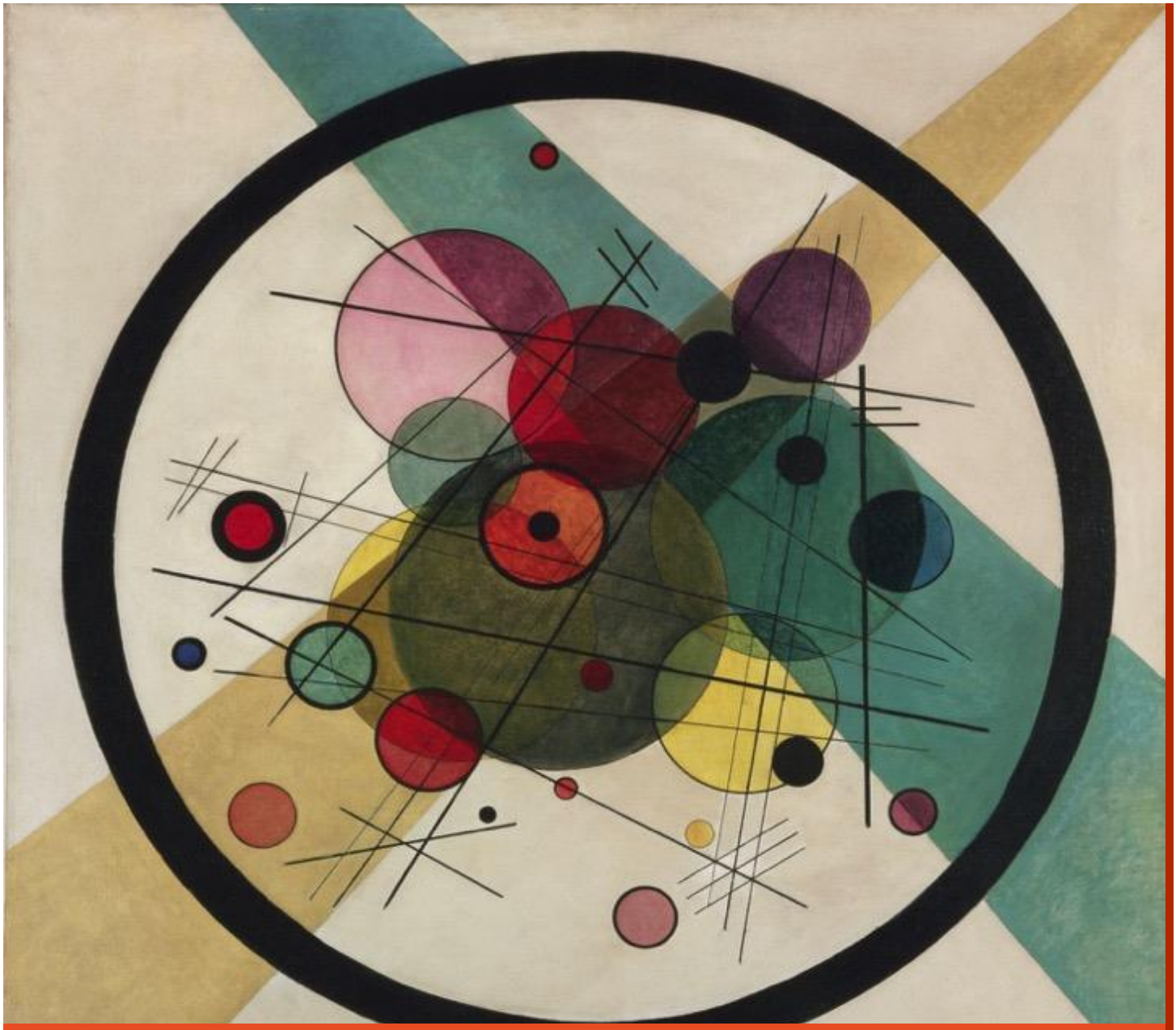

Playing the Story

The configuration of historical time in video games

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Master's thesis History of Society
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PLAYING THE STORY
THE CONFIGURATION OF HISTORICAL TIME IN VIDEO GAMES

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ABSTRACT

This thesis studies the configuration of historical time in four video games: *Assassin's Creed* (2007), *Call of Duty: World at War* (2008), *Age of Empires III* (2005), and *Sid Meier's Civilization IV* (2005). Historical time is the mediation of chronological (objective) time and the (subjective) time of a story. This mediation configures historical time by inscribing a story with details that refer to the past. Such a detail could be a calendar date, which contextualizes the story by referring to that point in time. The configuration of historical time is analysed by studying three temporal layers in games, namely: ludic time, represented time, and narrative time. The research question that this thesis answers is: *what are the differences and similarities in the configuration of historical time in action- and strategy games, and how can these differences be explained in reference to different game mechanisms?* I understand action games as games in which the player plays as a single game-character from a third- or first-person point of view. I consider s*trategy games* to be games that take on a large-distance third person point of view in which the player acts as a deity-ruler of a civilization.

What can be concluded is that there are no direct differences and similarities between the genres themselves. Instead, there were two general ways in which all games made use of history in their stories. There is constant representational opposition at play in all the analysed historical games. The games represent a historical setting, but also represent a passage of time within this setting to establish a narrative progression. Ludic time mediates this opposition through its mechanical level- and task-based structure. This structure allows the games to exist both as a representation of a historical setting, as well as a historical narrative. In represented time, all games refer to a series of chronologically arranged historical details to display a passage of time in the games. In narrative time, however, the games apply different strategies to configure historical time. While *Assassin's Creed* and *Age of Empires III* represent historical temporalities in which fictional stories take place, *Call of Duty* and *Civilization IV* perform step-by-step re-enactments of historical processes. The analysed games configure historical time in two ways. First by representing a temporal setting, and secondly, by establishing a specific narrative progression.

Keywords: video games, history, historical time, ludology, narratology, emplotment, play, problem space

PREFACE

Video games have undoubtedly changed our views on the way we tell stories. With this thesis I hope to raise awareness of the fact that this also affects our view on historical stories. When I first started my research on this topic I was more interested in theories of storytelling than in games as a medium. Now, over a year later, my interest in this medium has never been greater. I have a lot of people in my surroundings who I need to thank for this. For inspiring me, for encouraging me, and for believing in me. First, a word to dr. Robbert-Jan Adriaansen, my thesis supervisor. Game theory was a new field to me, and it was thanks to him that I became able to clearly express my newly gained views on historical games. Something which was not always easy in my enthusiasm. I also wish to thank prof. dr. Maria Grever for taking the time to act as the second reader to this thesis. Her feedback on the initial proposal for this thesis has also helped me to come up with a clear conceptual framework.

My parents, sister, and grandmother, have always supported me in my studies. I therefore would like to express my gratitude for their kind words and help. Especially to my mother, who has read all of my papers and provided feedback like only a school teacher can. But of course I could not have done this without the confidence that my friends expressed in me as well. Here I especially wish to thank Lisa and Tom, who have both been involved with this thesis from beginning to end and provided help when I asked for it.

I would also like to express my thanks to the students of my Master's research workshop, to the participants of the Helsinki Summer School in Games and History, 2015, and to the researchers with whom I have had the pleasure of working with over the past year. Their help and support gave me new insights that I will reflect on for the rest of my life.

Samir Azrioual
Rotterdam, March 2016.

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CHAPTER 1
SETTING UP THE PLAYING FIELD

1.1 INTRODUCTION

Every *Assassin's Creed*-video game begins with the same disclaimer on the computer screen. The disclaimer notifies the player of two things. First, that the game is inspired on historical events and persons. Second, that *Assassin's Creed* is a work of fiction. In 2014 a new spin-off game in the *Assassin's Creed*-series was set in the French Revolution. This time a disclaimer was not enough to save the game from political criticism. Jean-Luc Mélenchon, leader of the Left Party in France, stated that the game distorted history in service of a far-right political agenda. According to him the depiction of historical events was 'propaganda against the people'.[1] The game vilifies the heroes of the Revolution and shows a positive image of the aristocracy. But is this not already what the game developers warn the player for? They never make the claim that *Assassin's Creed* is historical. Rather, the developers borrow from history and use it as inspiration for their own story. Can we then say that the game is not historical? Absolutely not. These games might be a work of fiction, but players do recognize the historical information surrounding the story. Professional historical analyses have become enormously popular amongst fans of historical games.[2] These games are hybrid construtions: partly fiction, partly history. This thesis concerns a question arising at the borders of reality and fiction. How do game developers employ the past in their storytelling? And how do these stories create possibilities for players to get a 'historical' feeling from these games? Not as an exact copy of the past, but as something we simply recognize as historical. Regardless of their authenticity, we do get a sense of 'being in the past' in these games.[3]

In this thesis, I will look at the ways in which these games borrow from history in the construction of their story. How do game developers employ the past in their historical video games? The purpose of answering this question covers a variety of fields. I will explore the methods game designers use to configure *historical time* in their video games. Historical time is the mediation of chronological (objective) time and the (subjective) time of a story. This mediation inscribes a story with references to the past, and simultaneously inscribes

[1] Mathilde Siraud, "Jean-Luc Mélenchon Dénonce La «propagande» d'Assassin's Creed Unity," *Le Figaro*, November 13, 2014, http://www.lefigaro.fr/politique/le-scan/citations/2014/11/13/25002-20141113ARTFIG00300-un-responsable-du-parti-de-gauche-denonce-la-propagande-d-assassin-s-creed-unity.php, accessed November 13, 2014.
[2] Robert Whitaker, "Backwards Compatible: Gamers as a Public History Audience," *Perspectives on History: The Newsmagazine of the American Historical Association* 54, no. 1 (January 2016): digitally published.
[3] Eva Kingsepp, "Immersive Historicity in World War II Digital Games," *HUMAN IT* 8, no. 2 (2006): 80.

the references to the past into the structure of a story. The idea of this mediation between two conceptions of time originates from the French narrative philosopher Paul Ricoeur (1913-2005). [4] For historians, this thesis serves as an examination of video games as objects that emit historical knowledge, but are not bound by the rules of the academic monograph.[5] Video games have their own dynamic because the player participates in the story. A traditional narrative analysis is thus not enough to understand video games. Criticism from the field of game studies shows us that this is the case.[6] This thesis follows the more abstract idea on video games as *rule-based-systems*. In doing so, we refer to games as a set of game-mechanisms, or, following the tradition of game studies, *ludic mechanisms*.[7] This approach allows us to see how each individual mechanism has its own function in a game, and presents a piece of the story to us.[8] In this thesis I will study the game mechanisms that generate the plot development of the games. I will focus on this because the plot is the central constitutive element of historical time.[9] Put shortly, I aim to provide an update of Ricoeur's *historical time* from a game studies point of view.

Historians are not the only ones benefiting from this research. For game studies, this thesis offers a historian's point of view on video games. I wish to make game scholars aware of the utilization of the past in games. I want to see how games tell their stories, and how game developers set up these stories to make use of the past. This thesis thus operates in a relatively unchartered territory: between history and game studies. I aim to contribute to game studies by applying and questioning Ricoeur's notion of *historical time* in this multidisciplinary field.

1.2 RESEARCH QUESTION

My research question in this thesis is: *what are the differences and similarities in the configuration of historical time in action- and strategy games, and how can these differences be explained in reference to different game mechanisms?* I will answer this question by analysing four different video games. In doing so, I will propose a categorization of ways in which a variety of games configure historical time.

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[4] Paul Ricœur, *Time and narrative Vol.3*, trans. Kathleen Blamey and David Pellauer (Chicago: University of Chicago Press, 1988), 3, 99.
[5] Jeremy Antley, "Going Beyond the Textual in History," *Journal of Digital Humanities* 1, no. 2 (Spring 2012): digitally published.
[6] Frasca Gonzalo, "Ludologists Love Stories, Too: Notes from a Debate That Never Took Place," in *DiGRA '03 - Proceedings of the 2003 DiGRA International Conference: Level Up* (Level Up, Utrecht - The Netherlands: Digital Games Research Association, 2003), 4;Espen Aarseth, "Ludology", in *The Routlege Companion to Video Game Studies*, ed. Mark J. P. Wolf and Bernard Perron (London; New York: Routledge, 2014), 185 and 187;Gonzalo Frasca, "Simulation versus Narrative: Introduction to Ludology," in *The Video Game Theory Reader*, ed. Mark J. P. Wolf and Bernard Perron (New York ; London: Routledge, 2003), 221-222.
[7] Jesper Juul, *Half-Real: Video Games between Real Rules and Fictional Worlds* (MIT Press, 2005), 36.
[8] Frasca, "Ludologists Love Stories, Too," 4.
[9] Paul Ricœur, *Time and narrative Vol.1*, trans. Kathleen McLaughlin and David Pellauer (Chicago: University of Chicago Press, 1984), 4.

The aim of my study is to explore various ludic structures to see whether this difference in structure affects the way these games configure historical time. The ludic structure consists of the game-mechanisms put into place to shape the game worlds and their stories. I expect both types of games to have different game mechanisms. By looking at multiple types of games, we will gain insights in several structures of games that configure historical time. With *action games* I mean games in which the player plays as a single game-character from a third- or first-person point of view. The camera through which the player looks either takes on the point of view of the game-character, or hovers directly above the game-character, like a puppeteer.[10] I consider s*trategy games* to be games that take on a large-distance third person point of view. This view dissociates the player from identifiable characters. He acts as a deity hovering above the playing field and controls multiple pieces at once.[11] I expect there to be a difference because the scale of the story differs between these types of games. Action games focus on persons during a small period of time, and strategy games focus on groups for a larger period of time. This will probably mean that the games use different narrative- and ludic mechanisms to tell their story.

In order to answer my research question I will explore the following sub-questions:
Question 1: *How do narrative- and ludic mechanisms relate to each other in the construction of temporality in video game stories?*
Question 2: *How do action games configure historical time?*
Question 3: *How do strategy games configure historical time?*

The configuration of *historical time* in video games cannot be analysed by narrative methods alone. Historical time inscribes a temporal dimension onto its subject, which is a narrative strategy.[12] However, the narrative only makes up for a part of the game. Games are rule-based systems, and only present the narrative through action. Games are interactive mediums that go beyond the traditional monograph and produce meaning by combining and arranging ludic structures with audiovisual tools.[13] This is why this study requires an approach that takes ludic elements into account as well. In order to understand the configuration of historical time in video games, we must approach the subject from both a ludic and a narrative point of view. These views are not mutually exclusive, but complement each other. I will still take on a narrative point of view, but I will combine this with a ludic point of view to explore the ludic structure of the game as a factor that also contributes to the production of a narrative. With my first sub-question I want to account for this joined operation, and create a new approach that captures the configuration of historical time in games. I will answer my first sub-question by exploring literature about time in games,

[10] Alexander R. Galloway, *Gaming: Essays on Algorithmic Culture* (University of Minnesota Press, 2006) 40 and 57; The puppeteer- definition is based on my own interpretation of the genre, which I base on the definition that *Assassin's Creed* uses;Ubisoft Montreal, *Assassin's Creed*, Microsoft Windows (Ubisoft, 2007), tutorial.
[11] Clara Fernández-Vara, *Introduction to Game Analysis* (New York: Routledge, 2014), 140.
[12] Ricœur, *Time and narrative Vol.3*, 99.
[13] Antley, "Going Beyond the Textual in History."

through which I will develop a scheme of analysis in the second chapter of this thesis. This scheme will help us to follow how video games configure historical time. The second and third sub-questions will be answered by applying the scheme of analysis for the configuration of historical time in games to both action-, and strategy games. Following the scheme will reveal the underlying mechanisms that various games use to configure historical time. By looking at the differences and similarities in the outcomes to both analyses I will answer my main research question.

1.3 LITERATURE REVIEW: BETWEEN PLAY, NARRATIVE, AND GAMES

The key concepts I will use in this thesis originate from different academic fields. In this literature review I will position myself between these fields. Video games are a new medium and there is still much we have to discover. The field of game studies only started its formalization after 2001 with two major academic works by Mark J.P. Wolf.[14] Because of its youth, game studies often draws from multidisciplinary theories and methodologies. For this research this is also the case, which is why this literature review focuses on broader concepts and fields. These are respectively 'play', 'games as systems', and 'narrative theory in history and games'. The concept of 'play' is my vantage point, as it is through play that the player constantly interacts with the game and its story. In the literature review of game studies I will discuss the idea of video games as '*rule-based systems*'. This is important because my analysis will take place within such systems. The same is true for the concept 'narrative theory'.[15] I do not take the entire development of this concept into account. Rather, I look at the influences of narrative theories on time, history, and video games. This enables me to position myself in this multidisciplinary field, which will help me to pinpoint the problems in the configuration of historical time in video games. First, I shall provide a brief overview of the history of theories on play and systemic game analysis in general. After that I will give a general overview on the historical debates surrounding narrative and time in the writing of history and video games.

1.3.1 THEORIES ON PLAY AND GAMES AS SYSTEMS

The philosophical concept of play originates from Friedrich Schiller's (1759-1805) *Letters on the Aesthetic Education of Man*.[16] Schiller wrote these letters in response to several philosophical discussions in the eighteenth century. Most noteworthy is the dualistic paradigm of man as part of both the material and the Ideal world. Within this paradigm

[14] Mark J. P. Wolf, ed., *The Medium of the Video Game* (Austin: University of Texas Press, 2001);Mark J. P. Wolf and Bernard Perron, eds., *The Video Game Theory Reader* (New York ; London: Routledge, 2003).
[15] Norbert Meuter, "Narration in Various Disciplines," in *The Living Handbook of Narratology*, ed. Peter Hühn et al. (Hamburg: Hamburg University Press), par. 1–42 (digitally published), accessed July 21, 2015, http://wikis.sub.uni-hamburg.de/lhn/index.php/Narration_in_Various_Disciplines, par. 4.
[16] Friedrich Schiller, "Letters on the Aesthetic Education of Man: Letter XIV," in *Aesthetical Essays of Friedrich Schiller*, ed. Friedrich Schiller, Tapio Riikonen, and David Widger, 2004, Letter XIV, http://www.gutenberg.org/ebooks/6798, translated from the original work, 1794.

there was a discussion between Romantics and Rationalists. The Romantics focused on the subliminal, and the Rationalists focused on the universalities. Schiller places man in the middle. According to him, the 'sensual instinct', as well as the 'formal instinct', are part of man.[17] In play, both of these instincts are in concert. Schiller understands play as subliminal, subjective, and sensual. At the same time, he acknowledges that play also requires certain rules in order to make it 'play'. Next to its subliminal dimension, play also consists of a formal dimension.[18]

Johan Huizinga's (1872-1945) *Homo Ludens* (1938) ties play to a cultural dimension. Huizinga shows that play is a phenomenon preceding formal culture and society as a social structure. He sees play as a function that goes beyond biological survival and has a meaning of its own. Play is a quality that differs from most basic physical necessities of living. It cannot be a rational phenomenon because it is not bound to humans. However, it still has its own ceremonies, gestures and rules. Without a formal domain, play cannot exist. These are the boundaries established as 'the game', in which the player engages. Huizinga rightfully sees that we must understand play in the same way as the player of a game understands it. That is, in its primary meaning.[19] In this understanding we find a certain seriousness. A player devotes himself completely to his play, which makes it more than 'just' a game. Play is serious at its core. This makes sense, as we need rules to play (or to play games). Play fighting, for example, still follows simple rules, like, 'do not actually harm each other'. This makes it different from a real fight.

Ultimately, Huizinga approaches play through its characteristic motion. Play has a beginning and an end, and as long as it carries on, it is in a to-and-fro motion. This motion changes through turns, develops, and eventually concludes the play.[20] It is important to take note that play and a game are not the same. In essence, a game is created as a set of boundaries and rules. By following these boundaries and rules, and by engaging in them, the player is able to play the game. Play, on the other hand, is almost impossible to define, as it must be recognized by its player through its to-and-fro motion.

Hans-Georg Gadamer (1900 – 2002) approaches the concept of play from a hermeneutical perspective in his magnum opus, *Truth and Method* (1960). He frees the concept of play from its subjectivity in an aesthetic sense. Gadamer understands the concept as an experience outside the state of mind of the creator (or the player). Instead, play itself is a mode of being. Play has its own essence, independent of those who play. Players are not the subject of play. Rather, play presents itself through the players. The

[17] Friedrich Schiller, "Letters on the Aesthetic Education of Man: Letter XII," in *Aesthetical Essays of Friedrich Schiller*, ed. Friedrich Schiller, Tapio Riikonen, and David Widger, 2004, Letter XII, http://www.gutenberg.org/ebooks/6798, translated from the original work, 1794.
[18] Schiller, "Letters on the Aesthetic Education of Man: Letter XIV."
[19] J. Huizinga, *Homo Ludens: Proeve eener bepaling van het spel-element der Cultuur* (Amsterdam University Press, 2008), originally published in 1938, 28, 30-31.
[20] Ibid., 36-37.

players themselves change through the experience provided by play.[21] Inspired by Huizinga, Gadamer argues that play should be seen as a presentation of a to-and-fro motion. He differs from Huizinga in the sense that this movement follows of itself. The to-and-fro motion has no goal that brings it to an end, as it constantly repeats itself.[22] To Gadamer, a game is an ordered to-and-fro motion in a sphere of play. This sphere acts as a closed world -the game- which presents the player with a task. This means that the player cannot play freely any more without transforming the aims of the game. But the purpose of a game is not to complete a task. Rather, it is a means to pursue and structure the movement of play. Play is the process that takes place 'in between'. It unfolds between the tasks given by the structure of the game.[23] The idea of play taking place in between the tasks of the game is a core element in this thesis. Because what will this 'in between'-ness mean for the unfolding of a story in a video game?

With the rise of ludology, theories on play and games have been carried over to the world of video games. Ludology is the systematic analysis of video games as systems. It is a complementary sister discipline to narratology. Ludology is a methodological approach to make sense of games and game structures from a holistic point of view.[24] The ludologic movement often mentions Huizinga and Gadamer as the starting point for its *ludic theories*.[25] There have been shifts in defining what a game, or what play, actually is. But this does not direclty affect the topic of this thesis.[26] I will stick to the findings of Gonzalo Frasca. In his definition "play is to somebody an engaging activity in which the player believes to have active participation and interprets it as constraining his immediate future to a set of probable scenarios, all of which he is willing to tolerate".[27] Frasca defines a game as "a form of play where players agree on a system of rules that assigns social status to their quantified performance".[28] Let me clarify this with an example. In video games, the player takes on the role of a game-character. By accepting this role, he engages in the game. This means that he can 'play' as a specific character. To play the game, the player must also take into account the rules of that specific game. The most straightforward example of these rules are the conditions for winning the game, and for losing the game.

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[21] Hans-Georg Gadamer, *Truth and Method*, trans. Joel Weinsheimer and Donald G. Marshall, 2nd, rev. ed, Continuum Impacts (London ; New York: Continuum, 2004), translated from the original work, 1960), 102-103.
[22] Ibid., 104-105.
[23] Ibid. 104, 107, 109.
[24] Aarseth, "Ludology," 185-187.
[25] Hector Rodriguez, "The Playful and the Serious: An Approximation to Huizinga's Homo Ludens," *Game Studies* 6, no. 1 (December 2006): digitally published;Olli Leino, cited in: Aarseth, "Ludology," 188.
[26] For further investigations on the hermeneutic nature of play I refer to Peter McDonald, who continues to research on play as a rhythm with its own systemacity: Peter McDonald, "For Every to There Is a Fro: Interpreting Time, Rhythm, and Gesture in Play," *Games and Culture* 9, no. 6 (November 1, 2014): 480–90.
[27] This definition manages to take into account that play is: subjective, engaging, an activity, and limits the player's immediate future. It also takes into account that players believe in their active participation, are willing to tolerate all of the probable consequences. See Gonzalo Frasca, "Play the Message: Play, Game and Videogame Rhetoric" (PhD. dissertation, IT University of Copenhagen, 2007), http://www.powerfulrobot.com/Frasca_Play_the_Message_PhD.pdf, 50-57.
[28] Ibid., 70.

