealed upon reaching the stadium, in another cutscene. It turns out that the stadium is the stage of a demolition derby in which the Brotherhood's leader will crush old cars with a monster truck—and unbeknownst to him, the Boss has parked Jessica's car amongst them with her still inside. Her boyfriend unknowingly drives over her car, crushing it. When he gets out amidst cheers of the crowd, the Boss enters the arena, tosses him a set of car keys and points out Jessica's (now unrecognizably mangled) car, leaving him to discover the contents.

The mission's resolution is shocking, horrific and (through its absurdity) darkly comic. It serves as great characterization for the Boss at this point in the story, but its effects cannot be properly explained through only the positions of actor and audience. For the scene to work, it has to reveal the final twist through a carefully staged cutscene: players must be situated into performing as an audience, because the entire effect hinges on a surprise. The cutscene takes control out of our hands; there is no performance as actor. Yet the position of actor still lingers on in our interpretation as the scene unfolds: while we had no knowledge of the plot, our previous performance set it in motion. Likewise, as players we do not think that *the Boss has done this thing*, but that we are somehow co-responsible for it. And when the mission is done and the game continues, we reflect on these events in

5.1.2. Saints Row 2. Overview of the mission “Bank Error in Your Favor.”

our performance-as-actors as *something we had a hand in ourselves*. What has happened here cannot be properly explained by either the player as actor nor as audience. To claim that it simply results from a particular configuration in which our performance as actors and audience become intertwined leaves unpronounced the particularity of this configuration's effects, which forces us into a position which is both audience and actor simultaneously—and becomes something more in the process. It is an experience and form of performance which draws on both but is more than the sum of its parts. In many ways, it is the effect of a reflection upon both ourselves and the game space.

To understand the player's performance, this "third position" must be properly understood. The above example from *Saints Row 2* is very pronounced, but smaller occurrences abound in our engagement of digital games: they appear each time our character comments on an action we performed, when we perform an action without knowing what its shape or effects will be, when we experiment and discover games and encounter unknown but meaningful consequences. Without this third position, our performance always proves lacking: there could be no real engagement, merely a shared presence in the game space that, at best, produces surface readings of flickering lights and fleeting escapism.

This third position feeds on our performances as actor and audience, creating something greater out of them. It is a third performative position which stands in triadic relationship with that of actor and audience, incorporating them both. Keeping with our metaphor of theatre, we could say that this position is the player performing *as critic*. As critic, we *perform our performances* as actor and audience, reflecting on both these roles played *as part of a whole*. This triad of performance —actor, audience and critic— covers our engagement with the digital game as players. It yet requires a closer understanding of the player-as-critic, but this necessitates we first reflect on the above. In order to do this, we now turn towards aesthetic thought.

5.2. Performance and the aesthetic orientation

To better understand the shape of our performance concerning digital games, we turn towards Martin Seel's theory of aesthetics. For Seel, the creation of- and/or engagement with the aesthetic object relies on an aesthetic orientation/perception. (Kattenbelt, "Denken in Drieën" 17) This "aesthetically perceived does not present itself as a given situation, but is, as an event, interpreted as a whole of meaningful signs referring to both real as possible situations." (Kattenbelt, "Denken in Drieën" 19) As such, the aesthetic object only comes about through a perception which it helps bring about through its own composition.

"The aesthetic orientation is primarily characterized by an interest in the presentation of experience qualities which make it possible to perceive and experience — with a specific conduct of life — the actuality and internal constitution of one's own experience (Seel 1985, 127 and 247)." (Kattenbelt, "Intermediality in Performance" 31) That the effects of this aesthetic perception or orientation lay close to the effects of engaging digital games through a performance which includes the player-as-critic becomes clear when Kattenbelt summarizes Seel:

> […] aesthetic experiences are specifically involved in experience. The engagement of the aesthetic orientation implicits such an orientation towards oneself as experienced/experiencing, as a subject of experience, that -again- one perceives and experiences oneself in an engaged manner in one's world. It is from an aesthetic interest that we seek and create objects which rise up to our desire to experience the own experience in an experienced manner.
>
> (Kattenbelt, "Denken in Drieën" 20)

By itself, the "aesthetic object presents a coherence of internal references, in which it presents a remarkable perspective on that which it gives to understand or rather: to experience." (Kattenbelt, "Denken in Drieën" 21) The object, then, is activated by the aesthetic perception, which brings it to function. The result of this is the aesthetic experience, in which "we experience that we have created experiences which determine our here-and-now (referred to as "Gegenwart") or are constitutive of our here-and-now through an aesthetic experience. The concept of "here-and-now" refers to the common domain of life experience." (Kattenbelt, "Denken in Drieën" 19)

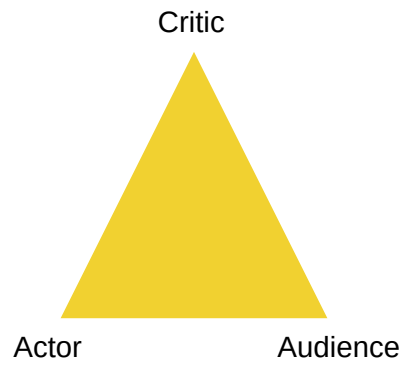
We engage the digital game through performance, but Seel's aesthetics serve as a good argument for why this performance cannot consist of the roles of audience and actor alone: without the player-as-critic, the effective interaction between these two positions is limited. As a result, it becomes hard to engage digital games *as games*, to truly engage in a meaningful form of play. The performance as critic brings about a reflection and composition on and between ourselves as audience and actors: it allows us to engage the aesthetic object that is the game space with what Seel might describe as an aesthetic orientation.

Seel and Kattenbelt help us understand why situating the player's performance as a duality of actor and public is not enough. If the player's performance as critic is not part of

the engagement, there is no real demand for our presence within the game space. As a result, its effects fall flat: the player-as-audience lacks a particular stake in the signs and might as well be watching a film, while the player-as-actor —relating only to the game space *as* game space— cannot relate it to the outside and his existence in the here-and-now. He is just following the script, and might as well be a robot. This is true even for a game such as *Dämmerung,* which only offered us one option and path. Even though there was no choice or alternative, our performance and presence was meaningful because there was a space left open for us; in following the game's script, we found some perspective or role that saw *more* in the game space than its components.

Our performance as players can thus be understood as taking place from three positions, which are in triadic relation. I use the word "triadic" here in a similar manner as Kattenbelt, to whom the triad is constituted when it places together "three elements as three fundamentally different, but unthinkable without mutual involvement, together, which work on each other in different relation, depending on the intentionality of our behavior and acting." (Kattenbelt, "Denken in Drieën" 8) As a basis there is the player as audience and actor. These two performances are crucial to our engagement of digital games, but they only become meaningful when placed in a context where they directly and mutually influence each other. This opens up the way for further effects, enables meaningful interpretation, and creates a bridge between the game space and our here-and-now that allows meaningful experience to arise. This is the third performance, that of the player-as-critic.

The top of a triadic relation, the player-as-critic combines the other positions. As said earlier, here we "perform our performances" and reflect on the other roles played as part of a whole. Through this performance, the triad becomes intertwined and mutually informative.



5.2.1. The triadic relation of the player's performance

The triad of actor-audience-critic outlined above, heavily inspired by Kattenbelt's triapartation of the lyric, the dramatic and the epic position ("The Triad"), not only helps us understand the shape of our performance as players, but also explains how the game space activates our wandering viewpoint and subsequent creation of a horizon. Interacting with the game space entails performing as both audience and actor. These performances are ongoing processes, but are unable to fully engage the game space by themselves. This requires a performance as critic, which incorporates the performances of actor and player in order to relate them and reflect. By "performing the performances," and reflecting on "the experience of experiences," the performance as critic brings about the aesthetic orientation which allows us to engage the game space to its full extent, simultaneously bringing it about as an aesthetic object.

Furthermore, when it *relates* the positions of actor and audience, it also relates their interaction with the open spaces and signs. As such, it touches upon the entirety of the game space's experience and in result produces a wandering viewpoint. This viewpoint not only wanders from sign to sign and open space to open space, but also between the performances as actor and audience, between ourselves as participants and observers, until it even wanders and reflects on our position as critic. It gives meaning to all and ultimately unites them internally. When it reflects upon this, it discerns between the constituents of the experience and thus builds horizons.

In the next section, we will illustrate the above with help of an example. As we will see, this example is in many ways similar to our earlier one from *Saints Row 2*, yet it ultimately presents quite a different effect and experience. It will also help us illustrate that the relation between our various performances is always equally distributed. As such, we now turn towards *Grand Theft Auto IV* (Rockstar North, 2008).

5.3. Interpreting performance

Like *Saints Row* 2, *Grant Theft Auto IV*[37] is an open-world action game with a criminal theme.[38] Players take control of Niko Bellic, a recently arrived illegal immigrant from Eastern Europe. As we play through Niko's story, we witness his struggle between finding

[37] Which I will from here on refer to by its common abbreviation, *GTAIV*.

[38] For a long time, the *GTA* and *Saints Row* series shared an almost familial resemblance, which is unsurprising considering the first *Saints Row* was heavily modelled after the generation of *GTA* games that followed *GTA 3* (which includes *GTA: Vice City* and *GTA: San Andreas*). However, from 2008 onwards (when both *GTAIV* and *Saints Row 2* released) the series started to diverge, with the former focusing on a more gritty and "believable" experience comparable to a Michael Mann-film, whereas the latter became more comedy-oriented and cartoon-like.

peace with his violent past and surviving in an equally violent present. Where the Boss struggled for control, Niko's struggle seems based more around a desire for peace and redemption. He is a somewhat complicated character, who has no qualms about killing but takes no pleasure in it either. A killer-with-a-conscience, a criminal against his will, and a tragic character who ultimately fails to escape his own nature: while *GTAIV* has two possible conclusions, both of them end badly.

5.3.1. GTAIV.

In what follows, we will look at how Niko's character arrises from interactions between *GTAIV* and the player's performance, between how the game presents Niko to us and how we perform ourselves *as* Niko. To do so, however, means discussing various performances from various players which are all different. In addition, I will also have to draw on my own experiences of the game for reasons that will soon become clear. As such, the following example might appear somewhat personal; nonetheless, I believe it will be illustrative.

As a protagonist, Niko Bellic was not received by players with unanimous enthusiasm, for several reasons. Some players found his character a bit too dour, "taking the fun" out of the experience of play. Much more interesting, however, are complaints that his character was "unfit" or "inconsistent" as the protagonist of a *GTA*-game. As discussed before, missions, cutscenes and dialogue present us with a narrative in which Niko adheres tot the stereotype of the reluctant criminal with a conscience. As such, he will rob a bank and kill cops and criminals alike, but he is not a spree killer or maniac who will deliberately come barging down a sidewalk driving a garbage truck, or someone who steals a car from an old

lady only to drive her over with it out of curiosity. Such activities simply don't fit his character; they do, however, conform to the type of activities which players will often engage in when presented with an open world such as in the *GTA* games. This tension, brought about by a protagonist who is reluctant to engage in crime being controlled by a player who may have bought the game *because* it allows for such fantasies, is not relieved by the game space's design: for example, while the "rampages"[39] from previous *GTA*-games are gone, players can still unlock an achievement for blowing up ten cars within ten seconds—something which the story's set-pieces offer almost no opportunity for. When players see Niko voice his concern over the blood on his hands during a cutscene, only to have him randomly blow up an intersection once under the player's control, the character can become somewhat problematic—inconsistent and unbelievable at best, unlikeable and hypocritical at worst.

5.3.2. GTAIV. A player engages in some violent joyriding

When I first became aware of these complaints, I was momentarily confused. They described an experience very different from my own, and spoke of an engagement with the game that arose from different desires. When I first played *GTAIV*, I almost immediately took an interest in Niko as a character, and tried to identify myself with him as much as possible. I was not just seeing Liberty City through the eyes of a player who had long anticipated the game's release, but tried to see it as he would, engage with it as Niko

[39] Side-activities in which the player has to kill a number of random people with a specific weapon within a certain amount of time,

might.[40] When I played the game —when I entered into a performance— I tried to match this performance with how I imagined Niko might act. At the end of the game, I had killed any and all opponents without second thought, but not a single civilian-npc. To me, this performance of Nico matched up very well with how I interpreted his acts and the manner he was presented to us during the game's narrative.

How do we place the difference between the above experiences? We can start by stating that they result from different performances undertaken. Yet we can't claim that one of these performances represents a a "right" or "wrong" form of engagement with the game: both result from performances undertaken and accommodated by the game space. This can be understood if we relate them to the game space's open spaces. As observed, players who took Niko on a rampage did so because the game allowed for it, because it is wholly possible within *GTAIV* to hit pedestrians and such. Or, put differently: such acts are possible because of particular agency blanks. Whether we choose to do so or not is left "open." If we do, we extend our performances into these open spaces and as a result the game space takes a particular shape to be interpreted. But the game offers us an alternative: to *not* engage in these acts, to use the space it accommodates us for a performance which actively seeks to avoid them. When the agency blanks enabling a rampage are negated in this manner, they accumulate first into an agency vacancy (our performance dictates that *we do not do these things*) and subsequently into powerful interpretive vacancies. Because it was wholly within the realm of possibility that bystanders will be killed during our actions, the fact that they don't —because we successfully avoided it— becomes a particular type of performance which we interpret. In my case, it marked Niko as a cold professional: someone who was willing to do what it takes to get the job done, but possessed the skill to do it in a professional manner that did not directly violate his personal code of conduct as I interpreted it from the information provided by the game.

The above explains how the different performances are both possible results from our interactions with the game space. Yet it does not tell us why one seemed to offer a particular satisfaction the other did not. Or, put differently: if this (dis)satisfaction results from an experience, and this experience results from actions undertaken and interpreted, then our answer lies not only in a study of the interactions between performance and game space, but in those within the triad of performance as well.

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[40] Perhaps there was a notable similarity between Niko, who arrives in a long-anticipated country which he is anxious to discover, and all those players that were finally given the option of exploring a brand new Liberty City in a long-anticipated game.

If the difference between the two performances relies on a discrepancy or coherence between how the outspoken plot of the game presents Niko and how we perform him, we may refer to the triad of player-performance and say that the difference results from a different relation between how we see the world as audience and perform as actors, resulting in a different texture of signs for the player-as-critic to interpret. When players cause the character of Niko to appear inconsistent because, in their performance of him, they engage in acts which appear unlikely or even contradictory to his character as presented in the narrative, what happens is that we perform in a certain manner *as actors*. As a character, Niko is “incomplete” and undetermined: interpreting him as a “complete” character requires not only what the game presents to us as given, but our own performance of him as well. Thus, if our performance as actors diverges from the given of the game, there is a dichotomy in his character: there is the Niko in search of his soul during cutscenes, and the Niko who would fire a RPG into a fast-food restaurant to see what happens.

5.3.3. GTAIV. Left: Niko contemplates his soul during a conversation in a cutscene. Right: Controlling Niko, a player fires a RPG into a fast-food restaurant.