The system of rules that Frasca describes coincides with Gadamer's structure of the game as a sphere for play. But Frasca splits the concept of play in two parts. He distinguishes between rules that build the game (a system, or the sphere of play, as Gadamer might describe it), and rules that structure the game. This structure directly affects the way the players play in the game. Frasca calls the rules connected to the sphere of play *paidea rules.* These are the rules that construct the game world, and thus construct the possibility of play. As Jesper Juul and Rowan Tulloch show, these rules are not limitations. Instead, they are productive forces that allow play to come into being.[29] To give an example, without the paidea rule of 'gravity', the player would not be able to let his game-character walk around in the game. Next to the paidea rules, a game can also consist of *ludus rules*. These rules decides the conditions within the game. Ludus rules are particular paidea rules that define a victory, a gain, or a loss.[30] If we glance back to Gadamer's notion of a game, we see these rules as the tasks that the player must pursue in order to 'play'. It is here that we find the appearance of an interesting phenomenon that directly affects this thesis. For Gadamer, play is located in between the rules (tasks) of the game.[31] However, this movement in between the tasks, is still set within the systemacy of the game world. The player can engage in the game world, without directly following the tasks of the game. In other words, play is set in between the ludus rules, but always within the system of paidea rules. It becomes clear that if we want to to tell stories within the game world, we must look at the ways games make use of both types of rules to structure their narratives. The analysis of play in video games is in this case the analysis of the rules these games consists of. This means that we have to look at the tasks (ludus rules), as well as the sphere of play (paidea rules), established in video games.

The rise of video games studies coincided with a movement countering the influence of narratology in this academic field. Ludology, as the systematic analysis of video games as systems, refers to a movement of game scholars in the years 1998-2001. The key contributors of this movement are Frasca, Juul, and Markku Eskelinen.[32] These scholars are all specialists on the concept of play. Most ludologists are also narratologists, but they reject the way narratology is applied to video games. Frasca criticizes the narratological approach to video games because narrative theories fail to take the medium into account. Ludologists also use narrative theories, but they are sceptical of the so-called marriage between game design and storytelling. They argue that games and older, more traditional, narrative mediums cannot be compared. The mechanisms of video games offer distinct possibilities

[29] Gonzalo Frasca, "Ludology Meets Narratology: Similitude and Differences between (video)games and Narrative," *Originally Published in Parnasso#3, Helsinki, 1999*, digitally published, http://www.ludology.org/articles/ludology.htm;Rowan Tulloch, "The Construction of Play: Rules, Restrictions, and the Repressive Hypothesis," *Games and Culture* 9, no. 5 (September 1, 2014), 335, 339, 340 and 336;Juul, *Half-Real*, 58.
[30] Frasca, "Ludology Meets Narratology."
[31] Gadamer, *Truth and Method*, 107, 109.
[32] Aarseth, "Ludology," 185-187.

that are unavailable in other mediums. The movement of ludologists studies elements of video games that are shared with the narrative. Contrary to the view that these elements are held together by a narrative structure, they see the story of a video game as the sum of all these elements together. The narrative structure is simply one of the elements composing the game experience.[33]

In 2005 Juul captured the state of affairs in the broad and turbulent discussions surrounding video game studies in his book *Half-Real: Video Games between Real Rules and Fictional Words*. With this book he offers a standard work to build on for a new generation of video game scholars.[34] Perhaps the greatest contribution of Juul's work is that it has sparked various new discussions. One of these discussions is the aforementioned debate on reducing the influence of the narratological discourse in game studies. Juul understands games as *rule-based-systems* that should be studied as such.[35] This requires a more mechanical and design-based approach to video games. Over the years, the theoretical field of ludology has expanded rapidly to cover a variety of topics and is still in the process of formalizing its discipline.[36]

Present-day game analysis includes an array of new possible topics to study. For instance, the effects of the mechanical game design on the game sphere, *the ludic space*.[37] Other ludologists are exploring alternative mechanisms that could be included in new, more inclusive, ways of storytelling in games. For example, the way in which players interact with the game space as a foundation for storytelling.[38] Alisson Gazzard shows that players perform tasks in games in order to get rewards. Through this perspective, the structure of rewards becomes central in the analysis of games if we want to study the development of these games.[39]

In 2003, the temporal dimensions of video games became the subject of video game studies with a first exploration by Katie Salen and Eric Zimmerman.[40] Juul was the first who made a model that successfully captures various layers of temporality in games. His findings

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[33] Frasca, "Ludologists Love Stories, Too,"2, 4;Aarseth, "Ludology," 187;Frasca, "Simulation versus Narrative: Introduction to Ludology," 221-222.

[34] Juul, *Half-Real*, 7;Jesper Juul, "Half-Real: A Dictionary of Video Game Theory," *Half-Real: A Dictionary of Video Game Theory*, accessed July 23, 2015, http://www.half-real.net/dictionary/.

[35] Juul, *Half-Real*, 36.

[36] See Chee Siang Ang, "Rules, Gameplay, and Narratives in Video Games," *Simulation & Gaming* 37, no. 3 (September 1, 2006): 306–25;Rodriguez, "The Playful and the Serious";Frasca, "Play the Message";Steven Malliet, "Adapting the Principles of Ludology to the Method of Video Game Content Analysis," *Game Studies* 7, no. 1 (August 2007): digitally published.

[37] Craig Lindley, "The Semiotics of Time Structure in Ludic Space As a Foundation for Analysis and Design," *Game Studies* 5, no. 1 (October 2005): digitally published.

[38] Miguel Sicart, "Defining Game Mechanics," *Game Studies* 8, no. 2 (December 2008): digitally published;Aki Järvinen, *Games without Frontiers: Theories and Methods for Game Studies and Design* (Tampere University Press, 2008), http://tampub.uta.fi/handle/10024/67820, 73-74. Aylish. Wood, "Recursive Space: Play and Creating Space," *Games and Culture* 7, no. 1 (January 1, 2012): 87–105.

[39] Alison Gazzard, "Unlocking the Gameworld: The Rewards of Space and Time in Videogames," *Game Studies* 11, no. 1 (2011): digitally published, 152.

[40] Katie Salen and Eric Zimmerman, cited in Anders Drachsen and Michael Hitchens, "Game Time: Modeling and Analyzing Time in Multiplayer and Massively Multiplayer Games," *Games and Culture* 4, no. 2 (April 1, 2009), 171.

demonstrate that time in games exists as a set of multiple temporal layers.[41] Anders Drachsen and Michael Hitchens show that time is an important concept for game design as well. It balances the game mechanisms, the pacing of the story, and creates a temporal setting in the game world. Drachsen and Hitchens provide a model that shows how time operates and moves in role-play games. They carry on the idea of time as a set of layers, but their model is more inclusive towards mechanisms and structures in the game world than Juul's. Drachsen and Hitchens show that progress in video games is not always based on progression of the story. It can also follow the progression of a set of tasks within the story.[42] José Zagal and Michael Mateas have recently published an article on time, with an emphasis on the category of 'fictive time' in video games . This is interesting from the point of view of historians because these authors also look at the time the story is set in. Similar to Drachsen and Hitchens, Zagal and Mateas understand time in games as a set of temporal layers. Their frame consists of time in the real world, time in the game world, the time of turns and movements in the game world, and the fictive time of the story.[43] The research of these authors also covers anomalies in time in games. By showing that different temporal layers exist at the same time, Zagal and Mateas reveal that temporality in video games is often inconsistent, contradictory, or dissonant, with our own experience of time.[44] This is in accordance with what Drachsen and Hitchens show: progression of stories, and progression of goals, do not always coincide. Players might be able to progress the story of a giame without completing all its goals, or vice versa. These anomalies are the key in my own analysis of historical time in video games. I want to take the models of these authors into account to get an understanding of the movements of historical time in video games.

1.3.2 NARRATOLOGICAL INFLUENCES ON HISTORICAL AND VIDEO GAME STUDIES

Narratology influenced a multitude of academic fields, especially the humanities and social studies. The works of narrative theorist Paul Ricoeur have blurred the line between fact and fiction in the philosophy and theory of history.[45] Ricoeur puts an emphasis on the narrative aspects in the writing of history. He shows that a historical story consists of 'facts', but also contains a subjective component in the ways we include and arrange these facts into a story. Whereas the facts themselves are objective events, their connection is constructed through a narrative. Ricoeur calls this *emplotment*. The events become 'historical' through three mimetic steps that place the event into a narrative. The mimetic steps refigure the event in a way that mediates the experience of the event, and the chronological moment in

[41] #time, in Juul, "Half-Real: A Dictionary of Video Game Theory."
[42] Drachsen and Hitchens, "Game Time," 171-172, 189-191.
[43] José P. Zagal and Michael Mateas, "Time in Video Games: A Survey and Analysis," *Simulation & Gaming* 41, no. 6 (2010), 844-848.
[44] Ibid., 854.
[45] David Herman, Manfred Jahn, and Marie-Laure Ryan, "Introduction" in *Routledge Encyclopedia of Narrative Theory* (London; New York: Routledge, 2008);Norbert Meuter, "Narration in Various Disciplines," in *The Living Handbook of Narratology*, ed. Peter Hühn et al. (Hamburg: Hamburg University Press),digitally published, accessed Jan. 30, 2016, http://wikis.sub.uni-hamburg.de/lhn/index.php/Narration_in_Various_Disciplines, par. 13.

time when the event occurred. This new category is *historical time.* Historical time captures and rewrites the events that are initally set on a cosmic timeline, onto a plot structure. This corresponds to the way any narrative is set up.[46] Historical time connects the narrated time of the plot of a story to its objective (chronological) counterpart. The time of the plot is inscribed with *historical connectors*, like a calendar date, or historical traces. These connectors tie the story of a narrative to an objective and measurable point in time.[47] For this thesis, it means that there are certain ways to make stories historical. The mediation of subjective and chronological time has an important role in this. Because of Ricoeur we see how historical stories are collections of historical events and connectors, joined together by a plot.

This line of thought continues to inspire theoretical historians. In 2001 Maria Grever and Harry Jansen published a volume of essays on the construction of the past in relation to the concept of time.[48] Two years later Eviatar Zerubavel demonstrated the use of various narrative structures in the writing of history.[49] Mark Currie focuses on the functions of time in fiction from a philosophical-narratological perspective. His analysis shows that any narrative is subjected to a backwards motion in time. Narratives are told from the point of view of a fixed past that is geared towards a future in the story. Every story is already historical in itself because the outcome has already been written down.[50] Passage of time is thus also of importance in the field of narratology. Alun Munslow is one of the first historians that applies Ricoeur's theories to historical games. In his *Narrative and history* (2007), Munslow creates a framework explaining the delicate relationship between narrative, story and history. Although Munslow's framework helps us to understand historical narratives and their creation, it mostly discusses games as a format for popular history, rather than a medium that goes beyond the traditional narrative.[51]

In 2002 David Herman made an important contribution to narrative theory by changing the focal point of the narrative. Herman describes how the surrounding context of the storyworld, and not the plot, provides most of the information that is required to experience the story. He calls this the *ecology of narrative interpretation*. Through the ecology of narrative interpretation the reader makes sense of the story by looking at the surrounding context.[52] Herman shows that the setting of the storyworld should be taken

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[46] Paul Ricœur, "Life in Quest of Narrative," in *On Paul Ricoeur: Narrative and Interpretation*, ed. David Wood (London; New York: Routledge, 1991) , 20-21;Ricœur, *Time and narrative Vol.3*, 99;Ricœur, *Time and narrative Vol.1*, 64-66.
[47] Ricœur, *Time and narrative Vol.3*, 99-101, 104.
[48] Maria Grever and Harry Jansen, eds., *De ongrijpbare tijd: temporaliteit en de constructie van het verleden* (Hilversum: Uitgeverij Verloren, 2001).
[49] Eviatar Zerubavel, *Time Maps: Collective Memory and the Social Shape of the Past* (Chicago: University of Chicago Press, 2012).
[50] Mark Currie, *About Time: Narrative, Fiction and the Philosophy of Time*, The Frontiers of Theory (Edinburgh: Edinburgh University Press, 2007), 4-5.
[51] Alun Munslow, *Narrative and History*, Theory and History (Hampshire; New York: Palgrave Macmillan, 2007).
[52] David Herman, *Story Logic: Problems and Possibilities of Narrative* (U of Nebraska Press, 2004), 13-14.

into account when we study a story. Samuel Zakowski is one of the narrative theorists who applies this idea to video games. He reveals that video game stories consist of separate narrative structures. These structures are all set in their own temporality. The plot of a game has a narrative, but its surrounding spaces also accounts for a part of the story. All possible interactions in a game contribute to the eventual narrative of the game from a holistic point of view.[53]

Within video game analysis historians mostly focus on modes of representation and authenticity of the past.[54] This usually leads to an debate on the representation of the past in games. I wish to avoid these discussions and will follow the view of Eva Kingsepp. Kingsepp argues that historical video games do not have to be in accordance with historical reality as established by an academic discourse. Video games are *simulacra* that are set in *hyperreality.* She bases this view on Jean Baudrillard's (1929-2007) *Simulacrum and simulation.* Baudrillard argues that hyperreality is the stage where reality as we know it has disappeared. Instead, it is replaced by a simulacrum. This simulacrum is a copy that has no original. Since there is no ontological original, hyperreality does not have to compare itself to the old reality.[55] For historical games it is important that they invoke a sense of historical time-travel. Kingsepp calls this feeling *immersive historicity*.[56]

Frank Ankersmit (1945) explores a similar question from a scientific-historical perspective. Ankersmit follows Roland Barthes' *reality effect* and applies it to the 'reality of the past'. Barthes believes that the reality of the past exists through association with details representing the past. These details lie in historical elements. A result of this is that historical objects reconstruct and invent the reality of the past. For Barthes, the reality of the past is an effect caused by the reality effect in historical texts., Ankersmit shows that the reality of the past is not static. It exists through association with historical objects, and changes depending on our knowledge of these objects. The historical objects represent the historical reality.[57] If we read about the *Parthenon* for example, we associate the text with

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[53] Samuel Zakowski, "Time and Temporality in the Mass Effect Series: A Narratological Approach," *Games and Culture* 9, no. 1 (January 1, 2014) , 59.

[54] Andrew B.R. Elliot and Matthew Wilhelm Kapell, "Introduction: To Build a Past That Will 'stand the Test of Time' – Discovering Historical Facts, Assembling Historical Narratives," in *Playing with the Past. Digital Games and the Simulation of History*, ed. Andrew B.R. Elliot and Matthew Wilhelm Kapell (New York; London: Bloomsbury Publishing, 2013) , 16 and 18;Rolf Nohr, "The Game Is a Medium: The Game Is a Message," in *Playing with the Past. Digital Games and the Simulation of History*, ed. Andrew B.R. Elliot and Matthew Wilhelm Kapell (New York; London: Bloomsbury Publishing, 2013), 2–23;Raupach, "Towards an Analysis of Strategies of Authenticity Production in World War II First-Person Shooter Games," in *Playing with the Past. Digital Games and the Simulation of History*, ed. Andrew B.R. Elliot and Matthew Wilhelm Kapell (New York; London: Bloomsbury Publishing, 2013), 123–39.

[55] Jean Baudrillard, *Simulacra and Simulation*, The Body, in Theory (Ann Arbor: University of Michigan Press, 1994), 3.

[56] Kingsepp, "Immersive Historicity," 70, 80.

[57] Frank R. Ankersmit, *The Reality Effect in the Writing of History; the Dynamics of Historiographical Topology*, Mededelingen Der Koninklijke Nederlandse Akademie van Wetenschappen, Afd. Letterkunde, N.R., 52,1 (Amsterdam: Noord-Hollandsche, 1989), 16, 19 22, 33, 35;Roland Barthes, "L'effet de Réel," in *Le Bruissement de La Langue*, ed. Roland Barthes, Essais Critiques / Roland Barthes 4 (Paris: Seuil, 1984), 167-172.

the Athenian Empire.

Construction of narratives in history has been an issue for historians. Scholars like Ricoeur and Ankersmit shed some light on these subjects. Ricoeur reveals the shaping of historical plots, and Ankersmit shows that a historical reality is always a construction based on our knowledge and associations. I will explore the ideas of Ricoeur to see how the meaning of historical traces changes if we fit them into a plot. With this, I hope to place my analysis in a broader framework of narrative studies as well.

But things are changing for historians who specialise in game analysis. Jeremiah McCall is one of the first historians who, following the ludological tradition, uses a design-based methodology for a historical video game analysis. He sees historical games as interpretations of the past that are designed as *problem spaces*: mental maps of a set of options that the player has to reach a goal in the game. By referring to video games as problem spaces we can explain games within the limits of their medium. Every option has to be constructed in a way that enables a computer to exectute and quantify it. McCall takes all these limits into account and explains that games should be understood from a point of view of the game designers, who create their games with a specific goal in mind.[58] His approach goes beyond the traditional narrative analysis in video games. It is grounded in ludic theories, and it shows us there is much to gain from this type of analysis. Adam Chapman shares this view. He argues that historians should privilege analysing the production of meaning in historical games. This meaning, according to him, is produced by the joint operation of both the audio-visual and ludic structures in games.[59] Clara Fernández-Vara has recently made a beginning in formalizing this type of analysis. In her *Introduction to game analysis,* Fernández-Vara takes narrative methods and complements them with new insights from ludology. She analyses games as systems that have a narrative, but also exists outside of a narrative structure. Her methods analyse games as realities on their own, making it perfect for historians and their study of games.[60]

1.3.3 AT A CROSSROAD

This literature review draws from a variety of disciplines and concepts. So let us look back for a moment to reflect on where these topics meet. Gadamer's theories show that play is something that exists in the 'in between' of tasks, the game rules. Frasca shows that there are two kinds of rules in games. Rules to play the game, and rules that make the game possible. Gadamer focuses on the first, but through the second type we open discussions on the analysis of video games as spaces that make play possible. The exploration of these spaces lies at the crossroad of this literature review. We can study them for their narrative effects, (Herman, Zakowski) as well as for their ludic effects (Juul, Gazzard, Drachsen and

[58] Jeremiah McCall, "Historical Simulations as Problem Spaces: Criticism and Classroom Use," *Journal of Digital Humanities* 1, no. 2 (Spring 2012): digitally published.
[59] Adam Chapman, "Privileging Form Over Content: Analysing Historical Videogames," *Journal of Digital Humanities* 1 (Spring 2012): digitally published.
[60] Fernández-Vara, *Introduction to Game Analysis*, 2.

Hitchens). There is a multitude of ludic elements that help to shape and construct stories in games. The rules of games have an important role in developing these spaces. This means that we have to take modern narrative approaches, as well as ludic approaches into account for any kind of game analysis. After the criticism of ludologists, ludological analysis became more important for present-day narratologists. Historians, who follow the roads built by narrative theorists, should include ludic mechanisms in their analysis as well.[61] In this thesis I want to explore both ludic and narrative approaches to answer my questions on historical time in video games.

Temporality is also something we need to study through a multidisciplinary approach. As Huizinga and Gadamer mention, play lies for a large part in the 'in between', outside of time. But from our narratological investigations we have learned that time has an important role in stories and their plot. Ricoeur shows that history is connected to its narrated time, and to a chronological time. We must ask ourselves what it means for historical time, as a concept, if the player plays in the space of the 'in between'. This thesis also lies in the 'in between'. At a crossroad between multiple disciplines. In the following chapters I intend to explore the spaces of games and look at how time moves in video games. If video games configure historical time, the rules of the games must play a role in this. Without them, we cannot go from the 'in between', to a moment in which the time of the story passes. But how do games configure historical time if the passage of time is uncertain and completely dependent on the player? This is the question that I will answer in this thesis.

1.4 METHODOLOGY AND SOURCES

This paragraph contains an explanation of my methodological point of departure and a description of the sources that will be analysed. In my methodology I will make use of a systematic qualitative content analysis. For the sources I will select two action games and two strategy games that rely on history in their narratives.

1.4.1 METHODOLOGY

I will use a systematic qualitative content analysis to examine four video games that make use of history in their narratives. Systematic qualitative content analysis provides a way to operationalize the principles from ludology in a framework that allows for empirical analysis. Through this type of analysis, it becomes possible to compare ludic mechanisms in various games with each other. Not the individual mechanism itself, but its intended effect on the player lies at the centre of this type of analysis.[62] To examplify, driving and walking are both different, yet comparable, game mechanisms because they both invoke the

[61] McCall, "Historical Simulations as Problem Spaces";Chapman, "Privileging Form Over Content";Antley, "Going Beyond the Textual in History."
[62] Sicart, "Defining Game Mechanics"; Malliet, "Adapting the Principles of Ludology to the Method of Video Game Content Analysis"; Fernández-Vara, *Introduction to Game Analysis*.

movement of a game character. The player's actions to interact with the game are central to my analysis. Any alteration of the game sphere through the player's behaviour is taken into account in this type of analysis.[63] In my research I will focus on the interactions that progress the time of the story in the games. The games will be studied as problem spaces. By analysing games as problem spaces, we understand each game as a holistic totality that is built around the objectives of the game developers themselves. In doing so, the games will be spared unjustified historical criticism.[64]

I will develop a scheme for the analysis of time in games, which takes ludic- and narrative elements into account in a structured manner. In a qualitative content analysis the content of the message cannot be analysed in terms of a strict coding scheme.[65] The scheme in my analysis serves as a way to describe specific mechanisms. It will also function as a tool to compare different types of games with each other. The mechanisms are central in my analysis. Through this scheme we can compare the mechanisms with each other on an analytical level.[66] The outcomes of my analysis will be quantifiable. Since games are rule-based systems, every action invokes a specific pre-established reaction. Every mechanism will, under the same conditions, consistently invoke the same reaction. To maintain the integrity of these games 'as systems', no modifications and add-ons to the source code will be made. [67] Every reaction is thus a 'natural' one.

I will also look at the official instruction booklets of the games to find clues on whether or not the game developers provide a specific historical context for their games. Mediums like instruction booklets transform the conditions of how the audience interprets the games.[68] Since I will study the games from the point of view of the game developers, their interpretation is leading in this study. I will use the information I gain from these sources as complementary to my own research.

I will create my qualitative content analysis scheme through the theoretical chapter (chapter two) of this thesis. It will be based on a collection of literature that I will broadly discuss. The scheme will capture a list of 'topics of interest to my research'. These topics are based on the mechanisms in games that affect the way time passes in the stories of the games. For this study, I will look at games that use *embedded storytelling.* This type of storytelling has a pre-established narrative structure, which is embedded into the structure of these games. The narrative sequence of the games establishes itself by prestenting tasks to the player that he must pursue to progress the story. This ascertains that the player follows the story of the games as intended by the developers.[69] In my analysis, I will follow

[63] Sicart, "Defining Game Mechanics."
[64] McCall, "Historical Simulations as Problem Spaces."
[65] Malliet, "Adapting the Principles of Ludology to the Method of Video Game Content Analysis."
[66] Sicart, "Defining Game Mechanics."
[67] Jesper Juul, cited in Malliet, "Adapting the Principles of Ludology to the Method of Video Game Content Analysis."
[68] Fernández-Vara, *Introduction to Game Analysis,* 6.
[69] Ibid., 107-108.

the development of the stories in games through the mechanisms, which set this development in motion.

1.4.2 SOURCES

I have made a selection of four historical video games. Because my research question focuses on the differences and similarities between action games and strategy games, I have picked two games of both types. To make this distinction, I have looked at different camera perspectives, although I also gained some general information of the games beforehand. Because I will focus on the production of meaning through the use of various ludic mechanisms, I have chosen games that had obvious differences in their mechanical game structures.

The games also had to have similarities. They all needed to have a clear pre-established and traceable narrative, and they needed to make use of historical characteristics. I have specifically chosen games that make use of *embedded storytelling* because this type of games has fixed points at which the games will progress their story. This will help us to see how the mechanical structure of the games plays a role in the construction of temporality. Within both types of games I have chosen games that use their game space differently. Here I have searched for games that either make use of a series of small spaces, or one larger space for the player to engage with. This will help us to find the full range of game mechanisms that are connected to the configuration of historical time.