Something curious now occurs to our performance as audiences. If we do not discern between the two halves of the dichotomy[41] we must prioritize one in favor of the other as we form an interpretation. In this case, priority is given to the Niko who rampages: when we are let loose in the game world, it is the curiosity of the audience that needs to be satisfied, “egging” the actor inside us on to experiment. Yet when a cutscene or story piece presents itself, our performance as audience does not actively acknowledge the dichotomy, while at the same time still giving prominence to the Niko resulting from our acts. As a result, we are now confronted with an incoherence which we cannot solve. Even if our performance as actors attempts to follow Niko-as-reluctant during the missions, only

[41] As we will see later, there *is* a way in which this can be achieved.

to “break character” outside of them, the audience still engages in only *one* type of performance while the actor engages in two. When we attempt to interpret these contradicting signs as critic, the resulting construction causes the frustration described earlier.

The shape of this triadic performance is different from what I experienced myself, or any other who seeks to actively perform Nico as the game presents him to us on a narrative level. Here, too, the performance as audience performs in only one manner, but it creates a different connection between the signs causing a different desire. As such, the actor is encouraged by the audience to adhere as closely as possible to the audience’s interpretation of the character. As critic, our performance now does not encounter the dichotomy observed earlier: all the signs of performance line up with those of the game space in our interpretation, and an agreeable synthesis takes place.

Again, there is no difference in terms of a “good” or “bad” engagement between these two performances, only a difference in shape. Nor can we simply say that the second example offers a more “complete” or “full” experience of the game, since it can only be brought about through the active negation of possibilities offered by the game space. Even in terms of an aesthetic experience, we can only say that the question of “proper” play is wholly irrelevant in the light of the far more important achieving of satisfactory synthesis.

The functioning of our trifold performance demonstrates what may appear obvious at first: the possibility of synthesis shows that the game space cannot be sealed so as to exclude the player *as player*. The success of synthesis (which, first of all, takes place if our engagement with the game space leads to an interpretable and therefore meaningful experience, and secondly can be satisfactory or not) depends not only on our activation of the open spaces within the game space and thereby the network of signs, but also on our own wishes and attitudes, our desires, as we engage the game space. Put differently: our capability to orient ourselves towards the game, to perform in the trifold manner, depends on our “idioculture,” our desires and expectations bred from previous knowledge that stems from us existing in the world (or, as Seel might put it, the here-and-now). This further makes each experience singular yet connected, through the player’s trifold performance, to the outside world.

The trifold performance gives purpose to digital games *as games*. It necessitates and acts upon an opening in what would otherwise be hermetically sealed constructs of code, giving shape to an interaction which is not the simple performance of acts for their

own sake but a genuine aesthetic experience. It positions our performance as an aesthetic orientation. The game space, in turn, can open up to such a performance, incorporating it and allowing its activation as an aesthetic object, through its structure of open spaces and signs. We need not only act upon the open spaces to complete the game, but do so through a performance which responds to the structure of the game and does so in a manner that adheres to both game space *and our own here-and-now*, our own desires, knowledge and experiences in our world. The result is that the work manifests in a manner which Attridge would describe as a singularity, an experience which is both singular yet never random because it adheres to a particular structure. Or, as Seel might put it, because the game manifests through an experience which is born both of the game space's structure of signs and open spaces yet requires our "Gegenwart," our engagement of games gives birth to an experience which is *intersubjective*.

We have discussed the functioning of our trifold performance as players and seen how the relation between the three positions is one which is not equally distributed nor of a completely stable nature. As demonstrated, the performance which accompanies the positions can take multiple forms, and at times our position as audience gains a precedence over that of player or visa versa. Put differently, there is a dynamics between them that resides within —and shapes— our performance. The word "dynamics" designates an importance to both the factors time and change; for a phenomenon to be dynamic, it must somehow prove capable of uniting the various changing shapes it incorporates over time. To further understand performance, I propose a return to the concept of the wandering viewpoint and horizon-building.

As observed, our performances are responsive to the game space, which responds in kind. As our interaction with the game space —our performance— progresses, we constitute a wandering viewpoint. This wandering viewpoint traverses the positions which constitute the triad of our performance, and through this it traverses the game space's signs and incompletions, its network of open spaces which is brought to full meaning. As it does so, it constitutes horizons in which it incorporates and frames our experience. Thus, the difference between the examples given above is not just a difference in performance: it is a difference in what has come to constitute the respective players' horizons.

Because it is constantly being built, a horizon —a sum of experience— is dynamic in itself. In fact, as Iser says, horizons can be built and discarded as our engagement of the work progresses. This can be easily understood through another example, a third way of engaging *GTAIV*. Many players may very well choose to experiment with the

opportunities offered by the game space *without* feeling a particular disconnect between their performances as actor and what they see in the cutscenes. They will attempt an absurd act, and when they later perform a mission they forget about it in this new context. It is as if, depending on the context of the game space, previous actions temporarily (or permanently) “don’t count.” What happens here is that the player “plays” with various shapes of performance, but depending on their desire they can choose *not* to incorporate —or, better said, discard— certain experiences from their current horizon. Technically, “their” Niko gleefully ran over an old lady in an ice-cream truck before contemplating the falseness of the American Dream; but in the actuality of play, the experience of the former is discarded from the horizon with which the experience of the latter is approached, and their is no discontinuity. While this may be a somewhat extreme and comical example, such moments are a regular part of many play sessions. Think, for example, of a death from which nothing is learned, a loss which is trivial, a level which has to be replayed because a power-outage shut down the machine. Technically, these can be seen as interpretive vacancies; in concord with our performance, however, they can be trivial incidents without much influence on our experience. They are discarded from our horizon of experience. If this is not the case, if we remember them in meaningful fashion, then this simply means that those moments held meaning to us, that we activated them as interpretive vacancies which we *do* incorporate into our horizon. The performance, after all, has no definitive final shape: it changes from player to player, session to session.

Remains but one element of our performance to be discussed: the physical, our manipulation of controller, keyboard or other interface devices. The shape and meaning of this physical performance is determined by the trifold performance on one side, and the game space on the other. For our current purpose, we observe that it takes its meaning from- and can only be interpreted in- this context, between man and machine, player and game.

In the previous chapter, we discussed the structure of the game space; here, we dealt with the player’s performance. In doing so, we have already glimpsed how these two are intertwined—how could we not, since they can only exist in conjunction? Now, however, the time has come to finally answer the questions with which we started this thesis. It is time to place performance and structure together, and study the birth of meaning from our experience of digital games.

Chapter VI:
The Player and the Game

In the previous two chapters, we discussed the game space's structure and the player's performance. For clarity's sake, it was necessary to separate the two; yet as we already saw in our earlier examinations, it is impossible for one to exist and function without the other. This chapter sees us finally examine their coming-together. As we will see, the player's engagement of the game space results in a particular experience. It is as such, as an experienced work, that the digital game manifests to us—and it is this very experience which generates meaning.

Together, the game space's structure and player's performance form the constitutive elements of the digital game as meaningful experience. Yet understanding how this experience comes about requires more than simply adding them together: the experience is generated through an interplay between the two. As such, what we are examining in this chapter is a process—one which, as we will see, can be understood as performative in nature. Our approach will be as follows. After a quick restatement on our findings concerning the game space's structure and the player's performance, we study their interplay step-by-step as it takes place over the period of time that constitutes play. Understanding this interaction, this interplay, means first of all recognizing it as a process in which both our performance and the game space's structure change in accordance with their dynamic relationship. As such, we start by discussing the game space's structure in its dynamism. From here on, we again look at the player's trifold performance as it not only influences the game space's structure, but is shaped by it in turn. This will allow us to see the process of play and the subsequent birth of experience and meaning as a *shared performance.* Through this shared performance's shape, we witness play as a constant feedback-loop between player and game. We are then capable of examining what constitutes our experience: here, we again encounter the workings of the wandering viewpoint and its horizons. Because we now discuss these terms in light of the dynamic process in which they occur, we can study what shapes them and what they shape themselves: doing so grants us the insight we desire into how games "speak" to us. From there, we will possess all the information needed to understand how games become meaningful to us as singular experiences.

6.1. A shared performance

Play, which takes place when the player engages the digital game in its singular phase, is constituted by the interactions between the player's performance and the game space's structure. The structure of the game space functions not only because of what it contains, but just as much because of what it does not: it is inherently incomplete, and because of this incompleteness it is accessible. Both because it becomes known to us through a system of signs awaiting activation, and because it must incorporate the player as an active agent, the game space requires the presence of a player to manifest itself as a game. The structure of the game space is built around incorporated incompleteness, the open spaces. These open spaces (the interpretive blank, the interpretive vacancy, the agency blank, the agency vacancy and the open space of progress) each demand a particular performance from the player. This performance not only directly affects the open space calling for it, but influences our interactions with other open spaces as well. The player's performance is not of uniform shape: rather, the demands of the game space call on the player to perform from various positions. When a player performs, he does so as both audience and actor; in addition, he performs as critic, a position from which he reflects on the other two and incorporates them. As such, our performance gives shape to the game space's manifestation during our play session, while this performance itself and the positions from which it is undertaken is simultaneously dependent on the game space's structure.

In this manner, play is the interaction between the game space's structure and the player's performance. These two are interlocked in a dynamic relation, in which both help shape and determine the form of the other. To understand how play leads to meaningful experience, we must understand it as a process.

During the process of play, the game space does not remain static: its incompleteness demands a performance in accordance with its open spaces. This performance impacts the game space itself, which changes its texture accordingly: we "complete" the open spaces in a certain manner, creating a particular manifestation of the game space's texture, which becomes part of its structure in turn. Yet the potential for various manifestations, while of uncountable variety, still adhere to a basic structure. For example, the game space of *The Elder Scrolls V: Skyrim* (Bethesda Game Studios, 2011) can greatly adapt itself to the player's performance, but any potential variation still adheres to a basic structure that marks it as *Skyrim's* game space particularly. As we wrote earlier: "digital games present a space which is inherently limited and hermetic." To explain how

the game space's structure is variable yet remains within the domain of itself, we must understand it as a dynamic structure. Concerning digital games, we never encounter the game space's structure in its entirety: the moment we engage in play, the structure of the game space "plays back." As such, what we experience is never the structure in its totality, because the structure forms itself around our performance. The structure we encounter thus arises in concordance with our play. For example, referring back to *Skyrim*, the game offers us an open world full of adventure. Its game space may be experienced as an heroic sword fighter, a villainous wizard, or a cowardly trader. The game space will eventually emerge in concordance with *one* such option, but this is only possible because it contains the components for *all* these options *in potentia*.

Concerning the dynamic nature of the game space's structure, we find a good example in *Saints Row: The Third*'s (Volition, 2011) "Whored Mode."[42] This game mode sees the player appear with a predetermined weapon in an arena, where he has to face off against several waves of opponents. For an unimaginably small moment at the start, each potential player encounters the same manifestation of the game space's structure: the player's character emerges from a determined position with a specific weapon, as do his opponents. However, the moment we gauge the situation and press a button —the

6.1.1. Saints Row: The Third's "Whored Mode."

moment play starts— this structure begins forming itself around our performance: we act in a certain manner, and the game space responds. Two minutes later, we may find ourselves in a panicked position, almost certain to lose, low on ammo and scared by any

[42] An admittedly terrible pun on the term "Horde Mode," which was popularized by Epic Games in the *Unreal* and *Gears of War*-series.

opponent who comes close. Or we may be hunting down the arena for that last opponent, glorious and certain of victory—or anything in-between. In all these scenarios, we are dealing with a different configuration of the game space. Yet all variations still adhere to the components present in its structure *in potentia*. We should note that, even though not all that can potentially arise during play will be encountered, this does not mean it is completely absent: such structural components can be transformed, for example, into vacancies or negations. A good example of this is if we replay a game in a completely different manner, and our confrontation with the game space's current structure incorporates the now-absent previous manifested structure as a meaningful vacancy: this is made possible because both still adhere to the components of the same game.

By understanding the game space as a dynamic structure, we are given our first sighting of what happens when performance and game space engage through play. By emphasizing the fluidity of the its structure, we begin to understand that the game space not only responds to our performances as player, but actively engages us in return as well. The incompleteness of the game space, given shape through the open spaces, demands a performance on our side from various positions. This trifold performance as players, triadic in nature, co-exists with a physical performance ("pushing buttons," so to speak). Our performance is shaped by the demands of the open spaces, but in its engagement with the open spaces it shapes the texture and manifested structure in return. Put simply, we play the game while the game plays us.

As a result, stating that meaningful experience emerges simply from a play that is the coming-together of *our* performance and the game space's structure does not grasp the intricacy of the situation. It neglects that, because play is a process, the game responds to our own performance with corresponding action. The game performs in kind, until both performances are intertwined by causation and signification. As a result, our meaningful experience is the result of that which we called a "shared performance." Our own performances are only meaningful because they take place within the context of the game space, while the game space itself can only fulfill its effects when it fully incorporates these effects through a response, a performance of its own. Even when the outcome of this process is set (such as when all alternatives are negated), the determined outcome will still be meaningful because it is the *lack* of a response to our actions. As such, the resulting meaningful experience is only so because there was a shared performance: think, for example, of our earlier examination of the functioning of interpretive and agency vacancies. In chapter II, we quoted Atkins: "…we are locked in a complex dialogue or

dance with the machine that amounts to a sequence of exchange that goes both ways.” (146-7) Four chapters on, these words illuminate new meaning: the complexity of the game space’s structure and the player’s performance meet in the shared performance, and it is this shared performance that drives forward the process of play and the manifestation of a meaningful experience.

Can we put words to the shape of this shared performance as it exists over the duration of play? On the screen: in *Doom II* (id Software, 1994), I run towards a demon. As I close the distance, I switch to a double-barreled shotgun and kill the beast in a single shot. In the

6.1.2. Doom II: Hell on Earth.

shared performance: the game space presents me with signs to interpret, such as the blanks borne by the pixelated landscape which I must complete to a certain extent if I wish to interpret it, and deliberate vacancies (in this case, the deliberate impossibility to see my own body, the potential for an outcome in which I do not kill my enemy). It presents me with agency open spaces, blanks forcing me to decide what to do and then perform these actions (taking out my shotgun, movement, firing) and vacancies (we find no other option but conflict in this situation). They force my hand at performance: we “complete” the interpretive blanks to interpret the situation and bring it to life, they position me in a particular manner as an actor (through the first-person perspective where the lack of a body asks me to imagine myself in the role) and as an audience (witnessing the events on the screen), they ask me to perform with the options available (the agency blanks and vacancies). I meet the challenge, and in the resulting performance not only fill out the open spaces but by extension link them together with other elements and open spaces, while

simultaneously my performance brings about a particular new manifested structure of the game space which demands the same process (the game performs back). Repeat ad infinitum, or at least until we cease play.

What came about was a shared performance, and its shape is that of a *constant feedback-loop*: each open space on the table acting in concurrence with its surrounding structure, demanding performance from all three positions of the triad, which connect the open spaces in a new manner, bringing a new structure about, and again, and again. The constant feedback-loop between player and game forms the texture of the shared performance, and its continued existence is the foundation of experience—the experience which, to us, ultimately constitutes the shape of the digital game as encountered through play.

The extent of this feedback-loop that shapes the shared performance has no limit in which open spaces and present elements it will connect, nor how this will be done. The connections are uncountable and complex, ultimately forming the texture of the game space. It is exactly this, combined with the player's idioculture expressed through his performance, that allows each digital game to arise as a singular meaningful experience.