I have checked the historical characteristics of the games by comparing the games with literature covering the subjects of the games. More importantly, I want to see how the games produce meaning with these historical elements. To get a clear view on this I have chosen games that use their historical elements in various fictional constructions. This helps us to see how the game produces new narrative meanings through the use of these elements. All games have been published for *Microsoft Windows* between 2005 and 2008. The games I finally selected for my analysis were *Assassin's Creed*, *Call of Duty: World at War, Age of Empires III, and Civilization IV.*[70]

1.4.2.1 The action games

Assassin's Creed is the first game of the successful *Assassin's Creed*-series. It is a third-person action game in which the player takes the role of the twelfth-century Levantine assassin, *Altaïr Ibn-La'Ahad*. The game takes place during the Third Crusade (1189-1192) and follows Altaïr on a journey of redemption. The game is played on two narrative layers. The actual story of the series unfolds in the 'present' (2012), where the player, as '*Desmond Miles*', enters a machine that takes him into the past. The player will mostly play in the part of the game that is set in the past. I will only take this second layer into account because the first layer takes place in the present of our current factual world. The game is divided in

[70] Ubisoft Montreal, *Assassin's Creed*, Microsoft Windows (Ubisoft 2007); Treyarch, *Call of Duty: World at War*, Microsoft Windows (Activision Blizzard, 2008); Ensemble Studios, *Age of Empires III*, Microsoft Windows (Microsoft Game Studios, 2005); Firaxis Games, *Sid Meier's Civilization IV*, Microsoft Windows (2k Games & Aspyr, 2005).

seven levels, which are all part of one large game world. I will analyse the ludic structures of level one, two, a part of three, and a part of five. I consider these parts representative for the gameplay in the entire game because the game follows a series of general patterns, which we also find in the chosen levels. I will analyse the narrative and represented time in the game as a whole. The game does not offer any multiplayer or online playing modes and has only one story line.

Call of Duty: World at War is the fifth game in the famous *Call of Duty*-series. It is a first-person shooter game in which the player takes the roles of two World War II soldiers. Although the game is part of a series, we can see it as a standalone game. The player does not need any prior knowledge of the *Call of Duty*-franchise to understand the story of the game. In *World at War*, the focus of the story lies on a Soviet campaign in Europe during WWII, and on an American campaign in the Pacific. I will limit my research to the Soviet campaign in order to establish a clear analysis of one specific narrative and set of historical representations. Within this campaign, I will focus on the first, the fifth, and the concluding seventh mission. All missions exist as separate levels. These missions are representative for the ludic structures in the entire game because the game consists of a limited series of mechanisms that structure the story. I will analyse the narrative and represented time in their totality.

In the Soviet campaign, the player takes the role of Private *Dimitri Petrenko*, who has to complete a series of missions. During these missions Petrenko must fight his way through enemy lines with the help of his army unit, his sergeant, and a lot of firearms. The game has various playing modes, like a co-operative mode and an online multiplayer mode. For my own research, I will only look at the narrative of the games, meaning that I will only take the single-player campaign mode into account.

1.4.2.2 The strategy games

Age of Empires III (*AoE*) is the seventh game in the *Age of Empire*-series. In this game, the player manages his colonial settlements in the *New World*: the Americas. The series is basically built for a 'free play' (skirmish) mode without an embedded story. In this mode, the player starts on a randomly generated map with some other (artificially intelligent) players. At the beginning of the game, the player chooses an 'empire' (nation) to manage. It is his goal to improve this empire and defeat the empires of his opponents.

AoE also contains a campaign-mode with a pre-established narrative. In this campaign, the player follows the lineage of *Morgan Black*, a Crusader who fights against a secret evil organisation, over a period of approximately two hundred years. I will study the ludic mechanisms in the skirmish mode without an embedded story and compare them to the mechanisms used in the campaign. By taking both into account, I will be able to capture the alteration of the mechanisms when the game starts telling its actual story. Similar to the action games, I will focus on a few levels in the story until I have found all general mechanisms that the game incorporates in its storytelling structure. The story of the game

takes place through three acts. For the analysis of narrative time I will look at all three acts. For the analysis of the historical representations I will limit myself to one act in order to keep the analysis clear. All three acts establish a specific temporal setting. Exploring one of these settings will suffice to get an understanding of how this happens in the other acts as well. *AoE* uses a series of small game spaces to tell its story in the campaign.

Sid Meier's Civilization IV (*Civ*) follows the player's civilization from the era of the hunter-gatherers all the way through the development of *cold fusion* technology. This game focuses almost completely on its skirmish mode (free play) without an embedded story. Similar to *AoE*, the player chooses a civilization (nation), with its own unique units and specialties, at the beginning of the game. The objective in *Civ* is slightly different from *AoE.* It is the player's goal to create an empire that stands the test of time. The player can reach this goal through combat, like in *AoE*, but he can also use other strategies, like diplomatic relations.

Next to its mode of 'free' gaming, *Civ* also offers individual scenarios for the player to follow. These scenarios have their own internal story and their structure is similar to the campaign-modes of the other games. In my analysis I will cover two of these 'levels'. The first scenario is the American Revolution (1775 – 1783), and the second one is the Desert War, also known as the 'North Africa Campaign' (1940 – 1943). I chose to build my analysis around these two specific scenarios because they both make use of different ludic mechanisms in the way they present their stories. Each scenario takes place in one large space.

1.5 STRUCTURE OF THIS THESIS

In this chapter I have positioned myself in broader academic debates, but I also wanted to shed light on the theoretical concepts I will be using. Summarizing these once more: I shall focus on the concepts 'play', 'narrative', and 'time'. Play, to capture the essence of game studies. Narrative, to get an understanding of unfolding stories. And time, to understand how we should approach this concept in a game environment. By tracing the lines within the academic discussions regarding these concepts, I have explained the need for a ludic historical game analysis that goes beyond the traditional narrative. It is this ludic approach that I will use in my research regarding the configuration of historical time.

My second chapter will serve as the theoretical foundation for this thesis. Here I will go into detail on the problems regarding the configuration of *historical time* in video games. With this thesis I hope to contribute to solving this problem. It is here that I will establish a model that manages to take the structure of video games into account. I want to adapt the application of the concept of *historical time* to accommodate its use in video games. To do this, I will go into depth of Ricoeur's theories on historical narratives. Along these narrative theories, I will use theories from game studies to analyse ludic mechanisms and the movement of time in video games. Joined together, the theories from both academic fields will allow me to study the configuration of historical time in video games. The main focus of

this theoretical chapter is to establish a scheme that helps me to accomplish this goal.

I will discuss the results of my analysis in the two chapters that follow my theoretical chapter. In chapter three, I will analyse two historical *action games*. The purpose of this is to find out how *action games* configure historical time. I will carry out this analysis by applying the scheme from chapter two to these games. Chapter four will cover the results of a similar analysis. There I will focus on two historical *strategy games*. In both chapters I shall briefly discuss my findings on each game. In my concluding chapter, I aim to carry my research to a higher analytical level by comparing the results of both analyses.There I will formulate an answer to my initial research question: *what are the similarities and differences in the configuration of historical time in action- and strategy games, and how can these differences be explained in reference to different game mechanisms?*

CHAPTER 2
PLAYING WITH TIME

2.1 INTRODUCTION

In the previous chapter I have provided an overview of the academic discussions that relate to this research. In this chapter I will focus on my first sub-research question: *how do narrative- and ludic mechanisms relate to each other in the construction of temporality in video game stories?* I understand ludic mechanisms as the rules that arrange the structure of a game to make it suitable for play. I will answer this question by looking at the way video games construct a notion of temporality by incorporating both kinds of mechanisms. In order to find these mechanisms I will combine narrative theories and ground them in a theoretical framework that has been established by previous theories on time in games. By answering this question I will find out which mechanisms construct temporality in games. I will create a scheme for analysis that will take exactly these mechanisms into account. This scheme will help me to answer my other sub-research questions.

In the first paragraph I will elaborate on the construction and function of time within any (historical) narrative. I will first explore Ricoeur's theories regarding *emplotment, mimesis, and historical time.* After summarizing these concepts I will use the second paragraph to show how video game environments problematize the application of the concept of *historical time*. In the third paragraph, I will create a methodological scheme that combines theories from game studies and narrative studies through which we will be able to study the configuration of historical time in games. I will present this scheme of analysis in the fourth paragraph of this chapter.

2.2 STRUCTURING TIME BY THE MEANS OF A NARRATIVE

In this paragraph I will provide a short overview of the theories and concepts of Paul Ricoeur that are of importance to my own analysis. I will start with Ricoeur's view on the creation of any kind of narrative through the operation of *emplotment*. I will then elaborate on the way we project narrative structures onto the past in order to restructure the past into a meaningful story through a series of *mimeses*. Finally, I will explain how this process establishes *historical time*.

2.2.1 EMPLOTMENT AND THE POETIC COMPOSITION

In *Time and Narrative* Ricoeur reassesses the relationship between history and life by focusing on the way we examine life itself as a narrative. It is clear for Ricoeur that fiction

only has meaning through our experiences in life. Simultaneously, humans understand life itself by telling stories.[71] Ricoeur understands all fictional narratives as tales of time. It is change that affects situations and persons in a narrative, and this change can only take place over time.[72] Narrative is the cornerstone in recounting life. It reshapes life as a story that we can tell and interpret. In this interpretation fiction has a mediating role. It provides an understanding of the lived events as a coherent story.[73] This knowledge leaves Ricoeur with two questions. How is a story shaped? And how can events from life ever be understood as a coherent story? Ricoeur finds his answer by reaching out to Aristotle's *Poetics*.

To Aristotle, a plot is a well-constructed storyline that follows a static structure. Ricoeur reveals that a plot is in fact a narrative operation. This operation is based on a process of integration into a specific *poetic composition* (a literary structure). The operation of *emplotment* structures the events in such a composition. Emplotment is the synthesis of heterogeneous events into a homogeneous story.[74] The events are heterogeneous because there is no attestable ontological connection between them. They all occur individually in separate orders of reality.[75] Through emplotment we synthesize the events as 'parts of the same story'. This operation shapes a causal structure between the events in the form of a narrative: it constructs a plot. This plot has a beginning, a middle, and an ending, which are all interconnected through their narrative structure. An example of the emplotment of three events could be as follows: (a) I have a plant (b) the plant did not receive water (c) the plant died. These are three heterogeneous events because we can perceive them individually. But by emplotting (a), (b), and (c), into a homogeneous story we get a structured version. This version provides the events with a new meaning through its narrative. Such a narrative could look like this: "I have a plant. But I forgot to water it. Because of this the plant died". The events are unified in a meaning-providing story.

Every story exists as a temporal totality. The borders of these stories mark the duration of time within the story. By creating a beginning and an ending, the story establishes its temporal duration in between these points. Within this temporal totality, the poetic composition mediates the passage of time from beginning to end. It shows a movement in time between the events.[76] In the earlier example, the borders of the story exist as event (a) and event (c). The set of events exists as the temporal totality. As we go from point (a) to point (b), and from (b) to (c), the time within the temporal totality passes. This marks the passage of time within the story itself. The poetic composition mediates the passage of time and duration of time within the story through its construction of a plot.[77] To

[71] Ricœur, "Life in Quest of Narrative," 30-31.
[72] Ricœur, *Time and narrative Vol.3*, 101.
[73] Ricœur, "Life in Quest of Narrative," 27-28.
[74] Ibid., 20-21.
[75] William C. Dowling, *Ricoeur on Time and Narrative: An Introduction to Temps et Récit* (Notre Dame, Ind: University of Notre Dame Press, 2011), 5.
[76] Ricœur, "Life in Quest of Narrative," 21-22.
[77] Ibid.

summarize, by emplotting events into a poetic composition we construct meaningful stories. These stories act as temporal totalities, and within such a totality the plot establishes a passage of time through the arrangement of events.

2.2.2 PLOT AND MIMESIS

The emplotment of events into a poetic composition requires a mechanism that is able to project the poetic composition onto human actions, and on the 'lived life'. To explain this, Ricoeur borrows another concept from Aristotle, *mimesis.* In Ricoeur's use of the word, *mimesis* is the redescription of something. The plot, or the poetic composition, counts as the mimesis of an action.[78]

Ricoeur distinguishes a threefold of mimeses that are all part of a continuous process. Mimesis$_1$ is our prenarrative understanding of the world. It is based on our experience of understanding the order of actions. There is no configuration by a narrative yet. It is a prefigurative mode that constitutes the understanding of an experience before its narrative interpretation.[79] Mimesis$_2$ is the entry of this prenarrative understanding into the realm of poetic compositions. It implements a logic of narrative causality that exists in the spatial and temporal structure of the story. This structure is derived from the boundaries of the story (the space of the temporal totality) and the temporality of the story (the passage of time).[80]

Mimesis$_2$ characterizes itself by its mediating function as textual configuration of the prefigurative mode of mimesis$_1$. It inserts our prenarrative experiences into a poetic composition, which has the capacity to transforms the reception of these experiences through its plot structure. Mimesis$_2$ configures and organises the experiences of mimesis$_1$ into a plot structure. This plot structure allows us to refigure the experiences and interpret them as a coherent story. This newly refigured interpretation is mimesis$_3$. Ricoeur shows that the poetic composition mediates between mimesis$_1$ and mimesis$_3$ in three ways. First, it mediates between singular experiences and the story as whole through the function of emplotment. One of the requirements of the emplotment of an experience, or an event, is that it must contribute to the development of the plot. A narrative has its own logic and deeper structures. It cannot solely be a set of chronologically occurring events; together the events must become an intelligible whole. Secondly, the plot moves towards a predetermined ending. It is a movement that is clear to the reader and makes sense of everything that happens in the story. This requires a clear causal chain of events. Without this, it is not possible to configure the heterogeneous elements into a narrative structure that allows the creation of a homogeneous story. The last mediation of the plot is that of temporality. The plot reveals its passage of time through its logical narrative causality. These three functions together allow the plot to function as a composition that mediates between

[78] Ricœur, *Time and narrative Vol.1*, xi.
[79] Ricœur, *Time and narrative Vol.1*, xi;Dowling, *Ricoeur on Time and Narrative*, 4.
[80] Dowling, *Ricoeur on Time and Narrative*, 9;Ricœur, *Time and narrative Vol.1*, xi.

mimesis$_1$ and mimesis$_3$.[81]

Mimesis$_3$ completes the mimetic process and is our poetically refigured experience. The ontological status of our experience remains the same, but through the mimetic process we now reinterpret the experience as part of a homogeneous story.[82] We can thus distinguish mimesis$_1$ as the prefigured experience of actions in the world. Mimesis$_2$, as the operation that inserts these experiences into a poetic structure. And mimesis$_3$ as the refiguration of the prefigured experience that now carries a certain meaning.

2.2.3 HISTORICAL TIME

The concepts discussed so far are more part of the realm of fiction than of history. They explore narrativity and its function as constructor of stories, rather than the past. *Historical time* is the concept that changes this. In order to understand how this happens, the reader must first know how historical time itself functions. Ricoeur defines *historical time* as the reinscription of lived time onto cosmological time. Historical time mediates these two conceptions of time by connecting them to each other.[83] Ricoeur draws his ideas on time from Aristotle (384-322 BCE) and Saint Augustine (354-430 CE). Both philosophers take a different approach towards the conceptualization of time. Aristotle describes time as 'a number of change in respect to the before and after'.[84] Looking at the changes in the movement of the celestial bodies provides a means to trace time. By choosing a point of reference, time becomes measurable. Ricoeur calls this cosmological time and uses it as an ordinal way to measure time, making it 'objective time'.[85] Contrarily, Saint Augustine understands time as a phenomenon that is experienced by its subject. Such a view situates time in the human mind of the present.[86] His ideas on time as a component of the human mind allow a conception of time from the point of human experience.[87] This is comparable to the construction of the temporal totality of a story in which the plot is responsible for the passage of time within the story. This 'experienced time' is always connected to a subject, and therefore functions as 'subjective time'.

Ricoeur inserts historical time as a mediation of both conceptions of time. This mediation is inevitable because we, as humans, narrativise our lives in time. Through this narrative we situate ourselves in a world in which objective time passes, but we also place ourselves in a story, which acts as its own temporal totality. Objective and subjective time are not interchangeable but complementary. Historical time connects the subjective (experienced) time to its objective (cosmological) counterpart by inscribing a narration that is based on reflective tools. Ricoeur considers these to be the tools of history. We find these

[81] Dowling, *Ricoeur on Time and Narrative*, 8-9;Ricœur, *Time and narrative Vol.1*, 64-66;Ricœur, "Life in Quest of Narrative," 23.
[82] Dowling, *Ricoeur on Time and Narrative*, 13-14;Ricœur, *Time and narrative Vol.1*, xi and 53.
[83] Ricœur, *Time and narrative Vol.3*, 99 and 104.
[84] John Bowin, "Aristotle on the Order and Direction of Time," *Apeiron* 42, no. 1 (2009), 57.
[85] Ricœur, *Time and narrative Vol.3*, 104.
[86] Ricœur, *Time and narrative Vol.3,* 13;Currie, *About Time*, 69.
[87] Harry Jansen and Maria Grever, "Inleiding," in *De ongrijpbare tijd: temporaliteit en de constructie van het verleden*, ed. Maria Grever and Harry Jansen (Hilversum: Uitgeverij Verloren, 2001), 9.

tools in the calendar, successions of generations, archives, and historical traces. By using these tools, we tie the narrated time to an objectively measurable past. We are able to measure this objective past by placing all events of the past and the traces of their existence on a cosmological timeline; there is a chronology at play. History writing has the capacity to refigure time through using its reflective instruments as a poetic composition, which exists as mimesis$_2$. The historical connectors between subjective and objective time define the plot structure, and in its mediation, this becomes historical time. [88]

The first connector between subjective and objective time is *calendar time*. By establishing a calendar we gain the means of counting time in a society's view of the world. Calendar time mediates between the subjective experienced time of a society, which is founded as the beginning of the era in which this society relates itself to, and the recurring intervals of cosmological time. This makes calendar time relatively objectively measurable. It is relatively objective because we can measure the counting itself, but this does not say anything about the time that has already stretched before the existence of this society.[89] We situate the events in life in the dated events that the calendar provides. This places the events onto a contemporary level and connects the events to each other. They make sense in relation to each other.[90] This mechanism relates directly to emplotment. We use the calendar to establish the temporal totality of the story, or in this case, life within this society.

The second mediation of historical time is the succession of generations. By looking at humans as successors and replacements of earlier historical agents, we suggest a certain continuity within society as a whole. Generational changes lay the foundation of the anonymous relationships between individuals. Whether they are each other's predecessors, contemporaries, or successors: the succession of generations makes them part of a temporal unity that lies between subjective and objective time.[91]

We find the last mediation of historical time in the traces of history. Traces of history are remains of things that once existed in the present, but are now part of the past. It illustrates a path between two figures of time. Traces are the proof of the existence of an earlier temporality. The fact that we understand these remains as a 'trace' and not as something that belongs to the contemporary realm shows a dissociation with the past. Which in turn implies the existence of a society that exists in a present temporality. The traces and documents of the past constitute a proof of a relationship between these two temporal situations.[92] To clarify this with an example: if we find a knife that was used in the times of the Roman Empire, we could surely give it the status of a knife. But instead we see it as a 'Roman knife'; it is something that belongs to a different realm.

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[88] Paul Ricœur, *Time and narrative Vol.3*, 99-100 and 104.
[89] Ibid. 105-107.
[90] Emile Benveniste, "Le Langue et L' Experience Humaine," in *Problèmes de Linguistique Génerale Vol. 2*, ed. Emile Benveniste (Paris: Gallimard, 1974), 70–71.
[91] Ricœur, *Time and narrative Vol.3, 109*.
[92] Ibid., 122-123 and 117.

Through the historical connectors of the calendar, generations, and historical traces, historical time operates as an additional temporal layer that resides between subjective and objective time. It joins both layers and mediates between them by inscribing features of cosmological time onto the narrative of experienced time. Ricoeur asked himself how we can recount life and found his answer in the structure of the narrative. It is this narrative that reshapes events into a story that people can relate to. We remediate life through the realm of fiction into poetic compositions. Through these compositions we see the heterogeneity of the events of life and refigure them into a complete whole. This whole, existing as a story, has its own temporal totality, as it is based between two points in objective time. But between these points, time passes in a subjective manner. It is the plot that is responsible for the passage of time by reshaping the events as a narrative that is comprehensible to its readers. It is this plot structure that mediates between the subjective and objective time and restructures them into historical time. The historical connectors that reside between both fields: calendar time, the succession of generations and the traces of history, are the foundation for this structure. These connectors define the passage of time within the temporal totality of the narrative.

2.3 THE PLAYFUL PASSING OF TIME: BEYOND OBJECTIVE AND SUBJECTIVE TIME

In order to make the concept of historical time a valuable tool for historical game analysis, we need to look at the changes within this concept when it travels to a video game environment. If we want to see how video games configure historical time, we should look at how these games establish objective and subjective time. Let us therefore look back and compare the concept of objective time, and the concept of subjective time, to the medium of games.

2.3.1 OBJECTIVE TIME IN GAMES

If we follow Aristotle, objective time is 'a number of change in respect to the before and after'.[93] Objective time is the transgression of 'moments of the present' that pass in a linear extension. Everything before the present is the past and everything after the present is the future.[94] It is impossible to capture this 'present', as it always extends to the next 'moment of the present'.

When we measure the passing of time in games, we use cosmological time as a referential framework. It is a way to measure how long we interact with a game. We can play a game for 'an hour', but this does not say anything of the passage of time within the fictive world of the game. An hour in the real world might not correspond to an hour in the game world. Maybe we played through an entire era in the game. We might have built entire societies, only to see them fall again on the game board. A game exists in its own

[93] John Bowin, "Aristotle on the Order and Direction of Time,", 57;Ricœur, *Time and narrative Vol.3*, 104.
[94] Aristotle, *Physica book II,* cited in Harry Jansen and Maria Grever, "Inleiding," 8.

temporal and spatial dimension. It is separated from everyday life and the rules of the everyday world. Reality is cast aside as the game applies new rules to establish its own sphere of play.[95] Our objective measurement of time is rendered useless in this alternative reality. Instead, games contain possibilities to manipulate the passage of time in their internal world. This does not necessarily mean that objective time does not exist in video games. It only means that objective time in games operates on a level that does not directly corresponds with cosmological time as we know it.

Even if the rules of games would allow their internal passage of time to correspond to the way cosmological time passes, it still would not be the same as cosmological time. Generally, the influence of cosmological time is unavoidable. We are always subjected to it. In a game, however, we have the option to separate ourselves from the game world, and thereby disregard its notion of time. We can actively freeze or stop time in a game entirely by stopping the game. The player can easily distort the objective time in a game, which is something impossible for cosmological time. In the end, time in games can only pass when we choose to engage in the game world. Let us now reflect on the concept of play, which always exists 'in between'. Play unfolds between the tasks that the structure of the game establishes.[96] Although play lies 'outside of time', its structure does not. The tasks that allow play to come into being follow a structure we can use as landmarks of objective time in the game. The tasks here become the centre of the 'number of change in respect to the before and after.' Not the measurable movement of celestial bodies, but the structure of the game and its tasks, lays the foundation for the passage of objective time in games.