6.2. Synthesis

It is through the constant feedback-loop of the shared performance that our experience of a game takes shape. Yet in the above, it remains unclear how this chaotic process enables the generation of *meaning*. Yes, any open space can be connected to any other, but how and why are these connections (and, by extension, the experience they facilitate) meaningful? To explain this, we refer back to Iser one final time, and examine how the earlier-discussed wandering viewpoint fits into this process.

In the previous chapter, we examined the wandering viewpoint when we discussed the position of the player-as-critic. When players perform as critics, they reflect on their experiences as actor and audience and relate the two into a meaningful whole. The wandering viewpoint is key to this, as it traverses the interactions of both performances (thereby spanning the entirety of the game space's open spaces and signs as experienced by us) and attempts to unite them into a whole. To be more precise, the wandering viewpoint accumulates experiences and unites them into horizons, experiential sums against which we weigh, measure and ultimately add or reject current experiences gained. Ultimately, this leads to *synthesis*, the coming-together of all the various elements, experiences and interpretations born of our performance with the game space that transforms our experience into a meaningful whole.

The wandering viewpoint helps us understand the shared performance of player and game space, the constant feedback-loop. Because it traverses the whole of our performance, it gathers up the experiences birthed by the shared performance of play, by the constant feedback-loop, and weaves them into horizons. When experiences are accumulated within a horizon, what happens is that they are given a meaningful context: they become part of a whole, in which they inform each other. Another way to put this is that the digital game is only accessible to us as a process (the shared performance of play) and that this process itself can only be understood as an experience. That which we experience is encountered by the wandering viewpoint, and placed into a horizon. In this manner, the experience is temporarily given an "initial" meaning, which reveals itself to us upon encounter. Based on this, it is given a particular place within our horizon, where it comes to meaning again due to the context in which it is placed.[43] The experience is meaningful to us both *when* we place it into our horizon, and becomes meaningful afterwards because of its placement, its position within the horizon's configuration.

As we discussed earlier, horizons are by definition dynamic: not only do we constantly add to them, but the configuration of a horizon is itself open to change. A later experience can completely alter our interpretation of an earlier one, causing it to be re-positioned. In the last chapter, it was the different dynamics of players' horizons that helped explain their different experiences and interpretations of *GTAIV*. It will be worthwhile to revisit the functioning of this dynamism at this point.

Previously, when observing which experiences constituted the horizon, we also spoke of experiences which were "discarded," such as when players tend not to reflect on a section which is replayed constantly until success is achieved, or when experimentation in *GTAIV*'s game space is "put aside" when the player actively engages the story missions. Perhaps it would be more accurate, however, to speak of "repositioning" experiences rather than "discarding" or "barring" them. This is best explained with the help of an example. In the game *Quake III Arena* (id Software, 1999), players engage computer or human-controlled opponents in arena-like maps. As a fast-paced first-person shooter, *Quake III* offers us a variety of weapons which can be found at different locations within the maps. My personal favorite was the "railgun," a weapon which instantly deals great damage with great accuracy. A single shot can take out opponents, but because the

[43] We might compare this process with Pierce's degrees of experience, where the initial experience corresponds to a firstness of experience, its placement in the horizon to a secondness of experience, and the experience of synthesis as a thirdness of experience.

weapon takes a relatively long time to recharge between shots, that shot has to hit. This is harder than it sounds, because *Quake III* is an extremely fast-paced game where players jump and run at great speed. Mastering the railgun is a pleasurable experience, and when I think back on my time with the game I remember the sensation of pleasure when I pulled of a hard shot that hit my opponent in mid-air. I have much fonder memories of the railgun than I have of the machine gun, a weapon I used occasionally but did not find very memorable.

6.2.1. Quake III Arena. Left: The Railgun. Right: The machine gun.

When speaking of my experience with *Quake III*, I am discussing a texture of experiences which were brought into a horizon during play—the above discussion of the railgun and machine gun amongst them. Yet my experience of these guns is itself based on a variety of experiences: not only is it composed of all the times I fired the weapons, but could be further broken up into individual interactions with open spaces: each time I fire a shot, I am performing in a particular manner in an agency blank. Considering the machine gun will often chew through 300 rounds per match, however, necessitates a particular type of madness to engage my experiences in this manner. Likewise, my experience of the railgun is not composed of individual hits scored or missed; rather, it is a composed experience of all shots taken accumulating in a horizon I carry with me into play. This horizon not only dynamically changes during the process, as I keep adding new experiences and reposition others, but it also positions my experience at any given moment so that it influences my play. For example, given the choice, I will discard the machine gun as quickly as possible once the railgun becomes available: this is an act in line with my previous experiences, and determines the creation of new ones. That I don't think about using the machine gun, or often forget it if I did, might be another example of an experience that enters into our horizon but is "discarded." Yet this term implies that its effects on my horizon are negated, which is not the case: the fact *that* I find the weapon of

little interest determines my play in such a manner that it is unlikely to become so later. I therefore argue that the term “repositioning” is more accurate: the experience is forced onto the border regions of the horizon without fully disappearing.

Experiences are repositioned constantly, and not only when they are pushed to the margins. It is the reason our horizon remains dynamic. It links experiences together, merges them, connects them and forms them into clusters. The experience of each shot of the railgun in our example is taken up by the wandering viewpoint, is brought into our horizon, and becomes intertwined with the experience of the other shots. But it also connects to experiences of movement, of other weapons, of environment, of interpretation, etc. —in our horizon, it constitutes a part of our experience of the game itself. In this manner, our horizons constitute the configurations of our conscious experience of a digital game.

Remains but one thing to be said on the wandering viewpoint and its horizons for now. While we have discussed *how* horizons are composed, we have not yet studied *why* certain experiences take precedence in composition over others. It is difficult to speak of a set manner in which this happens, as it varies not only from game to game but also from player to player. One constant, though, is that within the experience brought forth by the shared performance of play certain elements are given emphasis over others, or are more *pronounced*. To understand how this happens, we start by stating that the wandering viewpoint does not operate in a random manner. Rather, as it gathers experiences, it selects and categorizes them as it integrates them into horizons. In this process, both under influence of the game space itself and the player, certain experiences can receive a greater emphasis than others, turning them into pronounced elements. Whether or not an experience is pronounced says nothing about its importance to the horizons; rather, its emphasis helps configure the horizon in a particular manner and thus helps shape its eventual manifestation. This can be better understood with the help of an example.

Limbo (Playdead Studios, 2010) is a darkly atmospheric 2D platforming game, in which players control a small boy as he traverses nightmarish landscapes in search of his companion. When playing, we are constantly engaged in having our character run, jump, and pushing and pulling objects in order to continue our journey. The experience of these movements (or, put differently: the experience of engaging the open spaces that constitute it) constitutes a major port of the game’s ultimate experience, yet they receive little emphasis. Rather, the game asks us to make these actions our own so that they *don’t* become emphasized, so that the unpronounced direct experience of movement frees us to focus on other elements which the game *does* emphasize. In *Limbo*’s case, there is an

6.2.2. Limbo.

emphasis on the visual aesthetic, on the terrifying contradiction of an innocent child forced to traverse a threatening landscape of nightmares, a composition of stylistics inspired by early German Expressionism. When we think about playing *Limbo*, we are not asked to reflect on the constant running and jumping; rather, we are primarily reflecting on an aesthetic experience in which these activities are a natural part, and whose effect is far more important. This is the result of pronouncing certain elements in favor of others. In my personal experience, *Limbo* also provides an example of when the suggested emphasis offered by the game fails to manifest. This happened towards the end of the game, when I became somewhat tired of playing and reached an incredibly difficult section where I had to maneuver the child between deadly giant gears. The difficulty of this section forced me to completely focus on the controls, to emphasize the experience of an efficiency-oriented performance above all others. I no longer experienced the aesthetic so much as I was very aware of playing a game; put differently, I was “taken out of the game.”