2.3.2 SUBJECTIVE TIME IN GAMES

If we take subjective time as our point of departure, we must assume that time is a phenomenon that is experienced by its subject. Such a view situates time in the human mind of the present.[97] For games, this is clearly true. Players narrativise their gameplay and create their own temporality. This subjective temporality is based on when they did what. It functions as an organisational principle.[98] But when playing games that include an embedded story, the players are not only part of their own temporality. They also engage in a pre-established narrative. It seems like this narrative unfolds in the present, since the player is actively participating in the story. But actually, the player plays as his game-character in a story that is already written. If the player follows the story as intended, the subjective time of the player is based on the experienced time of the game-character in the story. The experienced time of the game-character is not part of the present, but it is narrated to the player in the grammatical *simple past tense:* a story is a recounting of past events. Although its narration marks a movement forward in time, this movement itself

[95] Drachsen and Hitchens, "Game Time," 171-172.
[96] Gadamer, *Truth and Method*. 104, 107, 109.
[97] Ricœur, *Time and narrative Vol.3,* 13;Currie, *About Time*, 69.
[98] Michael L. Black, "Narrative and Spatial Form in Digital Media: A Platform Study of the SCUMM Engine and Ron Gilbert's The Secret of Monkey Island," *Games and Culture* 7, no. 3 (May 1, 2012), 227.

follows a teleogical path towards an ending that has already been established by the game developers.[99] An interesting question arises: how can this time be subjective if it is pre-established, and in this sense is more or less objective? This problem, however, only exists if we choose to follow the rules of the game. Otherwise we could use the game space purely for projecting our own variants of play on the game. Such an act would be completely set in subjective time from a narrative point of view. And even then, a ludological approach would not agree with it. Video games are in the first place sets of rules, consisting of digital codes. Any kind of interaction with the game world changes something in the set of codes. This is measurable, and tells us that at least something has changed in the game since the previous moment. In other words, there is a measurable 'number of change in respect to the before and after'. [100]

In this research I will study games as *problem spaces*, so I will follow the games as intended by their developers. This means that I will follow the pre-established narrative in the games. Two things now become important. First, if we want to play a game as intended, we need to accept its set of tasks, or rules, to initiate play. Unless we are willing to transform the aims of the game, we must follow its rules.[101] But there are two kinds of game rules: rules that establish the sphere of play (paidea rules), and rules that decide on the condition of the player within this sphere of play (ludus rules). Both kinds of rules may not be based on an ordinal measurement of time, but it is possible to measure the position of the player in the story of the game if we understand the game as a set of ludus rules that he must complete. As long as the player does not follow the ludus rules, he exists solely in the sphere of play. This is the 'in between', a point outside of time. In his interaction with these ludus rules the player can move the time of the entire game world by completing a measurable task in the game. The ludus rules provide the structure, and thus the objective time of the game. But it is the choice of the player to pursue the tasks.[102] In other words, the passage of time is based on the agency of the player, and is in this sense more or less subjective.

The task-based structure of the game, as a system for play, lies at the centre of the existence of both objective and subjective time in video games. For objective time, it is the completion of tasks that marks the passage of time. For subjective time, it is the fact that the player chooses to engage into these tasks that initiate a temporal passage. We have seen that historical time exists as a mediation of objective and subjective time. Both objective and subjective time in games are subjected to mechanisms that derive from the internal structures of these games. This means that we have to come up with a way to measure passage of time in games if we want to see how this new medium configures historical time. In the following paragraph I will propose a model of which I believe that it

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[99] Currie, *About Time*, 5; Dowling, *Ricoeur on Time and Narrative*, 9.

[100] Drachsen and Hitchens, "Game Time," 172-173;Wood, "Recursive Space," 87;#game state, in Juul, "Half-Real: A Dictionary of Video Game Theory."

[101] McCall, "Historical Simulations as Problem Spaces";Gadamer, *Truth and Method*, 104, 107, 109.

[102] Gadamer, *Truth and Method*, 104, 107, 109; Since my goal is to study the games as problem spaces, I do not wish to interfere with the aims of the game.

can measure time sufficiently enough to analyse how video games configure historical time. With this model I will then be able to take a closer look at the way historical time mediates objective and subjective time in the game world.

2.4 A THREEFOLD ANALYSIS OF TEMPORALITY: ESTABLISHING TIME IN GAMES

In this paragraph I will look into the ways we can analyse the concept of time in games. First I will give an overview of earlier models of time in games and explain why we need a new model to study how games configure historical time.. After this I will establish a new model that is able to analyse the temporal structure of games with a focus on the configuration of historical time.

2.4.1 TIME ANALYSIS IN GAMES

The best way to understand time in video games is by dividing the concept of time in a set of temporal layers. Each layer takes on a function of 'time' as we know it. This is necessary because not all derivatives of time, like actions that use the laws of physics, are connected to the functioning of the passage of time in video games. There is no definitive framework of temporal layers that elucidates the working of time in video games. Choosing a framework depends on which functions of time the researcher wants to investigate. I will establish my own model to analyse time in games. My vantage point will be the model of time that Zagal and Mateas have provided.[103] I will amend their model with variables from the model of Drachsen and Hitchens, and variables from the model of Zakowski.[104] It is necessary to come up with a new model for temporal analysis because *historical time* is a concept unknown to game studies. This makes it almost impossible to pinpoint the configuration of historical time through existing models. In my case, it is important to look at the functioning of individual layers of time, and search for connectors between subjective and objective time. This will allow us to make generalizations on the way video games configure historical time, which mediates between these two conceptions on time.

In order to create a model that is able to analyse historical time in games I will divide the temporal structure of games in three layers. The first temporal layer is *ludic time*. Ludic time refers to the mechanisms of progression in the game world. It also includes means of progress in the games that lie outside of the scope of the progression of the general narrative. The second temporal layer is *represented time*. This is the time that the game world represents. The layer of represented time marks the representation of a specific point in time and space. Simultaneously, this layer of time also marks the passage of time within the games. This touches upon questions like the visibility of temporal passage in games. The third temporal layer is *narrative time*. Within this layer we follow the more narrative-based constructions in the games. Through this layer I will study the passage of the story and the

[103] Zagal and Mateas, "Time in Video Games," 845.
[104] Drachsen and Hitchens, "Game Time"; Zakowski, "Time and Temporality in the Mass Effect Series."

development of the plot. By looking at this layer we can focus on the narration of the story itself and the way time has a role in this.

2.4.2 LUDIC TIME IN HISTORICAL VIDEO GAMES

Everything that happens in the game, as a sphere of play, happens in ludic time. Ludic time exists as a layer between the involvement of the player and the game world. It synchronizes the actions of the player with the game world around him, which is the virtual world in which the player can engage. Any event that changes the game state, takes place in ludic time. However, this does not have to mean that the chronological time of the story of the game also progresses when there is interaction with the game world. If we see a game-character jump in the game world, the jump takes place in ludic time: it affects the game state, but not the temporal progression of the game. Furthermore, it is possible for a game to contain several layers of ludic time. This is the case if there is a metanarrative, or when the player plays parts of stories that exist as a set of separated levels. In that case each level exists individually and exists as its own temporal totality. Ludic time has its own state of time, which is dependent on its intrinsic cycles. We do not find this cyclical time in the world itself, but in its entities and objects and the duration of the cycles they are involved in. These are patterns of movement in any kind of way. An example of this is the way a non-playable game character follows a certain pattern of walking. The duration of this cycle equals this unit's (personalised) 'time'. Even randomly generated characters follow a pattern and are generated with a certain objective in mind that is used to influence the player in a specific way (which will happen time and again). This 'random' behaviour follows fixed schedules and behaviour systems, which makes it cyclical in nature.[105]

As long as the cycle of ludic time does not change through interference of a time limit or a set event, the player exists in a temporal bubble in which the chronological occurrence of events in time does not continue. The objective time in which the story exists is at a standstill, and the cycle of the game world remains the same. Objective time here, as measured by its cycles, is not chronological per se. It moves within its own temporal bubble.[106] The entire game world exists, as long as the player remains in this bubble, in what Drachsen and Hitchens call *abstract time,* and in what Gadamer sees as 'the in between'. When the player progresses the objective time of the game, he actually shifts from one temporal bubble to a newly established temporal bubble that that is separate from the prior bubble. The player completes his task, which is used to establish a sphere of play, and the game immediately presents a new task in the shape of a quest, a mission, or a

[105] Zagal and Mateas, "Time in Video Games," 849-850;Richard Zhao and Duane Szafron, "Virtual Character Behavior Architecture Using Cyclic Scheduling, (work in Progress)," in *Proceedings of the 9th International Conference on the Foundations of Digital Games* (Foundations of Digital Games 2014, Sailing from Ft. Lauderdale, FL (USA): Society for the Advancement of the Science of Digital Games, 2014), http://www.fdg2014.org/proceedings.html , http://www.fdg2014.org/papers/fdg2014_wip_24.pdf.
[106] Zagal and Mateas, "Time in Video Games," 854-855.

new level. This renews the cycle of play; the player enters a new world of abstract time.[107]

By establishing the game world as a set of temporal bubbles it becomes possible for the game to tell a coherent story. If the game would follow the rules of cosmological time, it could be possible for the plot of the game to slowly develop without the player. The player could lose the game without ever doing anything. To avoid this, the story in a game progresses through the pursuit of a set of tasks. We can reduce these tasks to landmarks that establish us with a measurable 'objective time' in the games. These tasks establish an alternative passage of objective time by allowing the plot to develop slightly after the player performs a task. The game tempts the player to follow the tasks by providing rewards. Games often provide *rewards of access* that allow the player to progress spatially to previously unavailable areas.[108] This structure establishes a natural sense of progression in the space of the game and in the time of the story. The player will gain access to an area where a 'later event in the story' will be played out. By restricting access to this space in the first place the event is locked out in a natural way. This ascertains that the event will only unfold if the 'play' in the game world runs parallel with the development of the story.

Next to rewards of access, the player also engages in a game for *rewards of glory*. These are the rewards that are not directly based on the development of the plot, but might provide new information about the story of the game. Because the rewards of glory are not based on plot development, the player will need to engage in them on his own. Rewards of glory are defined by their lack of direct impact on the plot of the game.[109] They are a way to stimulate the player to explore the game world in its entirety to complete additional tasks at hand. Next to the actual time of the story in the game, this development marks how far the player is in his pursuit of following the general tasks in the game. The abstract time within the temporal bubble mainly provides information on the status of the player within the abstract bubbles, but is not connected to the actual progression of the plot. It is a way for the player to keep track of his own performances aside of plot development.[110]

Ludic time directly progresses when the player completes his tasks. It also provides the mechanisms to ascertain that the plot cannot progress without the player, and that the player cannot advance too much in the game world without following the plot. This happens through the rules of the game. These rules structure the ludic time, as they are mechanical components that help maintain the abstract time of the game world. We have already distinguished two types of rules in the literary review: *ludus rules* and *paidea rules.* Ludus rules are the rules that provide the goals, and thus the tasks, of the game. These rules define the conditions of winning or losing the game. Next to ludus rules, games also consist of *paidea rules.* These are the rules that construct the game world and all possibilities in this

[107] Drachsen and Hitchens, "Game Time," 188-189;Gadamer, *Truth and Method*, 109;Zagal and Mateas, "Time in Video Games," 850.
[108] Gazzard, "Unlocking the Gameworld";N. Hallford and J. Hallford, *Swords and Circuitry: A Designer's Guide to Computer Role Playing Games* (Roseville, CA: Prime Publishing, 2001), 158.
[109] Gazzard, "Unlocking the Gameworld."
[110] Drachsen and Hitchens, "Game Time," 189-191.

world. These rules create the possibility of play. The paidea rules define how the player plays the game, and the ludus rules define how the player wins the game.[111] Deducing the ludus rules is quite easy, one simply follows the development of the game, as it is task completion. The paidea rules differ from this because we might not always perceive their effects. Paidea rules influence the progression of the game by allowing and restricting access to specific points in the game. Imagine playing *Call of Duty: World at War.* The players takesthe role of a soldier who has to capture an enemy base. He walks up to the base, but the gates are locked. There is no possible way to open the gates unless the player performs a specific task first. In this example we see how a paidea rule ensures that the player progresses the game as intended. The gate will only open when the he completes his required tasks (ludus rules) first. Similarly, paidea rules also interfere with the actions of the player by taking away his agency at points in the game. This helps specific pre-established narrative sequences to unfold as the game intends it. Whereas the player is normally able to respond to a threat, the intereference of the paidea rules might force him to accept his destiny in the story of the game.

The temporal layer of ludic time is a complicated layer. It functions as a means to make the player believe that the world he plays in is a world in which time passes. At the same time this temporal layer makes sure that the plot of a game cannot progress without the actions of the player. The player might not even be aware of all the mechanisms that assure the synchronic movement between the play of the player, and the development of the plot in a game. This synchronization mostly happens by structuring the game as a combination of ludus rules that the player needs to complete, and by connecting these rules to rewards of access. Simultaneously, the paidea rules also restricts options in the game to ascertain that the unfolding of the set of tasks develops as intended by the game designers. These are the components that directly affect any type of passage of time, regardless of the further nature of this time. Table 1 marks the key points for an analysis of the ludic mechanisms that contribute to the construction of time in games.

Table 1*: Key points for the analysis of ludic time as a means of storytelling in games*

Temporal layer	Type of time	Key points of analysis
Ludic time	abstract	• structure of division of frames and borders of the world or temporal bubbles, like levels • cyclical components/simulation of time passage • rewards of glory and their link to the general story • rewards of access and their link to the plot • possibilities of progress outside of the plot (task-based) • ludus rules in relation to the plot • paidea rules as restrictions in relation to the plot

A scheme of the ludic mechanisms that support the construction temporality and time in video games.

[111] Frasca, "Ludology meets Narratology;Ang, "Rules, Gameplay, and Narratives in Video Games," 308.

2.4.3 REPRESENTED TIME IN HISTORICAL VIDEO GAMES

The layer of represented time establishes the historical reality in which the game is situated. Represented time operates on two levels. It is a representation of a *passage of time*, and it is a representation of a *specific temporality.* The first representation marks the amount of time (objective time, as it would function in the real world) that passes in the game world. This can be anything from minutes up to ages. The second representation concerns the way in which the game represents a specific historical setting.

2.4.3.1 Passage of time

The representations of the passage of time allow us to understand the fictive duration of events. Zagal and Mateas show that games create this temporal understanding by applying sociocultural labels of time to the ludic structure of the game. Games apply these labels to a level-based structure, to a structure that is based around turns, or to a task-based structure. The sociocultural labels are based on, and represent, our own sociocultural notions of time. Some examples of these labels are days, weeks, and lifetimes. There are also more abstract sets of labels that are culturally based. We find one example in a novice-competent-expert structure. This set of labels is a temporal scheme, which already reveals that the sets of sociocultural labels imply a type of progression. We place such a set of labels intuitively in our *cognitive scripts* and see the passage of time move towards a certain direction. According to Zagal and Mateas a cognitive script is our own default event sequence and relative duration of these events. Following such scripts allows us to make sense of the events happening by linking them to our own ideas of the duration of time and progress.[112] In the novice-competent-expert scheme we see a progress of skill, for example. If we specify such a set even further we become able to get a better understanding of the duration of each label. This happens, for instance, by labelling a scheme as child-teenager-adult. In this example we have a general idea on the duration of each label. Such an understanding of the passage of time in the game world influences the way we understand all events in the game. It marks the way we should interpret the emplotment of certain events.

2.4.3.2 Represented temporality

The representation of the temporality in which the game world exists provides us with the tools to understand the setting of the game world. This temporal layer operates on the level of the game world and represents the temporal bubble in which the game world exists. This bubble is the point where the time of the story of the game has become 'abstract', or lies in the 'in between'. Game spaces are constructed environments in which each object has a specific purpose, like establishing a historical temporality. The games create such a temporal representation by associating game space with more traditional media that represent history, and by association with historical objects that represent a certain point in time.[113] In this thesis I especially look at *historical connectors* as a means to represent temporality.

[112] Zagal and Mateas, "Time in Video Games," 850.
[113] Drachsen and Hitchens, "Game Time," 188-189;Gadamer, *Truth and Method,* 109;Zagal and Mateas, "Time in Video Games," 850.

The historical connectors are the reflective tools of history that mediatethe objective and subjective time of the world. We inscribe features of cosmological time into the narrative structure of subjective time by referring to historical connectors.

Game spaces are constructed environments in which the player engages. Each object in this space has a specific purpose. This can be either to shape gameplay or to contribute to the mood or atmosphere of the game. Even the player himself is part of this space. He has the ability to reconfigure and influence the organisation of objects in this space.[114] Either way, the player interacts with the entire game space, and not just with the plot of the game. This means that we must take the entire game space into account when we study the temporality of a historical game. Zakowski argues that games consist of a variety of narrative structures which operate on different levels. The player does not only follow the story of a game through its plot, but via the entire game world. Although the plot is the engine that drives the story, it is simply a single part in a larger metanarrative. This metanarrative is more inclusive and consists of all actions, interactions and events that take place in the actual game.[115] In *Assassin's Creed,* for example, it is possible for the player to walk around in a town and interact (somewhat) with the locals, who might cry out that they are being mistreated and are poor. This does not progress the plot, but it does give us more information on the setting of the game itself. The story develops because we know more of its background, without actual progression of the plot. The represented temporality makes up for a part of the story and tells its part through the game space. The actual game world, which exists in the present of the player (representing a fixed temporality as a temporal bubble), is reinforced when the game developers put effort in creating of a logical, 'fitting' past of this world. This gives the world itself a history, and a place within a larger temporality. The characters in the present game world exist at certain points in their own life, and in history, as they also have a past. The game does not use all of these temporal experiences for its chronological progression of the plot,which progresses the movement of the player through the temporal bubbles of ludic time. But all of these narrative elements still function as a means to elucidate or foreshadow events of the actual plot. The player learns more about the connections between events and people within the represented game world.[116]

The represented temporality of the game space is thus a source of information to the player in various ways. First, it is constitutive of the narrative that the game tells through the spatio-temporal orientation of the player in the game. Any movement away from this point towards another point is the driving force behind the story. Games constitute stories by progressing a trajectory in time (plot development) and in space (exploration of the space in ludic time, through the game world as a represented

[114] Henry Jenkins and Kurt Squire, "The Art of Contested Spaces," in *Game on: The History and Culture of Videogames*, ed. Lucien King (London: Laurence King, 2002), 75;Wood, "Recursive Space," 87, 90-91, 93.
[115] Zakowski, "Time and Temporality in the Mass Effect Series," 59.
[116] Ibid.

temporality).[117] Both the passage of time and the representation of temporality influence the knowledge of the player about the story he plays in the game. Table 2 marks the most important ways games construct a passage and representation of time in their game space.

Table 2: *Key points for the analysis of represented time in games*

Temporal layer	Type of time	Key points of analysis

Represented time	abstract representation of temporalities	• the passage of time through the set of sociocultural labels and temporal schemata as distinguished by ludic mechanisms
		• the establishing of represented temporality via historical connectors:
		  ○ calendar time
		  ○ historical traces/objects
		  ○ successions of generations
		• elements contributing to the setting of the story that do not affect progression of the plot

A scheme that summarizes the ways represented time supports the construction temporality and time in video games.

2.4.4 NARRATIVE TIME

The final temporal layer is *narrative time*. The importance of this layer is twofold. First, this temporal layer reinstates the passage of time in the game world through its plot development. From a narrative point of view, the time of the game world can only move by prorgessing the time of the story. Secondly, it is through narrative time that the games tell their stories. Narrative time distinguishes a chronological account of the unfolding events as a sequence. Through this sequence we emplot the representations of historical events as chronological points in time into a poetic composition. Games invoke a variety of narrative effects to establish a new meaning of the events through a larger story. These effects consist of dialogues between character, cut-scenes, and other means to tell stories.[118] These narrative effects contribute to the creation of a story that is more elaborate than its separate events. Exactly when these effects come into play depends on the ludus rules, which trigger the narrative effects at set points in the transition of temporal bubbles in the story. Together, the represented temporalities, the ludus rules tht fuction as narrative triggers, and the plot itself, present the player with a story.[119] In short, the player plays individual events, which are prearranged in a specific order. The mechanisms of ludic time establish this order by placing the events in a task-based structure. When the player completes a ludus goal he might set a narrative effect in motion. The game uses these narrative effects to reconstruct the events in a meaningful sequence by providing additional information that contributes to the construction of a specific story.

[117] Ibid. 63;Mike Baynham, "Narratives in Space and Time: Beyond 'Backdrop' Accounts of Narrative Orientation," *Narrative Inquiry* 13, no. 2 (2003), 362;Zagal and Mateas, "Time in Video Games," 851.
[118] Barry Ip, "Narrative Structures in Computer and Video Games: Part 1: Context, Definitions, and Initial Findings," *Games and Culture* 6, no. 2 (March 1, 2011): 117, doi:10.1177/1555412010364982.
[119] Zagal and Mateas, "Time in Video Games," 851.

For my thesis this means that the layer of narrative time constructs a story through the individual sets of levels and tasks the player works his way through. Whereas the layer of represented time uses representations of history in its represented game world, the narrative layer emplots the historical representations within the levels into a singular larger story. If we want to analyse these stories, we have to take the plot development into account. But what belongs to the plot, and what belongs to the game world? Thanks to our earlier exploration of ludic mechanisms and structures, this is not that hard to find out. We just have to follow path of temporal progression in games. These instances of progression account for the progression of the game's plot as well. Table 3 shows the key points for a narrative analysis of the plot of historical games. I will especially focus on the points that act as the triggers of plot progression. These points transform the individual represented temporalities by connecting them to a single narrative structure.

Table 3: *Key points for the analysis of narrative time in games*

Temporal layer	Type of time	Key points of analysis
Narrative time	progressive time	• plot: actor, reasoning, objective • plot structure • use of calendar time in the plot structure • use of historical elements/actors in the plot • the ordering of narrated events • triggers of the narrative and their connection to ludus rules) • narrative effects to tell the story

A scheme that summarizes the ways narrative time establishes a progressing time of the narrative.

2.4.5 THREEFOLD ANALYSIS OF TEMPORALITY IN GAMES

I opened this chapter by posing the question: *how do narrative- and ludic mechanisms relate to each other in the construction of temporality in video game stories?* In order to answer this question I went back to the foundation of historical time as a mediation of objective and subjective time. The concepts of objective and subjective time are not directly applicable to video games because games have their own notion of time. The task-based structure of games is central to the existence of both objective and subjective time in video games. Historical games represent a historical setting, but also represent a narrative progression that takes place over time. If we want to analyse this difference in representation between the two, we need to focus on the mechanisms that move the time of the story in the world of abstract time. By dividing historical games in *ludic time, represented time, and narrative time,* we will be able to follow the way historical games mediate various types of time. Through the temporal layer of *ludic time* we will be able to study the mechanisms that mediate between the other two layers of temporality in games: *represented time* and *narrative time.* We need this division to study how games configure historical time.

Ludic time will give us the tools to find out how games exist as a series of temporal bubbles, which all represent a specific temporality. In the layer of represented time we will be able to look at the way games construct their spaces by association with historical connectors that represent a certain temporality. In this temporal layer we will also be able

to focus on how games represent a passage of time within this temporality. The final layer of narrative time will help us to analyse the set of temporal representations and their insertion into a poetic composition. Games construct their set of represented temporalities into a comprehensible whole through their level-, or task-based structure. This whole will provide the player with a new interpretation of the general plot of the game. By focusing on the mechanisms that establish a passage of time, we will be able to see the causality of the events in the story as the game tells it to the player. If we focus on how the layers of represented time and narrative time make use of historical connectors in their constructions of time, we will be able to find out how games configure historical time.

Through my analysis of the temporal layers, I will be able to differentiate between the games as representations of a specific temporality, and as storytelling platforms that include these represented temporalities into new narrative structures. By focusing on this distinction we will be able to see how games configure historical time. The way narrative- and ludic mechanisms construct temporality in a video game story is based on the way time itself passes in games: through a pre-established structure that progresses through specific actions of the player. The following table joins the keys points for the analysis of each individual temporal layer into a methodoglical scheme that is fit for the analysis of historical time in games.

Table 4: *A scheme for analysing historical time in video games*

Temporal layer	Type of time	Key points of analysis
Ludic time	abstract	• structure of division of frames and borders of the world or temporal bubbles, like levels • cyclical components/simulation of time passage • rewards of glory and their link to the general story • rewards of access and their link to the plot • possibilities of progress outside of the plot (task-based) • ludus rules in relation to the plot • paidea rules as restrictions in relation to the plot

Represented time	abstract representation of temporalities	• the passage of time through the set of sociocultural labels and temporal schemata as distinguished by ludic mechanisms
		• the establishing of represented temporality via historical connectors:
		  ○ calendar time
		  ○ historical traces/objects
		  ○ successions of generations
		• elements contributing to the setting of the story that do not affect progression of the plot

Narrative time	progressive time	• plot: actor, reasoning, objective • plot structure • use of calendar time in the plot structure • use of historical elements/actors in the plot • the ordering of narrated events • triggers of the narrative and their connection to ludus rules) • narrative effects to tell the story

A scheme for analysing historical time in video games

CHAPTER 3
A THREEFOLD ANALYSIS OF TEMPORALITY IN ACTION GAMES

3.1 INTRODUCTION

In this chapter I will show how action games configure historical time by using my model of the threefold analysis of time in games. I will look at the ways these games use ludic time, represented time, and narrative time in their configuration of historical time. For this case study I will apply my model to two historical action games: *Call of Duty: World at War* (Treyarch, 2008), and *Assassin's Creed I* (Ubisoft, 2007). In the first paragraph of this chaper, I will place these games in their historical context and provide the reader with a short background of the historical settings of these games. After this introduction of the source material I will perform a comparative analysis of both games with respect to all three temporal layers. In the conclusion of this chapter, I will reflect on the most important findings regarding the configuration of historical time in action games and their connection to each temporal layer.

In my analysis of the temporal layer of ludic time I will focus on the mechanical structure of the games. The ludus and paidea rules that divide the games into sets of temporal bubbles are central in this analysis. In the layers of represented time and narrative time I will focus especially on the use of historical connectors in the games, as these are the central components of the the configuration of historical time. Historical connectors are tools that inscribe features of cosmological time into the narrative structure of subjective time. Within the analysis of represented time I will focus especially on the historical connectors that have an important function in the game. This can be either in the gameplay or in the story. I will focus on the more leading traces in the games, because this is an important criterium for the *problem space*-doctrine of historical game analysis. Analysing games as problem spaces allows us to study games within the limits of their medium, which saves them from unfair criticism.[120] In the analysis of narrative time analysis I will look at similar connectors, but here, my goal is to find out how the games apply these connectors to a broader plot structure. This requires a narrative analysis of both the plot and the historical connectors.

[120] McCall, "Historical Simulations as Problem Spaces."

3.2 CONTEXTUALISING SOVIET VETERANS AND LEVANTINE POLITICS

In this paragraph I will provide a short summary of the action games that I will analyse. I will connect this summary to the historical contexts that the games use for their stories. We need this context to get a better understanding of the ways the games use historical connectors later on in this analysis.

3.2.1 SOVIET VETERANS

The Soviet *campaign* of *Call of Duty: World at War* follows the story of the young Soviet private, *Dimitri Petrenko*, in the Second World War. Dimitri is active in the war on the European Eastern front. The campaign spans multiple levels. Each level acts as a single mission, set during a specific moment in the war. The story starts with the rescue of Dimitri, who is left for dead by German soldiers in Stalingrad. His Sergeant, *Viktor Reznov*, notices that Dimitri is still alive and hands him a rifle. The rest of the game follows these two Soviet soldiers during the war. Specifically, it follows their journey through German territories, all the way to the roof of the *Reichstag*.

This game is set in the Second World War, right after the German offensive to capture Stalingrad. Here, German and Soviet soldiers confronted each other in a bloody war that Adolf Hitler himself saw as the turning point of WWII in favour of the Allied forces on the Eastern front.[121] The war on the Eastern front was very vindictive. The feeling of hatred towards the Germans left deep emotional scars on the participating Soviet soldiers. After the Soviets reclaimed Stalingrad during the actual war, it is noted that one of the Soviet colonels halted a group of German prisoners and yelled "That is how Berlin is going to look!", whilst pointing to the ruins of the city.[122] This captures the feelings the game wants to express perfectly. As the player follows the story of a Soviet soldier, we will see the war from his point of view.

Dimitri is part of the Soviet advance through German territories.In this advance, the game largely follows the trajectory of the Third Shock Army, which was organized under General *Zhukov*'s First Belorussian Front, a major formation of the Soviet Army. This Front was very competitive and attempted to break into Berlin in a rush to raise its victory banner before the other Soviet armies were able to.[123] The movement to Berlin was planned as Operation *Berlin* (or, the *Seelow-Berlin* offensive operation). The Soviet troops attacked the German-held *Seelow Heights* in order to encircle, attack, and capture Berlin.[124] When the Soviet soldiers managed to take the *Reichstag*, the photographer Yevgeny Khaldei captured the event in a photograph that would later become iconic. In his (staged) picture, a Soviet

[121] Antony Beevor, *The Fall of Berlin 1945*, Reissue edition (Harmondsworth, Middlesex: Penguin Books, 2003) xxxiii.
[122] Ibid.
[123] Ibid., 64 and 255.
[124] Peter D. Antill and Peter Dennis, *Berlin 1945: End of the Thousand Year Reich* (Oxford: Osprey, 2005), 36.

soldier raises a gigantic Soviet flag over the roof of the Reichstag, signalling the defeat of the Third Reich.[125] This event also marks the end of the Soviet campaign of the game.

3.2.2 LEVANTINE POLITICS

On the other hand, the historical part of the narrative of *Assassin's Creed* chronicles a part of the life of *Altaïr Ibn-La'Ahad* and is set during the Third Crusade (1189-1192). In the story, Altaïr is a member of the mysterious clan of the Assassins, a political organisation in the Levant. The game tells its story through a set of *memory blocks,* which are the levels of the game. These memory blocks are fragments of the memories of Altaïr. Each memory block connects to a part of the story. All memory blocks follow a chronological order, which reveals a chain of events that is of importance to the story of the game. This has to do with the fact that the player actually plays as *Desmond Miles*, a modern-day bartender. According to the game, our genes contain fragments of the memories of our ancestors. Altaïr is Desmond's ancestor, and Desmond is able to re-live the memories of Altaïr's life through his *genetic memory*. The story of Altaïr begins when he falls from grace with the leader of the clan of the Assassins. Throughout the game Altaïr fulfils a set of 'kill orders', which he receives to prove his devotion to the clan. The story of the game follows Altaïr on a journey for redemption. This journey brings him all over the Levant, where he meets -and often kills- various people who play a role in the Third Crusade. The story of the game spans a couple of months in the summer of the year 1191.

The Third Crusade was led by various European monarchs to take in key territories in the Levant. This was a response to the occupation of Jerusalem by *Saladin*, a Muslim ruler who managed to conquer significant parts of Palestine in the years before.[126] It was a turbulent time with a great variety of political actors. The story of *Assassin's Creed* uses *Richard I* and *Saladin* as the key figures in these political wars. But next to these actors, various other political groups were also fighting for power in the Levant. There were several Templar orders active in these territories who all fought under different political flags. Next to the two camps of the 'Christians' versus the 'Muslims', there was a third party active in the Levant. This was the clan of the 'Assassins', led by 'The Old Man of the Mountains', *Rashid Ad-Din Sinan*. This clan tried to remain neutral in the war in order to profit as much as possible from it.[127] The chief stronghold of the Assassins was a fortified castle in Masyaf, from which the Assassins operated. Saladin had once tried to fight the Assassins but chose to proclaim a truce in order to focus on the attacks from the European parties.[128] We do not know much about the Assassins. They were members of a secret organisation that fled the

[125] Ibid., 18.
[126] Lloyd, "The Crusading Movement, 1096-1274," in *The Oxford History of the Crusades*, ed. Jonathan Simon Christopher Riley-Smith (Oxford ; New York: Oxford University Press, 1999), 38, 57;Jonathan Phillips, "The Latin East, 1098–1291," in *The Oxford History of the Crusades*, ed. Jonathan Simon Christopher Riley-Smith (Oxford ; New York: Oxford University Press, 1999), 125.
[127] Steven Runciman, *A History of the Crusades. Vol. 3: The Kingdom of Acre and the Later Crusades* (Cambridge: Cambridge Univ. Press, 1979), 64.
[128] Steven Runciman, *A History of the Crusades. Vol. 2: The Kingdom of Jerusalem and the Frankish East, 1100 - 1187*, Reprinted (Cambridge: Cambridge Univ. Press, 1979), 410.

Masyaf stronghold shortly after the Crusades due to of a loss of territorial power.[129]

Assassin's Creed focuses on two significant events in the Third Crusade: the retaking of Acre by the Crusaders in 1191, and the battle of Arsuf. After the Crusaders captured Acre, the cities of Acre and Tyre turned into the 'main cities' of the Latin East. During the war, Acre was heavily besieged and the battle turned into a massacre.[130] In September 1191 Saladin chose an area near the city of Arsuf as his battlefield. On the fifth of September there were negation talks for a truce between Richard and Saladin, but without avail. On the seventh of September the fights started. Although it was not the decisive victory of the Third Crusade, it became a moral victory for the Crusaders and Richard I.[131] Right before the beginning of the battle, the game ends.

3.3 A THREEFOLD TEMPORAL APPROACH IN UNDERSTANDING TIME IN ACTION GAMES

Now that we have some background information on the games and their historical context I will start my threefold analysis of time in action games. In the previous chapter I have made a methodological scheme that will help us to analyse time in action games from a threefold perspective. First I will study the games through the temporal layer of ludic time, in which I will focus on the mechanical space of the games. After this I will study the games through the layer of represented time, in which I will focus on the games as represented points in time. Lastly I will study the games through the layer of narrative time. In this final layer I will study how the games establish their plot.

3.3.1 DIVIDING AND DISTORTING THE TIME OF THE PAST: LUDIC TIME

In the theoretical chapter of this thesis I explained that ludic time exists in the mechanisms of progression in the game worlds. Ludic time also includes structures of task-based progression outside of the scope of the narrative progression of the games. The ludic structure of games shape the game spaces as 'spaces for play' and as spaces in which stories unfold. First I will analyse the ways the ludic structure establishes the games as spaces for play. In this analysis I will focus in particular on the way time seems to come to a halt when the games establish a cyclical movement of time in their game spaces. The games provide a structural division of individual segments (as levels, for example) within their game spaces and in these spaces time becomes abstract. Ludic time also provides a sense of progression in the game that is not directly based on the narrative. This progression is connected to the use of rewards of glory, and through the renewal of gameplay. The second part of this

[129] Robert Irwin, "Islam and the Crusades, 1096–1699," in *The Oxford History of the Crusades*, ed. Jonathan Simon Christopher Riley-Smith (Oxford ; New York: Oxford University Press, 1999), 224.
[130] Jaroslav Folda, "Art in the Latin East, 1098–1291," in *The Oxford History of the Crusades*, ed. Jonathan Simon Christopher Riley-Smith (Oxford ; New York: Oxford University Press, 1999), 147-148;Runciman, *A History of the Crusades. Vol. 3,* 47, 48, 54.
[131] Runciman, *A History of the Crusades. Vol. 3,* 55-57.

analysis will focus on the use of ludic components in the creation of video game narratives. Here, I will look at the way paidea rules restrict and structure gameplay to establish a specific order within the game. Next to this, I will look at the way games use the ludus rules as a means to tell their stories. Finally I will examine the ways the games reward the player with access to new territories to see how this shapes their stories.

Table 1*: Key points for the analysis of ludic time as a means of storytelling in games*

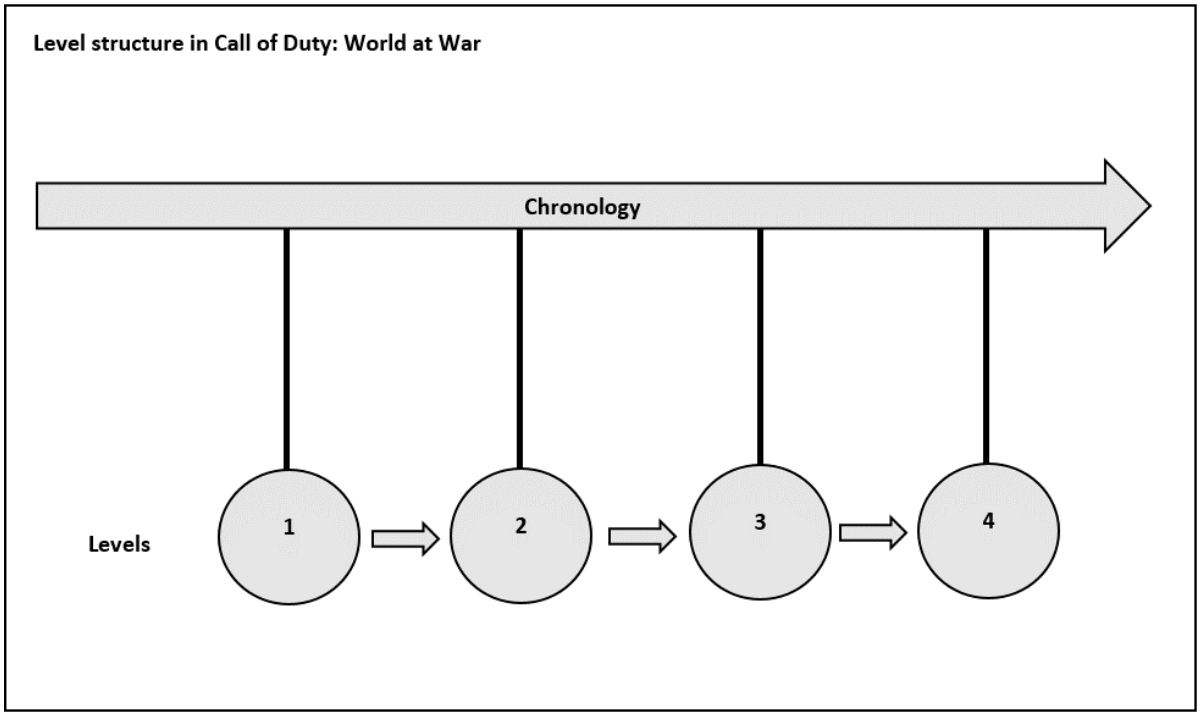
Temporal layer	Type of time	Key points of analysis
Ludic time	abstract	• structure of division of frames and borders of the world or temporal bubbles, like levels • cyclical components/simulation of time passage • rewards of glory and their link to the general story • rewards of access and their link to the plot • possibilities of progress outside of the plot (task-based) • ludus rules in relation to the plot • paidea rules as restrictions in relation to the plot

A scheme of the ludic mechanisms that support the construction temporality and time in video games.

Call of Duty: World at War (*Call of Duty*) follows a specific structure in terms of levels. This structure divides the game into a set of 'temporal bubbles' of abstract time, per level, and per objective. Each each level flings the player into a completely new world. *Call of Duty* establishes borders between the levels by simply dropping the player's character in a world with closed surroundings. The game offers only one way out, which complies with the progression of the plot. Through its division in parts and sub-parts, the game is able to tell a specific story.

Call of Duty follows a mission-based structure, in which each level represents one specific mission, as a singular temporal setting, for the player to play in. Because each level is individually established, the levels do not affect one another. The player does not take any gains or losses he makes within the temporal spheres along when he completes a mission and starts a new mission. It is, for example, useless for the player to save his grenades for mission B, while playing mission A, as the weapons are non-transferrable to new levels. These temporal worlds do not affect each other on a gameplay level, but do provide changes in the narrative of the game. Within the level as a temporal bubble, time becomes abstract and cyclical. Events unfolding in the background, like burning fires and the passing of airplanes keep repeating and renewing themselves while nothing changes. If the player, as Dimitri, does not take action, his fellow team members (the player is always part of a team of computer-controlled squad mates) will wait for him forever. The level itself is sub-divided into multiple temporal bubbles. The ludus rules define the passage from one temporality to the next by giving the player a set of objectives.

Figure 1: *The level structure in Call of Duty: World at War*



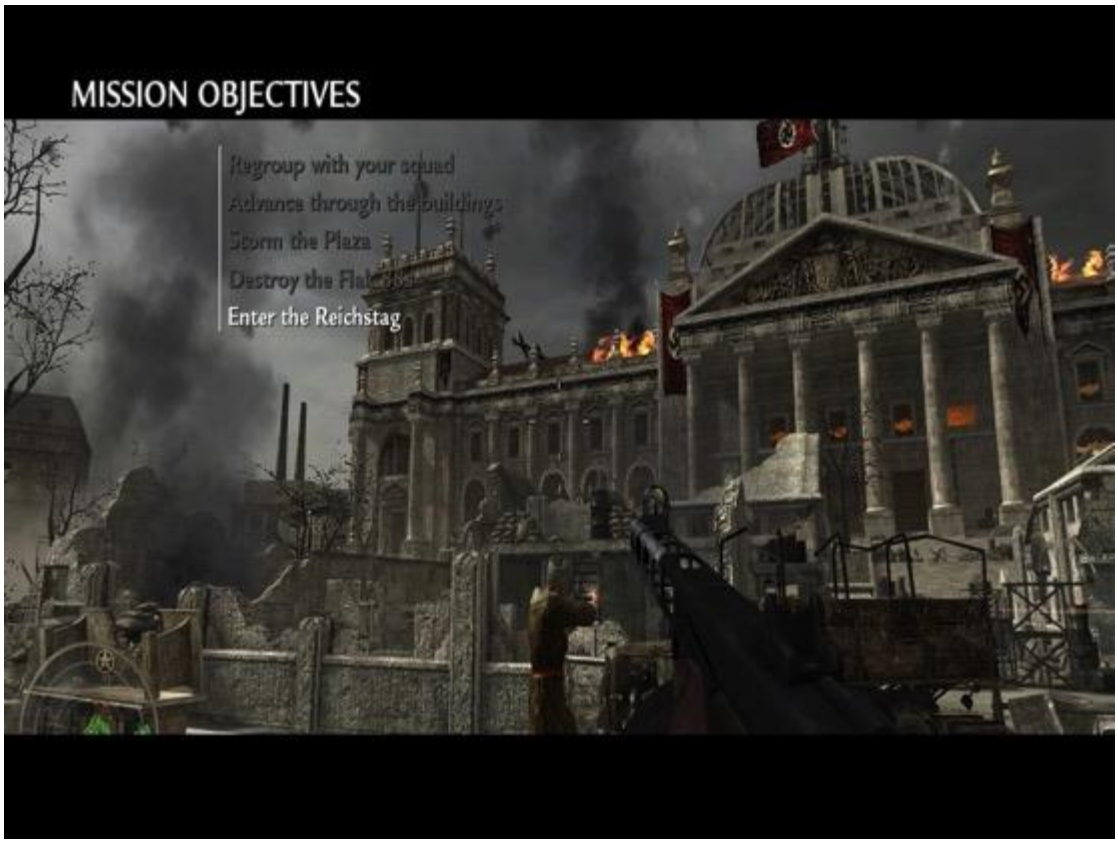
Each level is established as its own point in time and space. With the passage to a new level, the time and space of the level is renewed.

If the player completes the goals set by the ludus rules, he sets forward a sequence of events that establish the plot of the game. In *Call of Duty*, the player always receives a single objective that is within reach. When he reaches this objective, the game will present a new objective. For example, in the fifth level, *Eviction*, Dimitri is dropped in a flat in Berlin. His first objective is to 'clear the building'. This objective gives the player a goal and structures his behaviour to play the game in a specific way. When he has 'cleared' the building by killing the enemy soldiers, the player will receive a new objective: 'move up the streets with the tank'. By following the objectives the player transfers from one temporal bubble (him being in the flat which is stuck in abstract time) to a new one (a temporality in which the tank is moving up the streets). The game relies on the paidea rules to ascertain that the player follows the story as intended. The game establishes its space as a maze with only one correct path by using a set of invisible rules and visible road blocks. In order to let the player access the game space as intended, the level is structured as a linear path, with walls, barbed wire fences, or rubble, as 'natural' means that take away the agency of the player in deciding where to go.

In general, the player must fulfil his objective at a specific geographical location in the game. When the player reaches this location and completes his objective, the game rewards him access to new areas in the level. The next objective lies in these new terrains. In the final mission, *Downfall,* for example, the player must fight inside the Reichstag. It is only after the player completes his objective that his comrade soldiers open a previously locked door, which provides access to a new part of the building. The objectives that the player must complete are almost always related to the capturing of a specific geographical

location, or by taking out a specific person or object. It is often enough for the player to arrive at a specific location, which triggers a narrative sequence or a new objective. Sometimes the player has to perform a task within a limited amount of time. When this is the case, time is based externally (through a timer based on chronological time) and is connected to specific objects, like a moving car. In this case the player must complete his objective before the car leaves a designated area, which happens in an x amount of time.

Figure 2: *The objective-structure in one of the levels in Call of Duty: World at War*



Source: Treyarch, *Call of Duty: World at War*, Microsoft Windows (Activision Blizzard, 2008). The objective at hand is 'Enter the Reichstag'. Before, the objectives were structured to bring the player to the Reichstag.

The linear structure of the level hides the fact that the game mostly operates in temporal bubbles. The pursuit of objectives imposes changes in the temporality of the story of the game, but next to that it is obvious that the gameplay itself is set in abstract time. To mask this, the game presses the player to move 'forward' by giving him access to new areas and objectives. This structure allows the game to tell a specific story. If we choose not to follow these 'suggestions' that the objectives provide we can consider the games as spheres that allow for any act of free play. I will narrow this down to analysing possibilities for play that the game supports through its ludus goals that are not based on plot progression: the rewards of glory and the renewability of the gameplay. This is also in accordance with the concept of problem spaces.

Next to the following of objectives, *Call of Duty* offers little for the player to engage in. This is part of the strategy of the game to press the player forward as much as possible,

as this establishes the narrative development of the game. There is barely, if any, progression next to that of the narrative. The linear structure of the game ensures that the player eliminates all of his enemies on a first playthrough. This takes away the renewability of gameplay. After the player defeats his enemies there is nothing left to do and the enemies do not reappear. The player's team mates also do not follow him in any other explorations next to the linear progression of the game. If the player refrains from following the trajectory set forward by the objectives, and walks back to an earlier location in the level, he enters a desolated no man's land. There is not much to do except for walking around, and maybe stocking up on better weaponry that the player might find between the corpses of his enemies.

The game does provide a reward of glory as a bonus feature. Some levels in *Call of Duty* contain *death cards*, which are cards from a deck of playing cards that are attached to a helmet balancing atop of a rifle stuck in the ground. The death cards are collectibles that unlock specific items for the multiplayer variant of the game. If the player plays the game for glory, he will want to collect all available cards. This requires him to explore the entire level, and look in every nook and cranny to find them. The player has to engage in a different kind of gameplay; it is not just about running forward and breaking through enemy lines, he actually has to pay attention to his surroundings. In doing so, the setting of the game becomes more important. But this exploration of the world is secondary to the actual pre-established story line and its attached objectives.