Pronouncing certain experiences to reach a certain effect is present in almost every digital game, and it is a fundamental element in the generation of experiential meaning. The constituted experience of our horizons function by emphasizing certain elements to the cost of de-emphasizing others. For example, we often tend to emphasize the experience of an exceptional outcome over the experience of the more regular process that brought it about. The difference in emphasis and the repositioning of experience within the horizon explains why we remember the process of play, but often not the individual and repeated actions which brought it about. Concerning *Halo* (Bungie, 2001), for example, we remember the experience of its combat, its different types of enemies and weapons, its mechanics of play, its story, etc. What we are less likely to think of is each time we pick up a health pack, each individual enemy encountered, each weapon fired at a certain

moment. Such experiences are not lost in our horizon, but grouped together into more general concepts of experience. There, their individual components are de-emphasized in favor of the outcomes they help bring about.

Understanding how the wandering viewpoint and horizons function helps us explain how the great variety of experiences arising from the shared performance of play are meaningful. What it does not tell us, however, is how these meanings come together into a meaningful whole, how the digital game on some level presents us with a unity of meaning that characterizes our particular engagement with a particular game. By itself, the horizon is a constantly dynamic process which not only enables play but requires it in turn. Ultimately, however, true engagement requires a generation of meaning that reflects on the experience as a whole. This, in turn, requires a certain stability of experience. Understanding this requires us to understand a process which is enabled by the horizon: Iser's crucial concept of *synthesis*.

As discussed, the game space's incompleteness requires performance on the side of the player, leading to a shared performance of play. This shared performance generates experiences, which are gathered by the wandering viewpoint and placed into horizons. Within these horizons, experiences are given meaningful configurations in which their relations not only activate the experience's meaning to us, but also its meaning in relation to the whole spectrum of experiences we have been conscious of. Synthesis is the next step in this process, a coming-together of the experiences which constitutes the totality of experience that makes up our engagement with a digital game. Within the horizon, experiences enter into meaningful configuration; during synthesis, there is a reflection on these relations. It constitutes the final step of our engagement: through synthesis, there is a complete coming-together between player and game.[44]

[44] For example, to play *Quake III* is to enter into a field of experiences, each resulting from particular open spaces. There is the experience of the weapons and their use, of the environments, of the aesthetics, of movement, of the thrill of combat and the chatroom and the scoring of that final point which wins the match. There are countless experiences, each constituted of smaller ones, each born of our engagement with the game's incompletion. Each conscious experience is given its place in the horizons we constitute during play through our wandering viewpoint, determining our experience of the moments and acts taken during it. We see the railgun, run towards it, know that the glimpse of movement could be an opponent, pick up the railgun and miss, know that time is running out and remember from an early experience how the shotgun functions: we switch towards that weapon, turn around, and blast away our enemy. In each of these moments of play, the constituted horizon informs our acts that cause it to expand in new configurations. These are experiences of meaning, but they do not yet tell us what it means to us to play the game. To do so requires a reflection on the relations of experience which constitute the horizon and its dynamic nature. To do so, put shortly, requires synthesis.

Synthesis, put in the most direct terms, is not just an experience in its own right, but the *experience of experiences*. As such, because it is the experience of play-as-a-process, synthesis can be described as the experience of play itself. It is the reflection on all that has been done and what it means *to us*, constituted through the shared performance in which we both bring about and experience. Synthesis is not only the sum of all that constituted our horizon, but also the meaning it constitutes *to us*. It is the sum of our engagement, the moment when the incompleteness of the game in all its shapes has been completely met by the performative engagement of the player, now made whole. As such, synthesis is both *meaning* and *meaningful*, the process through which we offer final recognition to the meaningfulness of our experiences and thereby allow the digital game to generate *meaning* to us. As with any aesthetic object, this meaning is neither random nor predetermined: as witnessed in the process which brings synthesis about, synthesis is an act generating meaning in accordance with both our own performance as individuals and the structural qualities of the game space.

The generation of meaning by digital games is both a process and an outcome. In all that proceeded, we studied the process; with our description of synthesis, this task is complete. All that remains is an understanding of the outcome, and what it constitutes. We know how meaning comes about—the time has come to speak on what constitutes this meaning itself.

6.3. The birth of meaning

At the start of this thesis, we asked how games generate meaning through play. Now, having discussed the process through which this occurs, we can draw several conclusions on the nature of this meaning itself. With this, it is not my intent to claim that all digital games possess a hidden meaning which can be uncovered. Rather, I claim that if the nature of digital games necessitates a particular form of engagement through which they become meaningful to us, as discussed above, then it follows that we may conclude on several characteristics of how such a meaning relates to us in a particular shape.

First of all, as demonstrated in the above, the meaning generated by the digital game through play is *experiential* in nature.

Secondly, because play necessitates an engagement of the player with the inherently incomplete game space, this experiential meaning is a necessary component of play. If no meaning arises during play, we would be conscious of nothing more than the manipulation of flickering pixels on a screen. That this is not the case goes without saying:

to play is to undergo a conscious experience, and the fact that the game becomes accessible to us *not* as flickering pixels but as an *experience* necessitates that it generates a type of meaning through which it may be grasped. The engagement of play leads to a conscious experience of which we are aware as such. Put shortly, it comes to experiential meaning.

In this manner, all games are meaningful to some extent, because without meaning there would be no game. This does not mean that all games are of high artistic value. It does, however, claim that each meaning —high and low— comes about through the same process. The five-year old will not find the same depth of meaning in *Tetris* as a highly trained academic will in *Gone Home* (Fullbright, 2013), but both encounter meaning by necessity—even if it is of a radically different form and shape.

Thirdly, as demonstrated, the full extent of the meaning generated by the game is dependent not only on the game itself, but also on the particularities of the player engaging it at a certain moment in time. To this end, it might be more accurate to say that what the digital game provides us with are *meaningful effects.* Because we are conscious of an engagement which leads to experience, this experience is a constituted meaning unto itself. We become aware of it through the effects it has on us: these are the effects of a particular experience, the experience of this game and this play session, which grants them a particular meaning.

With this, I do not mean to say that the meaning generated through play is random; far from it, it directly corresponds to the structure inherent in the game space, which functions as an aesthetic artifact. However, as with any aesthetic object, the meaning a digital game generates through a particular performance has no *exact* predetermined shape. The game space offers a configuration of itself that is predisposed to the emergence of meaningful effects, yet the texture of these effects (as how they are experienced) depends on the particular player. Ultimately, the meaning generated through play is both determined and open ended, because it can only come about through the meeting of a determined structure (the game space) and an undetermined agent (a particular player). Therefore, the end result (the meaningful effects) is always dependent on this particular player's position and disposition, yet communication is possible thanks to the game space's designed structure.

To demonstrate this more clearly, we need only refer to the information we have already reviewed thus far. In our study of *how* the digital game comes to meaning, we have seen that meaning manifests through experience. This experience is not merely the result of the

game space as provided by the digital game in question, but comes about when this game space is engaged by the performance of a player through play. Thus, the experience is born of a shared performance resulting not only from the player's agency, but from the structure of the game space as well.

Ultimately, the meaningful experience of any digital game is neither predetermined nor random. It is not random, because it always comes about through the set structural qualities of the game space. At the same time, it is not predetermined, because this game space must be engaged through the performance of a player who always acts from a particular idioculture. The result of this coming-together is that no game is ever the same: each new engagement brings about a meaningful experience which is singular in its own right, while still being recognizable as an experience of a particular game. As such, the experienced digital game exists as what Attridge might call a singularity, or what Seel would describe as an intersubjectivity.

A hundred people playing the same game will, ultimately, all have a singular experience. Yes, they will progress through the same levels, overcome the same challenges, reach the same ending; but each and every one of them will have done so in a different manner, had a slightly or wildly different process of interpretation, faced the game with different hopes and expectations. Each of them will have brought their own performance to the game's incompleteness, and as a result there will be a hundred singular meaningful experiences which all still adhere to the same game, being brought about through interactions with the same structure. Even the same player replaying the same game will never experience that exact same game twice: each time we enter into a new engagement, we do so with a different idioculture, and as a result experience the same game anew. Yet every new experience is still the experience of *the same game*. As such, the experience of play is both singular and intersubjective; if it were not, any communication on it would be impossible.

The meaning of a digital game is brought about by its structure, by what it offers us and what it asks of us. It is the game which asks us to take up position and perform, which asks us to *play*; and it is only us who can do so. In the end, when play is over and the screen switched off, what we have experienced will have been meaningful, and the meaning generated will have been experienced. It will have been enabled in a specific manner by the game itself, yet it will only have been brought into our world through a performance of our own. It is through our interactions with their structure that digital games come to meaning; it is through this performance offered by ourselves that they become meaningful to us.

Conclusion

At the end of *Bioshock: Infinite* (Irrational Games, 2013), protagonist Booker and his ward Elizabeth find themselves, thanks to a bit of quantum-wizardry, amidst an infinite sea of lighthouses. Booker, thoroughly confused, and Elizabeth, almost all-knowing by now, have the following conversation:

> Booker: What are all these lighthouses? Why are we…who are…?
> Elizabeth: They're a million million worlds. All different and similar. Constants and variables.
> Booker: What?
> Elizabeth: There's always a lighthouse. There's always a man, there's always a city…
> Booker: How do you know this?
> Elizabeth: I can see them through the doors. You, me, Columbia, Songbird…But sometimes, something's different. We have to save—
> Booker: Constants…and variables.
> Elizabeth: Yes.
>
> (*Bioshock Infinite*)

At this point, they see endless variations of themselves moving between the endless lighthouses.

> Elizabeth: Look.
> Booker: It's us…
> Elizabeth: Not exactly. We swim in different oceans but land on the same shore. It always starts with a lighthouse.
> Booker: I don't understand.
> Elizabeth: We don't need to. It'll happen all the same.
> Booker: Why?
> Elizabeth: Because it does. Because it has. Because it will.
> Booker: There are so many choices.
> Elizabeth: They all lead us to the same place…where it started.
> Booker: No one tells me where to go.
> Elizabeth: Booker…you've already been.
>
> (*Bioshock Infinite*)

7.1. Bioshock Infinite. A sea of endless lighthouses, Bookers and Elizabeths.

The above exchange works on three levels. In the context of the plot, it serves as an answer to that has preceded and sets up the eventual resolution: in order to undo the horrors of the plot, it has to be erased from all possible worlds by undoing the cause; a creative interpretation of the infinite world theory. At the same time, it functions as a comment on the *Bioshock*-series itself: for *Infinite* to be a *Bioshock*-game, it must fulfill certain thematic expectations. There must always be a lighthouse, a man, a city…

Finally, is this not a beautiful illustration of all that has been discussed in this thesis? To play a game, to engage it through performance, leads to an experience. This experience is always dependent on “constants” (the game space’s structure) and “variables” (our engagements of the game space’s indeterminacies). Games become meaningful to us as singular experiences, all slightly different (“a million million worlds”) yet all related to an engagement of the same object: engaging the same game space, “we swim in different oceans but land on the same shore.” Who are all those versions of Booker and Elizabeth traversing this endless sea, but other singular engagements of play? Who are they but us when we replay; but those other players playing the same game; but all those different sessions of play with small yet infinitely varied experiences? To play a game is to engage its indeterminacies: “there are so many choices” and yet “they all lead to the same place…”—to our singular experience of the the digital game as aesthetic object. As players, our performance moves us through the game space by the places it has left open for us. We perform, but have been accommodated; and in this accommodation of the player, “we have already been.”

When we started this thesis, we asked how digital games go from lines of code to meaningful experiences. To answer this question, we first defined our concept of “game” (“a process and outcome, resulting from the actions of one or multiple players, taken according to a structure of rules”) and its structural properties given by the digital

format (they have a solid embodiment in code, present a inherently limited space, and are capable of hosting varied and dynamic medial configurations). We then tracked the manifestation of their game space through the differential phase, consisting of shared performances between code and machine, and between program and user. This led us to the singular phase, in which the structurally undetermined game space demands a trifold performance from the player. This leads to a shared performance between the two as a constant feedback-loop, from which the player's wandering viewpoint established horizons. This, in turn, enables a process of synthesis, finally leading to a singular meaningful experience. In my introduction, I wished "to provide a perspective on digital games that will allow us to understand how they become meaningful to us." In my description of the above process, and by having positioned digital games as the generators of experiential meaning through structural properties, I hope to have done just that. As such, the notion of conclusion now seems false: the question is, where do we go from here?

My hope is that this thesis will serve as a contribution to the field in two manners. First of all, if digital games are to continue their growth as a serious medium, it is essential that we become better at articulating their effects—not just in an academic context, but in a general one as well. Put simply, good art requires a strong vocabulary in which we can discuss it. Or, to echo Eddo Stern at IndieCade 2014: what digital games need right now is an increased digital literacy. I hold no pretensions to offering such a literacy outright, but do hope that this thesis might function as a valuable step in working towards this goal in the following manner.

Digital games are games in the digital format. As I hope to have demonstrated in this thesis, this format has several *structural* effects on these games' shape and experiential meaning. Understanding how structure determines experience in a specific manner may help us better articulate arguments on digital games. It entails a perspective from which we can both observe our own experiences and those of others in new ways—and as creators, it may offer a new perspective on the question of how to bring such experiences about. Because these structural properties are shared between all digital games, we may find unity in their variety. As such, this is not an argument for suffocating sameness; rather, it is a call for clarity in which we may marvel at the various effects digital games offer us. I thus hope to have contributed a step towards a digital literacy, which exists as a shared perspective brought about by the shared structural properties of all digital games.

Secondly, and perhaps a bit more concretely, it is my hope that the perspective offered in this thesis may serve as a solid basis for further research and analysis. In this thesis, we discussed the structure of digital games and its effects as a whole. I am well aware that any analysis of a particular digital game could never incorporate *all* effects of its incompleteness, simply because the vastness of its open spaces, their interconnectedness and their demands are almost incomprehensible. Yet knowledge of such a structure might be used to bring about more specific and aimed analysis. One way to do so would be to approach the incomplete structure of a game through a specific question, in whose service we might temporarily create a theoretical ordering of the open spaces in a manner that grants us clarity. For example, if we would wish to study the narratological effects of a game, we might create a temporary schema aimed at ordering the open spaces with an eye to their narratological effects. In doing so, we would be aware that we are not offering a “complete” picture of the game’s effects, but as long as this awareness is pronounced there is nothing inherently wrong with this. On the contrary, *because* the effects of digital games are so varied and, to a degree, singular, such an aimed analysis would only help us to appreciate the variety of their effects even more. In addition, we might be able to better articulate exactly what it is that digital games do to us *as games*. To this end, I suggest such analysis would be a valuable component of any follow-up research.

At the end of this thesis, there is not so much a conclusion as there is a beginning. What we have done here is only the start: we have attempted to create tools and a perspective to employ them from. Now it is time to use them. As such, there is nothing to conclude here: our work is just getting started.