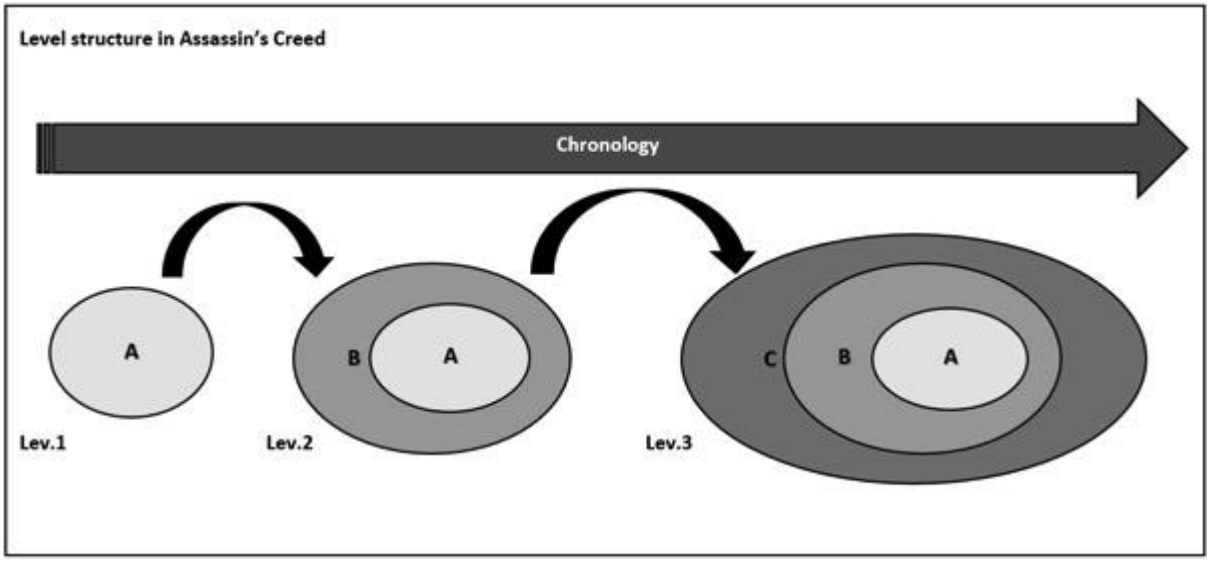
Figure 3: *A hidden death card (left), and a Panzerschreck-rocket launcher (right) in Call of Duty:World at War*

Source: Treyarch, *Call of Duty: World at War*, Microsoft Windows (Activision Blizzard, 2008).

The temporal worlds in *Assassin's Creed* exist, just like in *Call of Duty*, as a set of individual levels. Each level reveals a part of the story. A big difference between both games is that *Assassin's Creed* continues to use the same geographical locations in its levels, but at different points in time. In the first level, the player can only access a small area of the game world. Every time the player completes a level, or *memory block*, as it is called in *Assassin's*

Creed, the player progresses in time to a more recent temporality. With this temporal shift, the game world expands and opens up more possible quests. Within each level, the objective-based structure establishes a sub-division of temporal bubbles. Each temporal bubble exists in abstract time. Every object in this bubble follows its own cycles and contributes to the idea that time passes. The game uses various effects, like people walking in patterns and birds that fly past the player, to give the player a sense of temporal passage.

Figure 4: *The level structure in Assassin's Creed*



Each level is established as its own point in time and space. With the passage to a new level, space expands, and the initial level is renewed in time.

Assassin's Creed records the accomplishments of the player in two ways. The first way is based on the individual levels, which exists as *memory blocks*. Every time the player accomplishes a goal within an individual level, the game marks this accomplishment in its *memory log.* But the game also has a general log of goals that the player accomplishes throughout the entire game. The game calls this the *ribonucleic memory*. The goals that the player completes in the memory log keep track of the player's accomplishments in each individual memory block. They are tied to the temporal bubble of the level. The ribonucleic memory is different because it transcends the level-structure. This implies a shared causality in the accomplishments per individual level. One of the goals the game embeds in the ribonucleic memory is the collection of flag sets. The game contains a series of collectible flags that are hidden all over the game world. This game world is the shared space that reappears in each level. The flags are connected to geographical positions, and not to points in time (which shift over the course of the levels). If the player captures a flag in one level, it will be gone in all other levels as well. We find a second point of implied connections between levels in the rising notoriety of the player when he successfully assassinates one of his targets. After the assassination, all guards in the game will become more aggressive and distrustful towards Altaïr.

Similar to *Call of Duty*, *Assassin's Creed* establishes a movement from temporal bubble to temporal bubble by providing the player with a set of objectives. These are the ludus rules of the game. In this game, however, the player has more agency in the sequence of fulfilling the goals set by the ludus rules. At the beginning of a new level, Altaïr receives his main objectives and assassination targets from the Assassin leader in Masyaf castle. In order to complete his tasks, the player must break down this mission into smaller objectives and has the option to chose which objective he will follow first. The structure to complete an assassination-objective is always the same. First the player has to travel to the city where he wants to fulfil his first assassination. The starting point is irrelevant, as long as he assassinates all targets in the end. When the player has decided on where he wants to go, he must find his way to this city. The player then has to explore the city to start his investigations on the assassination target. There is a set of six possibilities to gather this information. The player has to complete (at least) two investigations to trigger Altaïr's '*Ancestral assassination memory'*, which is the moment in the level where the assassination target will appear.

When the player has investigated the assassination-case thoroughly enough, he can ask the *Assassin's Bureau leader* for permission to assassinate his target. If the player receives permission, the time in the game moves forward to a point in time where the target is at the expected destination, ready to be killed. As soon as Altaïr reaches his target, his *'assassination memory'* begins: he must kill his target and esape back to the Assassin's bureau without being seen by the guards. Reaching the bureau sets forward the chronological time in the game to a point where the city has settled down again. Altaïr must then report back to his leader in Masyaf and engage in the next assassination, which follows a similar pattern of objectives.

The objectives in *Assassin's Creed* are openly structured, which gives the player, to some extent, control about the way he will complete his mission. The player has the power to decide which goals he prioritizes over the others: will he go to Damascus first, or to Jerusalem? The order of these events is not important, as long as all 'checks' are marked. Between the completion of these checks the time of the world does not change. It is a task-based progression rather than a temporal progression. This is also true for the sub-objectives in Altaïr's assassination quests, where the player needs to complete two out of six tasks. Every objective is a ludus rule. Following the ludus rules establishes the story of the game. Temporality remains the same when the player works on the completion of a set of objectives within a level. It is only after he completes the entire set of objectives that the time of the story will move.

All objectives have a person at their centre. As soon as the player is near a person he needs to complete an objective, the game will initiate a '*memory imprint'*. The game calls this memory imprint the 're-playing of the memory as it occurred to Altaïr'. This basically means that the player has reached a point in the game which is supposed to be part of Altaïr's memory, and which will 'have been true' when the player re-enacts it. If the player fails, the temporality of the game resets the time of the story up to a point before the player

made an attempt to re-enact the memory. If the player succeeds, the game marks it as a 'truth' in history, and the player will gain knowledge of the event. The idea that the player in *Assassin's Creed* follows a set of memories also recurs in the development of the game world and levels. *Assassin's Creed* actively re-uses the same space in its levels, but this space expands per level. The game relies on paidea rules to lock the spaces the player is not supposed to explore yet in order to tell the story as intended. Here the developers chose to establish a 'memory failure'. As the player is supposedly re-enacting the memories of one of Desmond's ancestors, the memory of the past can suddenly become vague, making a location inaccessible. In the earlier levels of the game the memories of locations are still very vague. These memories slowly return per completed level.

Next to the ludus rules that provide the player access to new territories, the rewards of glory and the renewability of gameplay have a significant role in the game. This probably has to do with the fact that the game constantly recycles its spaces. *Assassin's Creed* is a game that relies heavily on exploration. Because the game re-uses its spaces, it is important that enemies also reappear. This shows us again that time is abstract, but it also shows that the player constantly engages with the game world. Even when he does not follow the trajectory of the plot, there is always something to do in the game. There are collectible flags scattered all over the world and in the cities, which results in the player exploring the entire world to collect all of them. The player also has the option to complete all possible objectives in his assassination investigations. As we saw, the player only has to perform an x amount of tasks before he receives approval to assassinate his target. But it is also possible, and more fun, to just perform all available tasks. The game stimulates these acts of play by giving the player rewards of glory, but these acts do not progress the actual plot of the game. What we see here is that *Assassin's Creed* uses its setting and space in a different way from *Call of Duty*. Instead of leaving the space empty and stimulate the progression of the story line, *Assassin's Creed* focuses on exploration as a way to induce additional gameplay. There is always something to do, even when the player is not following the objectives connected to the progression of the plot itself.

Through the ludic structure we see how the levels of both games divide their space in individual temporal bubbles, which are set in specific spaces at specific times. The player can do whatever he wants in these individuals spheres of play, but the games only allow him access to new points in space and time after he fulfils his objectives. These objectives lie at the centre of the story that the games are telling. Restraining the availability of moving from one level (or a part of a level) to the next allows the story of the games to unfold as intended. The space of the games can serve different purposes. It can be a limited space that is geared towards the rapid progression of the objectives that develop the plot of the game, or it can be a space that allows for exploration through the establishing of additional side-objectives that the player can follow for glory.

Figure 5: *Map of possible objectives in the city of Jerusalem, one of the locations in Assassin's Creed*

Source:Ubisoft Montreal, *Assassin's Creed*, Microsoft Windows (Ubisoft, 2007).

Figure 6: *Altaïr, capturing one of the collectible flags that are scattered all over the world*

Source: Ubisoft Montreal, *Assassin's Creed*, Microsoft Windows (Ubisoft, 2007).

3.3.2 ESTABLISHING HISTORICAL SETTINGS THROUGH REPRESENTATION

Now that we have revealed the mechanical ludic structure of the games, we can look at how the games transform their individual spaces into settings that represent history. I will first analyse the way games establish a passage of time between their objectives and levels. This will allow us to see the way time passes in the stories of the games itself. In order to do this I will follow the sociocultural labels that link the passage of time inside the games to our own ideas of temporal duration and progress. Secondly, I will study the way games establish their represented temporality as a constructed historical site. In my analysis I will focus especially on the ways the games use historical connectors to construct a historical setting. Calendar time will serve as my starting point, because this will give us a first indication of the temporality that the settings of the games represent. The historical traces flesh out this representation through their insertion in the game world. Analysing the historical connectors that the games use to establish their historical setting will provide us insights about the kind of historical story that the games are telling.

Table 2: *Key points for the analysis of represented time in games*

Temporal layer	Type of time	Key points of analysis

Represented time	abstract representation of temporalities	• the passage of time through the set of sociocultural labels and temporal schemata as distinguished by ludic mechanisms
		• the establishing of represented temporality via historical connectors:
		  ○ calendar time
		  ○ historical traces/objects
		  ○ successions of generations
		• elements contributing to the setting of the story that do not affect progression of the plot

A scheme that summarizes the ways represented time supports the construction temporality and time in video games.

3.3.2.1 Establishing a passage of time

The ludic structure of *Call of Duty: World at War* divides the game into a set of seven individual levels. Each level has its own mission name and coordinates, which mark the space and time they represent (e.g. 'Vendetta, Stalingrad, September 7th, 1942). The game establishes its representation of time through the use of calendar time. The sociocultural labels of these levels establish a temporal scheme through the progression of dates, and by calling each level a 'mission'. If we place the calendar dates of all levels next to each other, we see how the game presents a chronological recounting of the passage of time in its story. Time passes between each level, and the duration of this passage of time allows us to fit the events into a temporal scheme. For example, we see that the first level of *Call of Duty* takes place in September 7th, 1942, whereas all other levels take place between April 16th and April 30th in the year 1945. There is a gap of three years between the first and second level, and all other levels unfold over a period of two weeks. Because of the subsequently

unfolding of events in level two to seven, each level becomes part of a fast-paced offensive. The levels have a clear connection to each other because they are so close in time to the other levels. Furthermore, each level probably takes place over the course of a single day. There are no visible solar cycles, and the game only provides a date at the beginning of the level. This implies that each level is a representation of a single day. The sociocultural label of 'a mission' also corresponds to this idea.

Within the levels themselves, *Call of Duty* also triggers temporal schemata. The game often implies a passage of time to the player. For instance, Dimitri's sergeant often yells that he must hurry, or that he must attack his enemies when the bombers fly over. This intuitively creates an awareness that the time for action is limited, as a flight of bombers will probably not take very long. Most of the time the game establishes a sense of temporality that makes the player think that time passes, whereas it is actually highly abstract. Eternal rain, buildings that remain scorching, and a never-ending hail of bullets. All these occurrences might trick the player into thinking that time passes, while it does not. They trigger our temporal schemata because we compare these events to similar events in our own world. But in contrast to our world, the rain is simply a stylistic means to add to the mood of the setting of the game and does not signal temporal movements.

Assassin's Creed uses its sociocultural labels in a more abstract way. Instead of simply reading them from the screen through the dates on the calendar, the game implies its labels through the story of the game. The ludic structure divides the game in separate levels through its *memory blocks*. Each memory block (level), as explained in the game, is an expansion of earlier unlocked memories. According to the story, the player needs to recall a specific memory from his Ancestor's *genetic memory*, but can only get 'near' the recollection. When the player completes a memory block, the game will trigger a more recent memory.[132] There is a chronological order of the unfolding events, as each memory block brings the player to a more recent memory. We, quite literally, follow a 'train of thought'. Time passes from earlier memories to later memories. Unlike *Call of Duty*, we have to guess which specific points in time the levels represent. The instruction booklet that accompanies the game contains an 'internal memo' of the scientists working on a time machine, the *Animus*, which opens up a time path into the memories of a person's ancestor. This note reveals that the period the scientists studied covers three months (July, August, September) in the year 1191.[133] We can safely assume that the story takes place in this historical period. Through these dates, the player will place the events of the story in a temporal scheme that unfolds over a period of three months. This relaxes the passage of time when compared to *Call of Duty*, where most of the story spans two weeks.

Within the game and the levels itself, *Assassin's Creed* shows its passage of time

[132] In the game researchers find out that certain memories of persons are genetically transferred to their descendants. This is called the 'genetic memory'. Through the *Animus*-device, it becomes possible for the descendants of this person to travel back in time to the exact moment these memories were made by their ancestor.

[133] Ubisoft Montreal, *Assassin's Creed Instruction Manual*, n.d., 5.

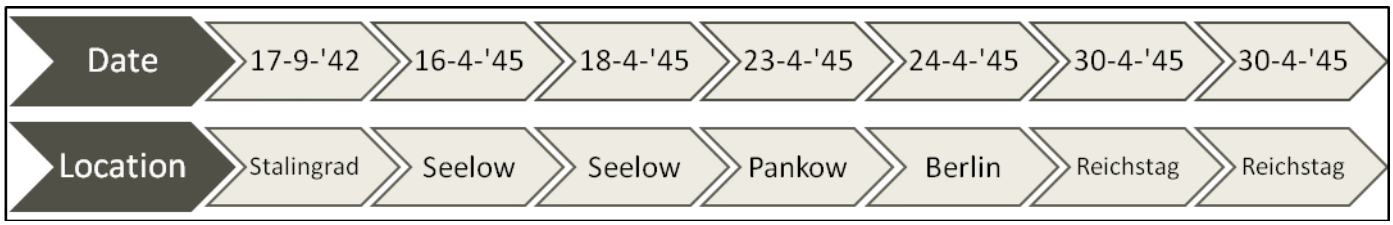
through the personal development of the player's persona, Altaïr. In the beginning of the game, the Assassin leader strips Altaïr from his rank as a master assassin. Throughout the rest of the game Altaïr redeems himself by completing tasks for his leader. Every time Altaïr completes a level, the Assassin leader allows Altaïr to move up in rank and provides him with more privileges, like better weaponry. This structure of personal progression is similar to a novice-expert structure. It activates a temporal scheme that shows how Altaïr grows as a person, and as an assassin, throughout the game. Next to this personal progression over time, the game also uses *memory fast-forwards.* When Altaïr completes a specific task, the memory (the current representation of temporality in the game world) fast-forwards to a more recent memory. This shows temporal passage, but the game does not indicate how much.

3.3.2.2 Projecting history

Next to the actual passage of time, the games also represent historical settings, which are set at a specific temporalities. It is clearly impossible to find all representations that the games provide. Instead I will present an overview of the ways the games use historical connectors to establish the game spaces as represented temporalities. The games project history onto the sphere of the game world through its use of calendar time, historical traces, and historical objects.

In *Call of Duty*, the dates of the game refer to specific dates in time as the foundation for its levels. Each level represents a specific point in time. Next to the dates, the levels also provide a specific geographical location and information on the army unit of which is Dimitri part of. As the timeline in figure 7 shows, the game follows a pattern which is structured around the representation of three historical events: the *Battle for Stalingrad*, parts of the *Seelow-Berlin offensive operation,* and the *Capture of the Reichstag.*[134] The levels represent moments in time and space where heavy fights went on during the war. The geographical locations and activity of different military units make the levels historically accurate. The set of represented temporalities reveals a large part of the narrative, which is something I will explain this in the next sub-paragraph.

Figure 7: *Timeline of the individual levels in Call of Duty: World at War*



Each level is assigned a specific date and location. Each arrow corresponds to the arrow beneath it.

The calendar date only serves as the beginning of the creation of a historical décor. The game uses a set of historical connectors within its game spaces to reconstruct their spaces

[134] Beevor, *The Fall of Berlin 1945,* xxxiii, 64, 255; Antill and Dennis, *Berlin 1945*, 36, 18.

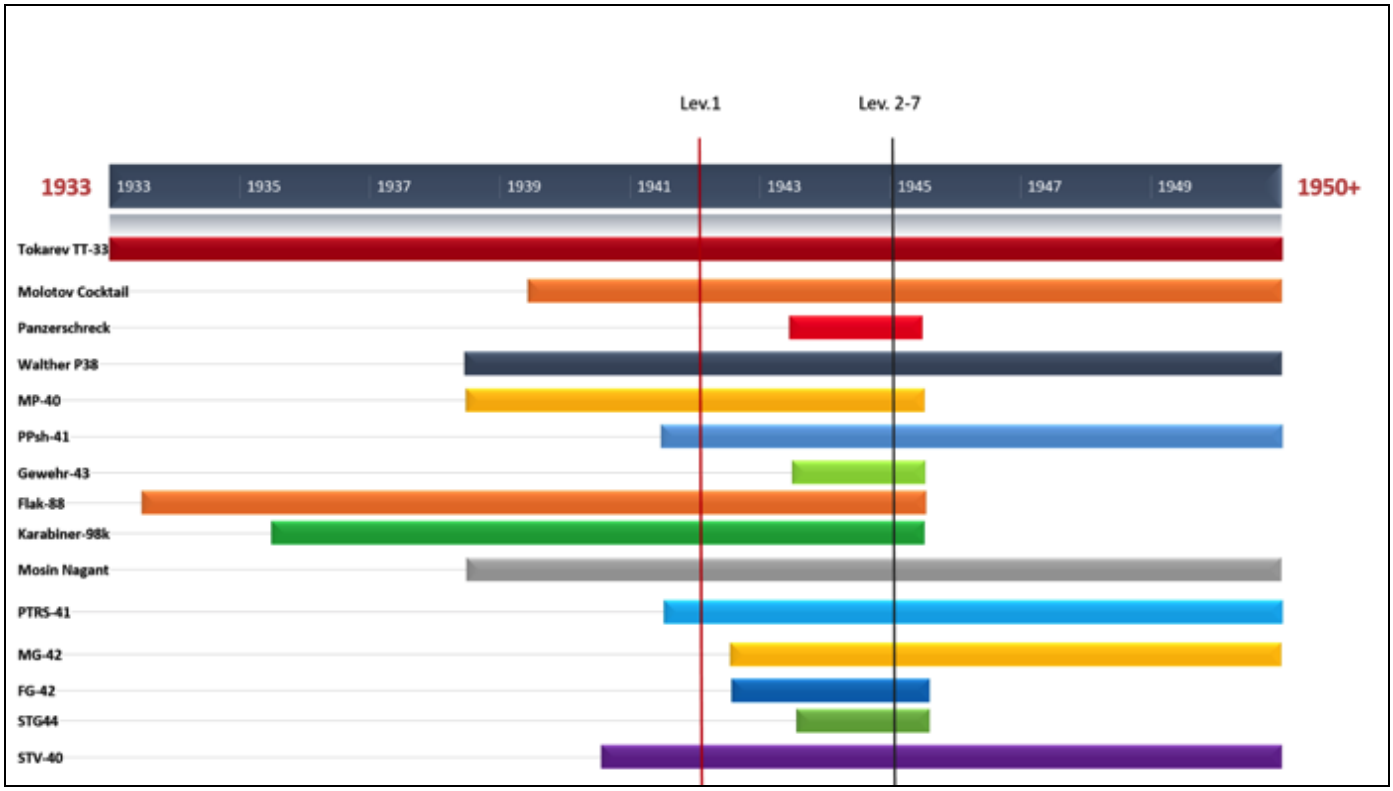
as representations of the points in time on the calendar . A multitude of traces contribute to this, which we could all take as a point of departure for our analysis. To name a few in *Call of Duty*: the geographical locations that the game uses as combat sites, and the use of European cities that the game recreates as desolated ruins. The game also depicts a series of Soviet and Nazi signs in its game spaces, like on flags and banners. The player wins the game when he places a Soviet flag atop of the *Reichstag,* which represents, or is at least a reference to, the iconic picture that marks the end of the war at the Eastern front.[135] I chose the case of the used weaponry in the levels of the game. This seems to be something the developers put effort in, making it a fair point to analyse the game in.

Figure 8 shows a timeline that marks the development of Soviet and German weapons used in the campaign in *Call of Duty*, compared to their actual service years around World War II. As we see, all weaponry that the player uses in the levels was in fact in service during the temporalities that the levels represent. It is important to note that the more modern weapons, like the *Sturmgewehr-44* are not available in the first mission, which takes place in 1942. The lack of these newer weapons in the first level shows that the difference in weaponry establishes a passage of time between the different temporal representations. The level is set at a specific time, and the weapons correspond to this point in time in order to represent the past. This contributes to the idea of historical authenticity in the game. The calendar time is of great significance here, because we measure all the historical traces against it. The traces must fit, or at least contribute to, the time of the calendar to configure historical time.

Next to the accessible levels, the cut scenes between the levels also use historical connectors. These scenes reveal a passage of time between the levels and help to construct a historical background for the game. By taking the cut scenes into account, the levels become part of a broader context. In the cut scenes, the game uses three types of historical traces: names and dates of important military events, troop size and movement on a map of the European Eastern front, and actual footage of the war. The screencaptures in figures 9 and 10 show some examples of historical traces that *Call of Duty* uses to construct its historical context.

[135] Antill and Dennis, *Berlin 1945,* 18.

Figure 8: *Weaponry in the Call of Duty: World at War Soviet campaign compared to their service years*



Source: "Call of Duty: World at War - Internet Movie Firearms Database - Guns in Movies, TV and Video Games," accessed March 19, 2016. My own projection, the horizontal lines show the used weapons in the Soviet campaign of Call of Duty: World at War on a timeline marking their service years. The vertical lines mark the represented temporalities in the campagin levels. It is only after the game moves to the temporalities set in 1945 that some of the later-used weapons become available.

Figure 9: *Two maps representing troop movements between levels, in Call of Duty: World at War*

Source: Treyarch, *Call of Duty: World at War*, Microsoft Windows (Activision Blizzard, 2008). Cut scenes between the levels 'Their Land, Their Blood' (left), and 'Ring of Steel' (right).

Figure 10: *Footage of the Second World War, used between levels in cut scenes in Call of Duty: World at War*

Source: Treyarch, *Call of Duty: World at War*, Microsoft Windows (Activision Blizzard, 2008). Cut scenes between the levels 'Ring of Steel' (left), and 'Eviction' (right).

The calendar dates establish a background 'story' for the events that take place in the campaign of the game. The footage of the WWII soldiers and victims contributes to the historical setting in which the game unfolds. We can actually say this about all historical traces, as they all contribute to the representation of that specific point in time. The footage concerning these historical events fills in the blanks of the narrative of the game through connecting it to a historical context. It shows what actually happened after 'the player', as a soldier, has taken in a city. The maps showing the troop movement also contribute to this context, but these maps also place the individual levels in a narrative structure by connecting them to a larger movement. Here the game uses snippets of historical information to distort the borders between the fiction in the game and the facts of the war. It serves a purpose by connecting the game to the reality of the past, which establishes historical time. The game inscribes its story with traces of the past, which embeds the game in the history of the war.