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Appendix

Appendix I:

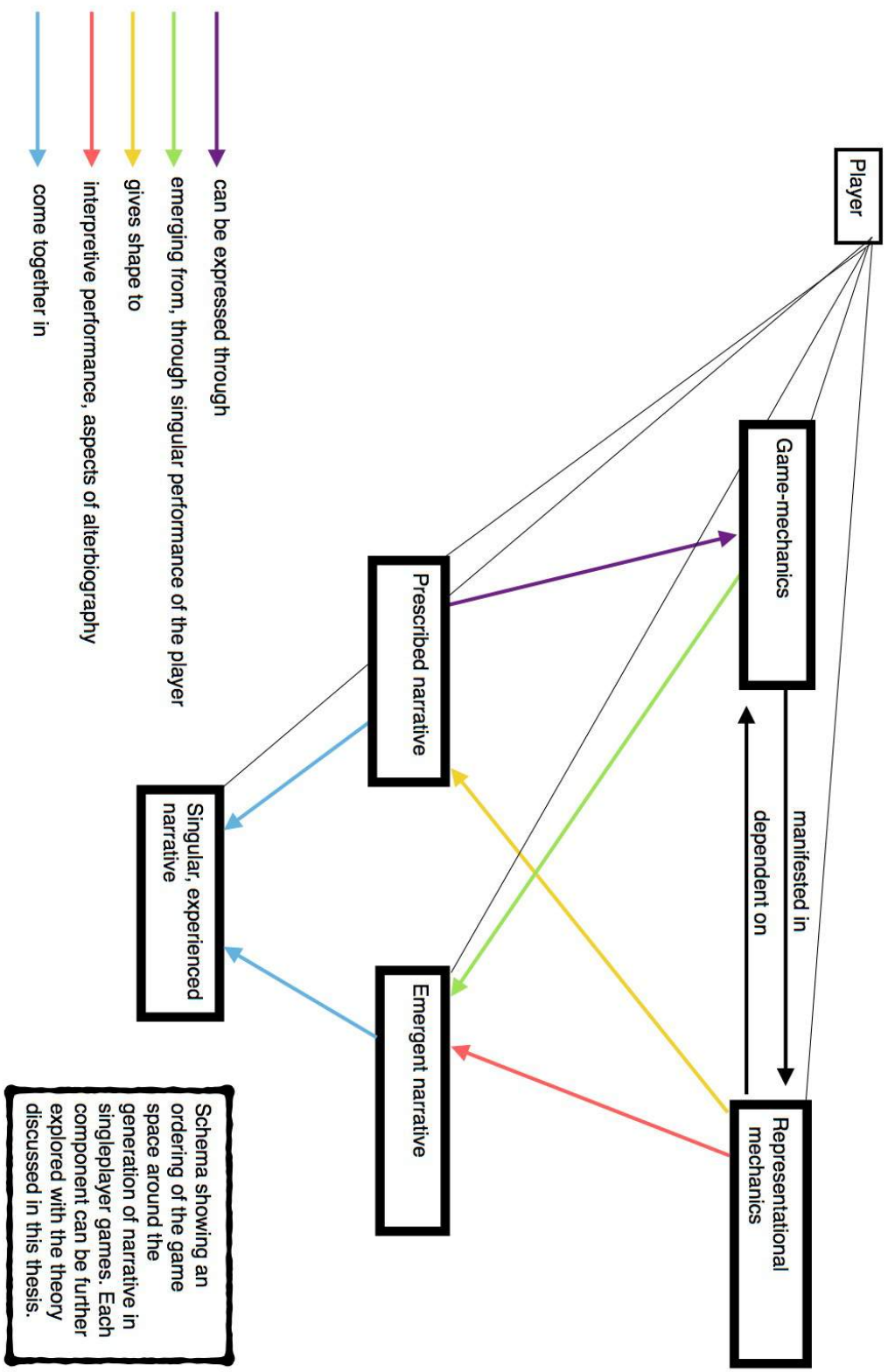
As the reader's wandering viewpoint travels between all these segments, its constant switching during the time-flow of reading intertwines them, thus bringing forth a network of perspectives, within which each perspective opens up a view not only of others but also of the intended imaginary objects. Hence no single textual perspective can be equated with this imaginary object, of which it only forms one aspect. The object itself is a product of interconnections, the structuring of which is to a great extent regulated and controlled by blanks. In order to explain this operation, we shall first give a schematic description of how the blanks function and then we shall try to illustrate this function with an example.

In the time-flow of reading, segments of the various perspectives move into focus and take on their actuality by being set off against preceding segments. The the segments of characters, narrator, plot, and fictitious reader perspectives are not only marshalled into a graduated sequence, but are also transformed into reciprocal reflectors. The blank as an empty space between segments enables them to be joined together, thus constituting a field of vision for the wandering viewpoint. A referential field is always formed when there are at least two positions related and influencing one another––it is the minimal organisational unit of the wandering viewpoint. (…) The first structural quality of the blank, then, is that it makes possible the organization of a referential field of interacting projections.

Now the segments present in the field are structurally of equal value, and the fact that they are brought together highlights their affinities and their differences. This relationship gives rise to a tension that has to be resolved, for, as Arnheim has observed in a more general context: "It is one of the functions of the third dimension to come to the rescue when things get uncomfortable in the second." The third dimension comes about when the segments of the referential field are given a common framework which allows the reader to relate affinities and differences and so to grasp the pattern underlying the connections. But this framework is also a blank, which requires an act of ideation in order to be filled. It is as if the blank in the field of the reader's viewpoint has changed its position.

> It began as the empty space between segments, indicating what we have called their ‘connectability’, and so organising them into projections of the reciprocal influence. But with the establishment of this ‘connectability’ the blank, as the unformulated framework of these interacting segments, now enables the reader to produce a determinate relationship between them. We may infer already from this change in position that the blank exercises significant control over all the operations that occur within the referential field of the wandering viewpoint.
>
> We now come to the third and most decisive function of the blank. Once the segments have been connected and a determinate relationship established, a referential field is formed which constitutes a particular reading moment, which in turn has a discernible structure. The grouping of segments within the referential field comes about, as we have seen, by making the viewpoint switch between the perspective segments. The segment on which the viewpoint focuses at each particular moment becomes the theme. The theme of one moment becomes the horizon against which the next segment takes on its actuality, and so on. Whenever a segment becomes a theme, the previous one must lose its thematic relevance and be turned into a marginal, thematically vacant position, which can be and usually is occupied by the reader, so that he may focus on the new thematic segment. In this sense it might be more appropriate to designate the marginal or horizontal position as a vacancy and not as a blank; blanks refer to suspended conceivability in the text, vancancies [sic] refer to non thematic segments within the referential field of the wandering viewpoint. Vacancies, then, are important guiding devices for building up the aesthetic object, because they condition the reader’s view of the new theme, which in turn conditions his view of previous themes. These modifications, however, are not formulated in the text—they are to implemented by the reader’s ideational activity. And so these vacancies enable the reader to combine segments into a field by reciprocal modification, to form positions from those fields, and then to adapt each position to its successor and predecessors in a process that ultimately transforms the textual perspectives, through a whole range of alternating themes and horizons, into the aesthetic object the text.
>
> (Iser, “The Act of Reading” 197-8)

Appendix II:


Player
Game-mechanics
Prescribed narrative
Singular, experienced narrative
Emergent narrative
Representational mechanics
manifested in
dependent on
can be expressed through
emerging from, through singular performance of the player
gives shape to
interpretive performance, aspects of alterbiography
come together in
Schema showing an ordering of the game space around the generation of narrative in singleplayer games. Each component can be further explored with the theory discussed in this thesis.