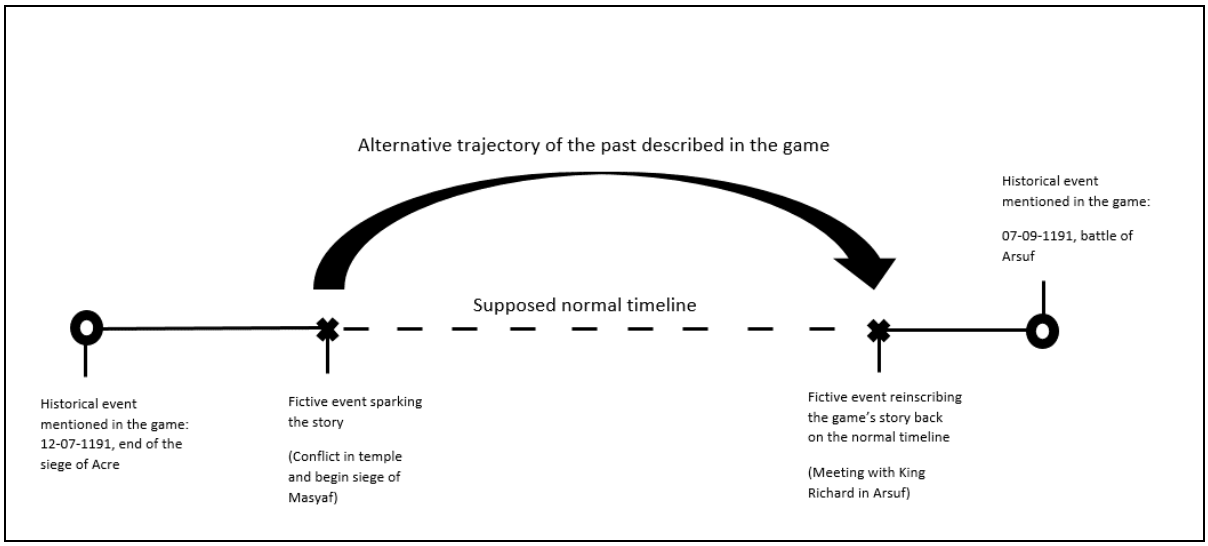
Similar to *Call of Duty, Assassin's Creed* also uses the calendar as a point of reference to establish its setting. The instruction manual of the game reveal that the game takes place in the months of July through September, in the year 1191. The game itself does not refer to specific dates, but near the end of the game, Altaïr has a conversation with King Richard I, before the king attacks the city of Arsuf. For us, this is interesting because the battle of Arsuf was an actual event during the Third Crusade, set on Sept. 7th, 1191. We find a second second hint, which locates the date near the beginning of the game, in a different city. When the player visits the port city of Acre during the third level, he will see a part of the town in ruins. Dead bodies are stacked in piles and remnants of wooden stakes, a common defensive obstacle, surround the city walls. During the Third Crusade, Acre was besieged by the Crusaders on July 12th, 1191. In the game we find the represented traces of this siege.

The game uses these two historical events to establish the representation of a specific setting in time in the game world.

Figure 11: *Aftermath of the siege of Acre, piled up bodies, wooden stakes and the scars of siege warfare on the city walls*

Source: Ubisoft Montreal, *Assassin's Creed* Microsoft Windows (Ubisoft, 2007).

Figure 12: *Timeline marking the historical events as borders of the storyline in Assassin's Creed*



My own projection, the game uses historical events near the beginning and ending of the game to provide the player with a point of reference to the temporal setting of the game, with a fictive story in between. This fictive story is sparked through a historical misunderstanding, initiating an alternative timeline, but these effects are reversed at the end of the game, when Altaïr talks the misunderstanding over with the involved parties.

As the timeline in figure 12 shows, the siege on Masyaf castle (the headquarters of the Assassins), which sparks the development of the plot of the game, is not a historical representation of a real event. In this case, the game configures historical time by using historical traces that correspond with the chronological representation of the year 1191 itself. We can safely assume that the game unfolds on a similar world and timeline as ours, since there are two events (the siege on Acre and the battle of Arsuf) that we can use as a point of reference, and these events correspond with the unfolding time of the game.

The idea of a lineage within the game also establishes a causal relation between the events that are set in the Third Crusade, and in the present of the game. It is *Desmond Miles*, living in the present, who moves back to the past through the genes given to him by his ancestor. The game uses a biological connection to suggest a normal continuation of history between the game's 'present' and 'past'.

The setting of the game, as a décor, configures historical time by referring to historical traces and objects that correspond with the given date, the year 1191. The cities in which the game partly takes place are all representations of cities that were of importance during the Crusades. Some examples are Damascus, Acre, Jerusalem, and Tyre. These cities serve as decors for the story to take place on and are filled with historical representations.The game uses market stands with clay pots and dried peppers, and people wearing specific clothes, to establish *immersive historicity,* which is the feeling of 'being in the past'.[136] This shows that historical traces do not only establish a temporal construction of the past, but also give the player the feeling that he is in the past. For my analysis I will look at the representation of specific political groups that are active in the game. As we saw in the historical introduction, the Levant was the theatre of a variety of political disputes during the Third Crusade. It is also a fair point to analyse the game on from a *problem space*-point of view: the various political factions active in the Levant serve a role in the rewards of glory of the game, so we know that the game developers put serious effort in the development of this category. The player must collect sets of flags that belong to the political factions. Each faction has a specifically designated geographical area where the player can find their flags. There are *Assassins flags, King Richard I flags, Saracen flags, Jerusalem crosses, Hospitalier flags, Templar flags, and Teutonic flags.* These flags all represent the political groups that were making spatio-political claims in the Levant: the Assassin tribe in Masyaf, King Richard I, Saladin and his Saracens, the Kingdom of Jerusalem, the Knights Hospitaller (Order of the Knights of Saint John), the Knights Templar (Order of Solomon's Temple), and the Teutonic Order (Order of the Knights of Saint John). These elements contribute to the way the game establishes a political setting that corresponds to the actual political status of the Levant in 1191.[137]

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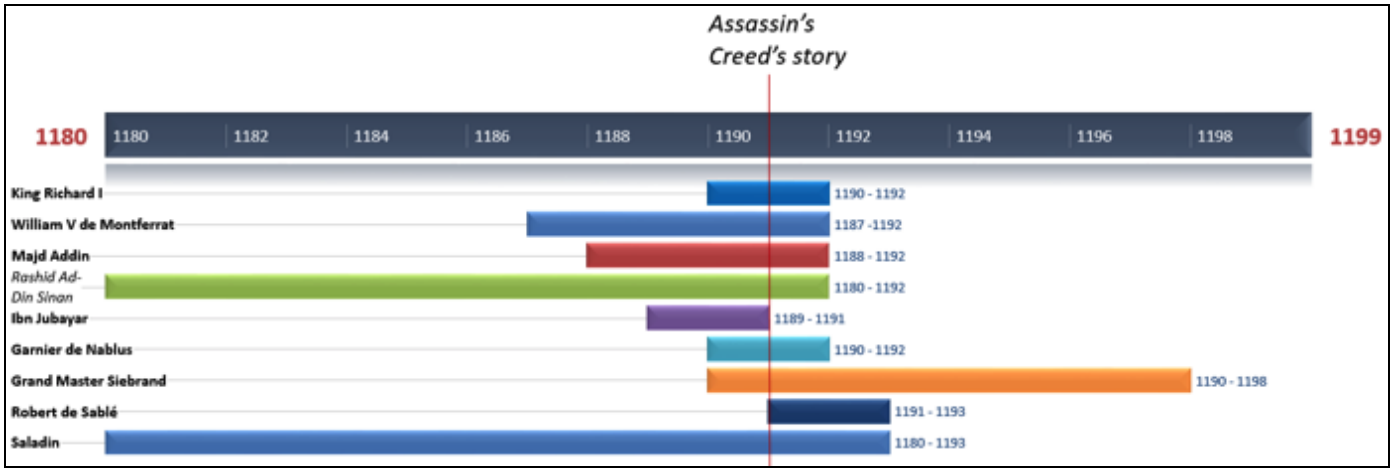
[136] Kingsepp, "Immersive Historicity," 80.

[137] Runciman, *A History of the Crusades. Vol. 3*, 67;Lloyd, "The Crusading Movement, 1096-1274," 63-64;Michael Routledge, "Songs," in *The Oxford History of the Crusades*, ed. Jonathan Simon Christopher Riley-Smith (Oxford ; New York: Oxford University Press, 1999), 106;Phillips, "The Latin East, 1098–1291," 125;Denys Pringle, "Architecture in the Latin East, 1098–1571," in *The Oxford History of the Crusades*, ed. Jonathan Simon

Almost all assassination targets in *Assassin's Creed* are based on historical persons that were active somewhere in the Levant in the year 1191. Figure 13 shows a timeline of these actors and their activity in the Levant. It shows that 1191 is the only point in time where all actors were situated in the right place to perform in this story. Not all names are exactly the same. Assassin leader 'Al-Mualim', for example, did not exist. However, the status of this persona corresponds to *Rashid Ad-Din Sinan*, the leader of the Assassins in the city of Masyaf at that time.

Figure 13: *Timeline of the activity of historical actors in the Levant on which the assassination targets in Assassin's Creed are based*



My own projection: the timeline shows how various historical actors all were in the Levant somewhere around the year 1191, the exact year the story of *Assassin's Creed* is set in.

It is important to take note that the assassination targets in the game often survived the year 1191 in real life. This reveals an interesting phenomenon in the representation of the past in games. History and fiction start to blur. In this case, the represented historical connectors establish the temporality of the setting of the game. From a broader perspective, however, this story does not inform us about the actual events that happened. The historical connectors construct a historical world, but within this world, the game allows for fictive events to take place. The calendar time serves an important function in this construction, because it is a point of reference. The year 1191 in the game acts as a representation of the year 1191 as we know it. The game uses a variety of historical connectors to construct the historical world of the game. Anything that happens after this construction belongs to the sphere of the narrative time.

3.3.3 TELLING STORIES THROUGH HISTORICAL DECORS

The final layer of time in games propels the time of the story that the player follows in a historical setting. In this temporal layer I will look at how the games connect the various

Christopher Riley-Smith (Oxford ; New York: Oxford University Press, 1999), 167; Irwin, "Islam and the Crusades, 1096–1699," 234.

represented temporalities in the games (as individual levels) to each other. This connection places the events into a poetic composition. Analysing these connections allows us to look at the development of the stories of the games. This operation lies at the centre of the games as narrative mediums, because the time of the game world progresses through its story. In my analysis of the plot, I will look at how the games use historical connectors to structure their plot. This is different from the analysis of the layer of represented time because I will now look at how the historical connectors serve as a catalyst that is part of a bigger story, and not simply as a décor. Next to this analysis of the plot structure I will also connect the layer of narrative time to the ludic mechanisms that progress it, and I will check if the structure of narration in the events is dynamic or static. This will reveal whether the outcomes of the occurrences of the events in the games are predetermined, or if the player has the agency to affect the historical development in the games. Finally, I will review the narrative effects that the games use to tell their stories.

Table 3: *Key points for the analysis of narrative time in games*

Temporal layer	Type of time	Key points of analysis
Narrative time	progressive time	• plot: actor, reasoning, objective • plot structure • use of calendar time in the plot structure • use of historical elements/actors in the plot • the ordering of narrated events • triggers of the narrative and their connection to ludus rules) • narrative effects to tell the story

A scheme that summarizes the ways narrative time establishes a progressing time of the narrative.

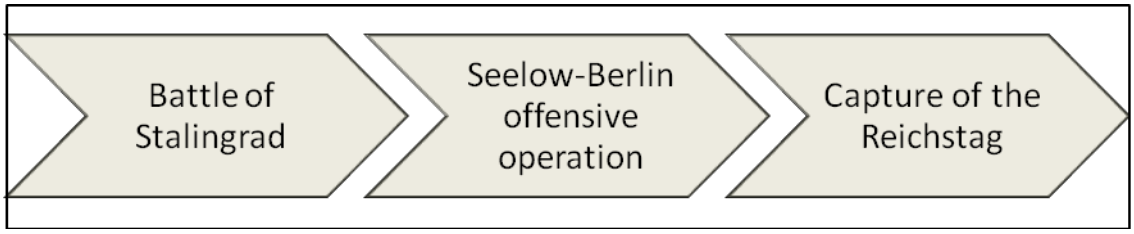
"The rotten cancer of the Fascist Reich ravages Europe like a plague. Their relentless drive into our motherland steals the lives of men, women, and children alike. The arrogance of their leaders is matched only by the brutality of their soldiers. These are the darkest days of the Nazi occupation of Stalingrad." – Sgt. Reznov, *Call of Duty: World at War*

With this text *Call of Duty* opens its first cut scene. The main character, *Dimitri Petrenko*, lies in a pile of human bodies in Stalingrad while German soldiers empty their rifle cartridges in the corpses of Dimitri's friends. When the soldiers leave, the player will hear a sudden voice. "*Shh… I need your help. Do what I say and we can avenge this massacre."* Sergeant Reznov appears, and he will not leave the player's back for the rest of the game. Within the first few minutes of the game the plot develops rapidly. The player takes the role of a soldier who lost his entire army unit during the battle of Stalingrad, and he wants revenge. This will become clear when the player beats the first level and the game fast-forwards three years in time. Right before the second level begins, the game shows a cut scene in which Reznov lauds the successes of the Red Army of the last three years. His speech ends with *"Once we have control of Seelow, we will begin the march to Berlin. There, we will ensure that every*

sacrifice is repaid in blood." The level will open and reveals a fitting name: 'Their Land, Their Blood'.

This story follows the structure of an epic, with revenge as its main drive. Dimitri survived the battle for Stalingrad and wants retribution for the cruelties he was exposed to. It is his objective to take revenge on the Germans by bringing the fight to their capital, Berlin. As we saw in the example of the levels as represented temporalities, the player effectively follows the narrative of the *Seelow-Berlin offensive operation.* This operation was a great success for the Red Army, and took place on German soil. The first level represents a period that is set three years before the rest of the levels, during one of the worst battles of the war. It is this time frame, so different from the rest, which establishes the emotional narrative of this story.[138] By starting the plot at this point in time the game develops the structure of a revenge story. This deeply affects the rest of the story and the way the player will interpret his objectives. The first level serves as an explanation for the Soviet violence when killing Germans in the game, and in history itself. The game emplots three historical events, the *Battle of Stalingrad*, the *Seelow-Berlin offensive operation*, and the iconic picture of the capture of the *Reichstag*, in a poetic structure to tell a very specific story about the war.

Figure 14: *The three historical events used in the story of the Soviet-campaign in Call of Duty: World at War*



My projection, based on the events and dates surrounding the Soviet campaign in *Call of Duty: World at War*

Call of Duty relies on calendar time for its level structure. Specifically, each level represents a moment on the calendar in which a historical event occurred that bears significance for the story. The historical events become part of a homogeneous story through this structure. The game starts at a point when the Soviets are overrun by the Germans, which provides the motivation for the protagonist to achieve his goals. After the first level, the game structures each mission around a specific point in time in space, and in the process establishes the narrative of the *Seelow-Berlin* offensive operation by following its pattern of movement: from Seelow to Pankow, and from Pankow to Berlin.

[138] There actually is a second possible reason for the game to use this level as a starting point for its story. This level is mostly based on the story of the popular World War II-film, *Enemy at the Gates.* It is possible that by taking this as its starting point, the game developers wished to make their game more appealing to its audience. See Jean-Jacques Annaud, *Enemy at the Gates*, (2001).

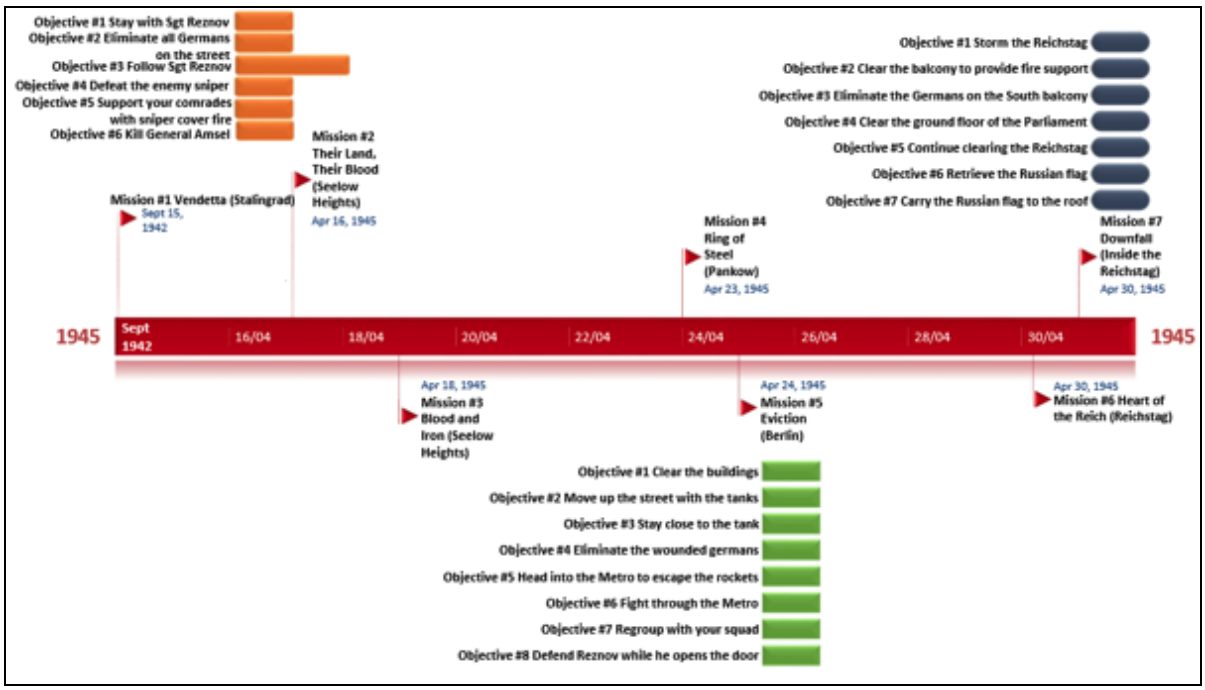
Dimitri's narrative wraps up after he places the victory flag at the top of the Reichstag on May 30th, 1945. During this act, an enemy soldier critically wounds Dimitri. We know from historical sources that the fighting in Berlin did not stop on May 30th. But with Dimitri's state of health, the war is definitely over for him. This event allows a natural closing of a plot that leaves several interpretations open about Dimitri. This 'natural' ending of the story does not collide with the facts of history regarding the ending of the war.

The army units that Dimitri is part of play a significant role in the plot. In the first level of the game, Dimitri is part of the 62nd rifle division. The survivors of this division all attained the honorary guard status after the battle for Stalingrad. During the last mission Dimitri is part of the 150th rifle division, which is the division that was responsible for taking over the Reichstag. Interestingly enough, historical sources note that some members of the 62nd rifle division were promoted to the 8th Guards Army. This army was also involved with the battle for Berlin.[139] This fact logically connects the first and the last mission with each other through the use of this historical military rank. The final historical trace that the game uses for its plot is the point where Dimitri plants the victory flag, which marks the Soviet victory in Berlin. I do have to note that it would almost be impossible for a soldier at that time to be part of as many units as Dimitri was. It is especially hard to believe that a soldier survived the battle of Stalingrad and also entered the Third Shock Army, like Dimitri did.

Call of Duty tells its story through various narrative techniques. First of all, the narrated events in the game follow a predetermined and static structure. The player must follow his objectives step-by-step in a pre-arranged structure that determine the path of the game. The story progresses linearly, which ascertains that the narrative unfolds as the game intends it. The game is a story about a specific *World War II* soldier and it must be told as such. The game establishes its linear structure by dividing each level into several objectives. The player must fulfil each objective to progress the narrative. By following the objectives, we can trace a causal chain of events, which tells a story through the performances of the player. Each objective triggers a new part of the narrative. This happens either through new dialogues, cut scenes, specific events, by providing the player with new objectives, or by wrapping the level up entirely. Every time the player achieves a goal, the story of the game progresses. Simultaneously the game uses the set of goals to structure the game space as a story. The game creates a narrative causality by connecting the objective to a narrative meaning.

[139] Antill and Dennis, *Berlin 1945*, 16.

Figure 15: *The objective-structure of various levels in Call of Duty: World at War*



My own projection of the levels of the Soviet campaign. Each level is divided by a set of objectives, and by following the objective at hand the game tells its story.

The outcomes of the events are predetermined by the narrative structure, which is directly connected to the completion of the ludus goals, which trigger narrative effects whenever the story requires it. However, there are a few moments in the game where the player must decide on the fate the prisoners of war. Will he kill them mercilessly, or will he allow them to live? The war game shows moral grey area, as it does not always reward the acts of mercy. In one instance, Dimitri's comrades burn the German soldiers to death if the player decides to let them live. It turns out that the quick and clean bullet to the head would have been the responsible option.

The sequence of occurring events does not change through these actions of the player. But in one of the final levels the player will get to read the journal of a fellow soldier. The journal describes Dimitri's role in the war, and its content changes depending on the actions of the player during these moral dilemmas. The role that the journal bestows upon Dimitri varies between him being a brave hero who is also able to show mercy amidst the brutality of war, and him being someone who is a merciless savage, similar to the other soldiers of the Red Army. The outcome of the game remains the same in all cases, but this journal helps the player to establish an image of Dimitri in comparison to the rest of the Red Army. It is a way for the player to reflect on his own actions and position in the war.

The story of *Assassin's Creed* begins in the Temple of Solomon, where Altaïr is sent to steal the *Ark of the Covenant*. Robert de Sablé, a Knights Templar, is also after this treasure and attacks Altaïr when he finds him in the temple. Things go bad and De Sablé lays siege on

Masyaf castle, the Assassin Clan's headquarters. The assassins manage to fend off the army of De Sablé, but the Assassin leader, *Al Mualim*, still punishes Altaïr for putting the clan in danger. Al Mualim threatens Altaïr with the death penalty, but also gives him an alternative: Altaïr needs to redeem himself and 'buy back his life' for nine others. The player can save Altaïr by assassinating eight people with a connection to Robert de Sablé, and of course De Sablé himself. Al Mualim is not confident in Altaïr and strips him from all of his 'assassin privileges', to make him 'a child once more'. The rest of the story follows how Altaïr tries to restore his rank by eliminating his targets. With every assassination, Altaïr wonders more and more about the morality and justification of his actions. Near the end of the story, Altaïr finds out that De Sablé and Al Mualim are conspiring to maintain political control in the Levant. This makes both De Sablé and Al Mualim traitors, the first to King Richard, and the latter to his own people. Throughout the game the character of Altaïr grows as a person. The story establishes him as someone who is righteous in his actions. Altaïr carries out his assassinations as a 'death sentence' to those who betray their beliefs, in order to make a better world. Near the end of the game, Altaïr has a conversation with King Richard, right before the battle of Arsuf. This is where the treachery of both De Sablé and Al Mualim comes to light. De Sablé and Altaïr duel to the death, and Altaïr wins the fight. At the same time the battle of Arsuf, led by King Richard, is about to start. Altaïr leaves King Richard to deal with his own war, as he returns to Masyaf to confront Al Mualim with his betrayal.

The story of *Assassin's Creed* revolves around Altaïr's struggle for redemption after exposing his clan to danger. Similar to *Call of Duty,* the beginning of *Assassin's Creed* constitutes an antagonist for the story. As we saw in figure 12, the timeline of the historical events in *Assassin's Creed*, the game starts with the siege of Masyaf, but the represented temporal frame of the setting itself only begins right after the siege of Acre. The interesting part here is that the siege of Masyaf never happened in history. Nor did the Knights Templar ever fight against the Assassins. In order to establish an enemy of the Assassins, the game inserts an additional event to act as the catalyst for the story. The Assassins interfere with the Third Crusade because of this event, which is something that never happened in reality. This also explains why Altaïr goes to the Temple of Solomon in the beginning of the game: Robert de Sablé was the Grand Master of the Knights Templar, which is also known as the Order of Solomon's Temple. The game needed a location where the Assassins would be able meet De Sablé. To establish this possible meeting point, the game provides a backstory in which both parties search for the Ark of the Covenant, which remained in this temple (and later mysteriously disappeared). After the Assassins are drawn into the Crusades by this event, the game ends at a point where both antagonists, Robert de Sablé and Al Mualim, are killed. The disruption caused by their interference in the 'historical timeline' stops, and normal order re-establishes itself. The death of these persons is not important as a historical fact, since it never happened, but it marks the closing of the alternative timeline that was

created by implementing the fictional siege of Masyaf. After Altaïr talks with King Richard, the Assassins withdraw their involvement in the Crusades. King Richard, now with only Saladin against him, continues the Crusade and attacks Arsuf, where he will undoubtedly defeat Saladin. This suggested event marks the ending border of the timeframe of *Assassin's Creed*. The attack on Arsuf itself implies that the story, after the series of events in *Assassin's Creed*, continues in accordance with our own notions of the trajectory of history.

The use of calendar time is rather abstract in *Assassin's Creed*. The game establishes its temporality more or less by connecting the beginning and the end of the game to the siege of Acre and the battle of Arsuf. Between these two points we see that the game has based its assassination targets on persons that were in the Levant during the represented temporality of the game. This has already been shown in the timeline that I created in the previous sub-paragraph. In this sense the game relies a lot on historical actors in the plot: they are participants in the unfolding story and legitimize the use of the year 1191 in the story.

3.4 CONCLUSION

This chapter started with the question: *how do action games configure historical time?* To answer this question, I have analysed two historical action games through a threefold analysis of temporality in games. Following the configuration of historical time requires an analysis that takes the way games establish temporality itself, and allow it to shift in accordance with the story of the games into account. My threefold analysis of temporality helps us to understand games in both configurations. Respectively, I looked at the games as spaces for play divided by its structural mechanisms in *ludic time,* as spaces where specific temporalities are created, in *represented time*, and as spaces where stories unfold, in *narrative time*. This conclusion provides the results that I found by applying my methodological scheme to action games, and is a first step in analysing how historical time is configured in action games.

In the analysis of ludic time we saw how both action games progressed their stories. The games are divided by a level-based structure, which is again divided by a series of objectives. Inside the levels and between the objectives the games establish motionless points in time, which are temporal bubbles. This structure arranges the unfolding events of the games in a specific sequence of causality. Time only moves if the player undertakes a specific action. *Call of Duty,* for example, uses a mission-based structure in which the story of the game only progresses after the player completes his mission. This structure establishes a linear game experience by expanding the story and objectives step-by-step. *Assassin's Creed* uses a similar structure, but here the player completes the level after he marks all required items on the check list.

The games restrict and structure the player's possibilities in the game through the ludus and paidea rules. These rules establish a particular kind of play, in which the player follows a specific path. We see this more clearly when we look at the level structure of the games. Each level is a closed sphere, and the player is only able to progress the time and space of the level after he completes the objectives within this space. *Assassin's Creed* re-uses the same game space for multiple parts of the story. Here the game restricts the player from entering parts of the game sphere until it is time for the story to progress towards those areas. The game establishes blockades and narrativises them as 'memory failures'. *Call of Duty* does not have to do this because the game never re-uses its game space. The player simply moves over to new levels which consists of a new space that the player must explore.

The game sphere itself is an active component for free play in *Assassin's Creed.* There are multiple reasons for the player to explore the entire world of *Assassin's Creed*, like capturing flags or collecting items. This type of interaction shows that the background, or the setting of the game, is an important part of the gameplay. Here, space itself works as a means to learn more about the world of *Assassin's Creed* through exploration. *Call of Duty* does not seem to have such a desire. Instead, the world here is geared towards the rapid development of the plot. The game actively nudges the player in the right direction of the levels through the vocal commands of Dimitri's squad leader, and by a lack of interaction with the rest of the game world. In both games the story progresses through the set of temporal bubbles, which are established as levels. But whereas *Call of Duty* goes for a sort of 'film experience', and pushes the player to follow the plot, *Assassin's Creed* attempts to persuade the player to also engage with the rest of the game world.

In the layer of represented time I studied the way the games establish their historical setting, and I looked at the mechanisms that reveal the passage of time between the represented temporalities. In both games calendar time has a key function in these two kinds of representation. By referring to a date, the games invoke the idea that their settings represent a point in time that is comparable to a date in history. *Call of Duty* marks each of its levels with a location and a date, which gives us specific and accurate insights about when and where the level takes place. By connecting the levels of the game to various points in time, the game establishes a sense of temporal passage between the levels. Each level exists as a specific day within this structure, which follows a subsequent temporal progression. In *Assassin's Creed*, the player discovers that the game is set in the year 1191. Internally, the game does not establish a clear passage of time. Instead of linking its temporal progression to a calendar, the game uses two historical events to mark the passage of time. The first event is the siege of Acre, whereas later in the game, the second event appears when the game mentions the battle of Arsuf. Moving from the siege of Acre

to the battle of Arsuf implies a progression in time, as these historical events took place within months of each other. Here we see how the games can use historical events and traces that indicate temporal change to tell a story.

Within the levels as represented temporalities, the games do much more to represent the past. The games actively use historical traces and other historical connectors to establish their historical decors. *Call of Duty* focuses, for instance, on weaponry that Soviet and German soldiers used in the same time period. Next to this the game uses a multitude of signs that are common to the European Eastern front in the war. The game draws parallels with actual historical events by basing its level-objectives on these events, like the raising of the Soviet victory flag on the top of the Reichstag.

Assassin's Creed mostly maintains the same temporal representations in its levels. The game revolves around the year 1191, and by not specifying the exact time of the events that take place, the game always represents 'the year 1191'. The game uses its representations in a similar style as *Call of Duty*. The assassination targets in *Assassin's Creed* are representations of people who actually were in the Levant somewhere around 1191. In the setting of the game several political factions that were active in 1191 fight out their territorial disputes. Next to this, the game draws parallels with the Levantine past, through its references to specific cities, and its use of more general historical representations, like clothing and architecture.

In the analysis of narrative time I studied the total set of represented temporalities in the games. In particular, I followed the plot of the games, and I looked at the emplotment of the individual levels and historical representations in their broader stories. *Call of Duty* emplots various historical events into a homogenous story. The game establishes its levels as representations of historical events. The game refigures the individual events, or levels, into a new story through a poetic composition. The game establishes this composition through its level structure. *Call of Duty* revolves around the trauma of the battle for Stalingrad, which the game ties to the Seelow-Berlin offensive operation. To finalize the story, the game re-enacts the raising of the Soviet victory flag at the top of the Reichstag. Each historical event changes in meaning through this structure. It is not the historical event that the player re-enacts, it is the set of events. This set of events tells its own story through its poetic composition.

In the story of *Assassin's Creed*, the past itself becomes distorted. The game begins with a counterfactual event that changes the course of history. The game emplots two historical events in the same story to demarcate the borders of the 'real past'. Fiction reigns between these events. The entire setting of the game acts as a representation of the temporal world set between the two points in time. In between, the past becomes counterfactual. Whatever happens in the narrative does not matter because in the end, the story will reverse the causal effects of the events through a final event in the game. The

conversation between Altaïr and King Richard I allows the Assassins to retreat from the Crusades without affecting the normal trajectory of the past. The game re-establishes normal time by reverting all possible changes to the normal timeline. The two leading historical events in the story function as a means to configure historical time. The narrative ties both events together, and refigures all events in the game as part of the wrapping up of this alternative timeline.

The process of configuring historical time inscribes features of cosmological time onto the narrative of experienced time.[140] Games reverse this structure, as the story and the ludic structure become the denominators that decide when time in the game sphere is moving. Action games configure historical time through the interplay of ludic time, represented time, and narrative time. In the first place, the represented time configures historical time through its use of historical representations. These representations inscribe objective time onto the game sphere, and onto the story, which the player acts out in this sphere. In the narrative time, however, the game repurposes the represented time. All events that configure historical time in the games are, for a second time, reinscribed onto the time of the story. Through this second configuration the levels of the games attain a new meaning. The game emplots each level in its new homogeneous structure. Action games configure historical time in twofold. The individual levels and settings of the games configure historical time through their representation-filled settings. The story of the games configures historical time for the second time by drawing all events into the subjective time of a new, broader story, which the games provide through their entire structure.

[140] Ricœur, *Time and narrative Vol.3*, 99–100, 104.

CHAPTER 4
A THREEFOLD ANALYSIS OF TEMPORALITY IN STRATEGY GAMES

4.1 INTRODUCTION

In this chapter I will analyse the configuration of historical time in *strategy games* by using the threefold analysis model of temporality again. I will re-apply the steps of the previous chapter to see whether strategy games take on a different approach in their configuration of historical time. I will discuss two historical strategy games: *Age of Empire III* (Ensemble Studios, 2005), and *Sid Meier's Civilization IV* (Firaxis Games, 2005). The approach I will use for these games differs slightly from my approach to analysing action games. This is because action games focus especially on their story mode (the campaign), but after playing the strategy games, I found out that this is not really the case in *Age of Empires III (AoE)* and *Sid Meier's Civilization IV (Civ)*. There is a clear distinction between the campaigns, or scenarios, as it is called in *Civ*, of the games, and the normal, free playing modus of the games in the 'skirmish'-mode. In the skirmish-mode of the games the player takes on randomly generated enemies in randomly generated maps. The emphasis of these games lies on the skirmish-mode, and not on the campaign. In order to understand how the game developers tell historical stories in these games, we must take the 'free' mode of playing the games in the skirmish mode into account. We have to take a look at how this mode of playing changes when the games implement a (historical) narrative.

The structure of this chapter is as follows: first, I will elaborate on the games themselves by explaining the historical context of their narratives. In the second paragraph I will commence my analysis and take a look at the ludic structure of both games. I will compare the skirmish-mode of both games with their campaign-mode to see which rules are changed in order to create spaces for historical representations and stories. I will elaborate on these two subjects in the third and fourth paragraphs. In the third paragraph, I will take a look at how settings in the campaigns configure historical time through their use of historical connectors, and I will explain what happens with the configuration of historical time in the skirmish mode of strategy games. I will take on a similar project in the fourth paragraph, but now for the narrative structure. I will analyse the plot of the games, to see how they uses various historical settings in their storytelling. Through this analysis I hope to see how the games make use of the past for their own stories.

4.2 TO BUILD AN EMPIRE WHICH WILL STAND THE TEST OF TIME

Strategy games differ from action games in their perspective and scale. The easiest way to recognize this is by looking at the camera perspective. Strategy games often take on a third person point of view from a large distance, which is similar to a bird's eye view. This distances the player from recognizing identifiable characters. Through this removed point of view the player takes on a broader perspective. He acts as a deity hovering above the playing field and controls multiple pieces at once.[141] In opposition, action games usually focus on one single character in their stories and gameplay. In the strategy games I will study, the player takes the role of a ruler-deity of an empire. The structure of strategy games is either based on *real time* or on a *turn-system*. In *real time*, all players are able to move their pieces continuously. When games are *turn-based*, each player takes turns performing actions. [142] In both types of games the player has a high situational awareness. Next to managing an army, the player also has to manage the input and output of his economic resources. He can use these resources again to improve his army and empire. It is as Sid Meier (the creator of the game) says in the introduction of *Civilization IV*: "your goal is to create and maintain an empire which will stand the test of time."

4.2.1 A LINEAGE OF HEROES: AGE OF EMPIRES III

Age of Empires III (AoE) is a real time strategy game in which the player manages his colonial settlements in the New World: the Americas. As the game carries on, the player expands and develops his colony through a series of upgrades and technological progressions. The goal of the game is to transform a small settlement of tents and shacks into a full-grown empire with fortresses and railroads. The player is not bound to specific turns, and the game allows hims to move his pieces and develop his buildings and lands whenever he pleases. At the start of a game the player can choose a specific civilization as his 'actor'. Each civilization has its own special skills and expertise. The game ends when the player beats his enemies through military conquest.

The narrative 'campaign mode' of the game follows the story of the *Black*-family over a period of approximately 200 years. The story starts in the late sixteenth century when Morgan Black, famous (and fictional) sword fighter and Knight's Hospitaller, sails to the New World to stop a great evil from gaining immortality. Throughout the game, Morgan's grandchildren, and great-great-grandchildren (etc.), will be called upon to fight this evil in their lifetimes as well. The story unfolds in the New World and tells a short history of this continent after its colonization. The player slowly sees the British colonies develop, finds himself caught in the American Revolution, and eventually even helps *Simon Bolivar* in his Revolution against the Spanish. The story focuses on members of the *Black*-family, but the gameplay revolves around the historical periods that harbour these family

[141] Fernández-Vara, *Introduction to Game Analysis*, 140.
[142] #RTS and #turn based game, in Juul, "Half-Real: A Dictionary of Video Game Theory."

members. The game develops in three individual acts. Each act is set at a specific point in time.

It is harder to explore the historical setting of the game because this game covers a much larger period of time than the action games in the previous chapter. This is especially the case because the game clusters historical facts that did not necessarily happen around the same time. Most important for this story is that the game draws its inspiration from the voyages to the New World for settling purposes. The main story, as I will explain later in the narrative sub-paragraph, is based on the legends surrounding Juan Ponce de Leon's travels to Florida in 1513. The setting in which the story develops is set at a point in time where the Spanish had already conquered the Inca and Aztec empires in the Americas.[143] The second act of the game begins at a point in time where the territories in the New World are caught up in the events of the Seven Years War (1754 – 1763), which was a complex conflict between, amongst others, France, Great Britain, Russia, Prussia and Spain. The conflict also involved the (Native American) Iroquois Confederacy.[144] For our story it is important to note two key conflicts in the Seven Years War: the French and Indian War in North America, and the conflict between Great Britain and France.[145] It was this latter conflict that eventually procured the long due American Revolution, which marks the end of the second act of the game.[146] The third and final act of the game covers the period after the Revolution in North America, during the so-called 'transcontinental race for the railroad to the West' in the US. Perhaps more important to the story, the game follows the conquests of Simon Bolivar (1783 – 1830) during his fight for independence from Spanish rule in Latin America.[147]

4.2.2 THE COURSE OF HUMANITY, CIVILIZATION IV

On the other hand, *Sid Meier's Civilization IV (Civ)* follows the player's civilization from the era of the hunter-gatherers all the way through the development of *cold fusion* technology. The game is set on the calendar between 4000 BCE and 2050 CE. This game almost completely focuses on its skirmish play mode, in which the player must choose a civilization to develop. After his selection, the game will start on a randomly generated map (the level), where the player will find other (artificially intelligent) players, who also play as certain

[143] Garcilaso de la Vega, *The Florida of the Inca: A History of the Adelantado, Hernando de Soto, Governor and Captain General of the Kingdom of Florida, and of Other Heroic Spanish and Indian Cavaliers,* (Austin, 1951), http://hdl.handle.net/2027/mdp.39015003943852, 8;Robert Greenberger, *Juan Ponce de Leon: The Exploration of Florida and the Search for the Fountain of Youth* (The Rosen Publishing Group, 2005);David B. Abernethy, *The Dynamics of Global Dominance: European Overseas Empires, 1415 - 1980* (New Haven, Conn.: Yale Univ. Press, 2000), 47;"Aztec Timeline," accessed May 30, 2015, http://www.aztec-history.com/aztec-timeline.html.

[144] Jonathan R. Dull, *The French Navy and the Seven Years' War* (U of Nebraska Press, 2007), xi;Fred Anderson, *Crucible of War: The Seven Years' War and the Fate of Empire in British North America, 1754-1766*, Reprint edition (New York: Vintage, 2001), 12;Matthew Shaw, "The American Revolution - Timeline from 1763-1787," Text, accessed June 19, 2015, http://www.bl.uk/onlinegallery/features/americanrevolution/timeline.html.

[145] Dull, *The French Navy and the Seven Years' War, xi*.

[146] Ibid, 254.

[147] Walter R. Borneman, *Iron Horses: America's Race to Bring the Railroads West* (Hachette UK, 2014), 9-10 and xiii-xiv. Marie Arana, *Bolivar: American Liberator*, Reprint edition (Simon & Schuster, 2014), 6, 3-5.

civilizations. Similar to *AoE*, each civilization has its own unique units and specialties. Diplomacy between states is more important in *Civ*, and it is the goal of the player, as the title of this paragraph already states, to create and maintain an empire which will stand the test of time. The player can accomplish this by forming strategic alliances, or through complete military domination. The game is *turn-based*, meaning that unlike *AoE*, the player can only move his pieces in his own turn, after which the turn goes to the other players. The game develops over 460 turns, after which the game decides on the victor through a points decision. The game also ends if the player meets other, predetermined, victory conditions that the player has decided on prior to the game.

Civ does not offer a 'story mode' as its campaign. Instead the player can choose to participate in various pre-established narrative scenarios. Each scenario is an individual background for a story that focuses on specific civilizations, at a specific point in time and space. These scenarios have their own internal story in which the player must participate. In my analysis I will cover two of these scenarios as an alternative for my normal focus on levels. The first scenario is the American Revolution (1775 – 1783). In this scenario the player can fight the American Revolutionary War from an American or British perspective.

The American Revolution gained momentum after 1775, when Boston, under control of the British, was besieged by American militiamen after the British attempted to stop a series of revolts in Massachusetts. These militiamen were soon organized into a real army under command of George Washington. With this organized army, the Americans were ready to initiate a war.[148] During the war, Continental Congress (the governing body of the US at that time), set up more war funding, and took more legislative measures to separate the colonies from the British. The French started to financially support the American Colonies as well. In 1783, backed by the French, British and American parties signed a peace treaty in Paris, which marked the end of the revolutionary war.[149]

The second playable scenario that I will study is that of the *Desert War*, also known as the 'North Africa Campaign' (1940 – 1943), during the Second World War. This scenario is set in the Mediterranean, and follows Feldmarschall *Rommel* and his campaign in North Africa.[150] This territory was the theatre for fierce battles between Axis and Allied forces, with both groups having large bases in the African colonies. Military campaigns were fought

[148] John Whiteclay Chambers, *The Oxford Companion to American Military History* (Oxford University Press, USA, 1999), 606;Terry Golway, *Washington's General: Nathanael Greene and the Triumph of the American Revolution*, Reprint edition (New York: Holt Paperbacks, 2006), 1-2;Shaw, "The American Revolution - Timeline from 1763-1787."

[149] Andrew Stockley, *Britain and France at the Birth of America: The European Powers and the Peace Negotiations of 1782-1783* (University of Exeter Press, 2001), xiv-xv.

[150] Samuel W. Mitcham, *Rommel's Desert War: The Life and Death of the Afrika Korps* (Stackpole Books, 2007), 15;Alfred Toppe, "German Experiences in Desert Warfare during World War II (vol. 1). Commissioned by the U.S. Marine Corps." (Fleet Marine Force Reference Publication (FMFRP) 12-96-1, oktober 1990), http://www.emilitarymanuals.com/pdf/DesertWarfare/FMFRP12-96Vol2.pdf, 1 and 5.

in North Africa by the US (as ally of the North African colonies), Vichy France and Free France, Italy, Great Britain, and Germany.[151]

4.3 A THREEFOLD ANALYSIS OF TEMPORALITY IN STRATEGY GAMES

In this paragraph I will apply my methodological scheme to analyse time in games again. I will first study the games through the temporal layer of ludic time. In this analysis I will compare the campaign modes (story modes) of the strategy games with their own skirmish modes, which are the modes in which the player can freely play the game without a pre-established narrative. I will then analyse the layer of represented time in both games. I will, again, draw a comparison between the campaign and skirmish-modes of both games to see what happens with the represented temporalities of the game worlds in both playing modes. Finally, I will study the games through the layer of narrative time in order to see how these games establish their plot. By connecting the results from all three analyses we will be able to see how these strategy games configure historical time.

4.3.1 MAKING THE SKIRMISH SUITABLE FOR HISTORY: A LUDIC POINT OF VIEW

Because the skirmish mode, the 'free for all' mode of playing without a predefined narrative, is such an important part of the strategy game genre, I will compare the narrative mode of the games to their skirmish counterpart. We can only search for the mechanisms that structure the story if we thoroughly understand the game worlds themselves. This is why I will analyse the skirmish-variants of both games first. In the skirmish, the player does not have to follow a predetermined narrative, so the performances of the player are less restricted. I assume that the rules of strategy games are more restrictive in their campaign, or scenario, modes because the games now will need to tell complex stories that require a sequence of unfolding events. A comparison of both variants of the games (their campaign and their skirmish) will allow us to see which rules the games add to structure the gameplay in order to develop their stories.

The specific focus of this part of my analysis lies on the way the ludic structure establishes the games as spaces for playing, but also as spaces in which the games tell stories. The games become spaces for play through three operations: by establishing a cyclical passage of time, by providing a structural division of levels and maps, and by implementing a sense of progression that is not based on the narrative through the means of rewards of glory, or the renewability of the gameplay. The narrative structures of these games set up their game spaces specifically to tell stories, , which is connected to their use of the ludic structure. To establish this structure, the paidea rules need to restrict gameplay and will only allow the story to develop in a certain way. Simultaneously, the games use

[151] "The Desert War," *Spartacus Educational*, accessed June 19, 2015, http://spartacus-educational.com/2WWdesert.htm;Richard Doody, "The Second World War in the French Overseas Empire," *The World at War*, accessed June 19, 2015, http://worldatwar.net/timeline/france/empire40-45.html;Toppe, "German Experiences in Desert Warfare during World War II," 5.

their ludus rules to direct the gameplay and structure it as a set of goals. As a consequence of this division, the games reward the player with access to new areas after he completes the goals that are set by the ludus rules. I will focus on these ludic mechanisms to see how they structure and influence the stories of the games.

Table 1*: Key points for the analysis of ludic time as a means of storytelling in games*

Temporal layer	Type of time	Key points of analysis
Ludic time	abstract	• structure of division of frames and borders of the world or temporal bubbles, like levels • cyclical components/simulation of time passage • rewards of glory and their link to the general story • rewards of access and their link to the plot • possibilities of progress outside of the plot (task-based) • ludus rules in relation to the plot • paidea rules as restrictions in relation to the plot

A scheme of the ludic mechanisms that support the construction temporality and time in video games.

In the skirmish-mode of *AoE,* the game generates a map for the player, which serves as the playing field, or, 'the board of the game'. This map does not change during the game, although its resources, like forests for lumber, or wild animals for food, are finite (but the player is allowed to generate his own resources through other means, like trade or by building farms). The map itself does not change and the entire setting of the game is set in abstract time. The game does not use a timeline to track a chronological account of time in the game sphere. There is no external level structure that establishes a new point in time for the game to exist in. The game does use real-time mechanisms that control the actions of the player and his opponents. This means that even though the time of the world does not necessarily move, the opponents of the player will develop their own societies, so the player will have to do this as well to avoid getting overrun by this opponents. This progression is not based on time (neither real-time nor an amount of time in the game). Instead of an external movement of time, the player progresses the 'age' his society belongs to by purchasing 'upgrades' that develop the age in which the society of the player exists.

The game has five available 'ages' in the game: the discovery age, the colonial age, the fortress age, the industrial age, and the imperial age. Each age comes with its own upgrades in terms of units, buildings, and techniques. We can best understand these ages as a sequence of stages that mark the 'level of progression' of the society of the player. The player chooses whenever he wants to upgrade to a new age by paying a large sum of resources. Upgrading is always a good idea, as it gives the player long-term technological and civil advantages. For example, in the discovery age, the player's society can only act as a 'society of discoverers'. The player's actions are limited to trading with other societies, and to allow his villagers to gather some resources from the bare lands. But when the player upgrades his society to the colonial age, the game allows him to build barracks and deploy soldiers, or to build a church that provides missionaries. The progress between the ages makes the game a more fun and elaborate experience. The game incorporates the 'time' (age) of the player's society in the progress-structure of the ages. Through its incorporation

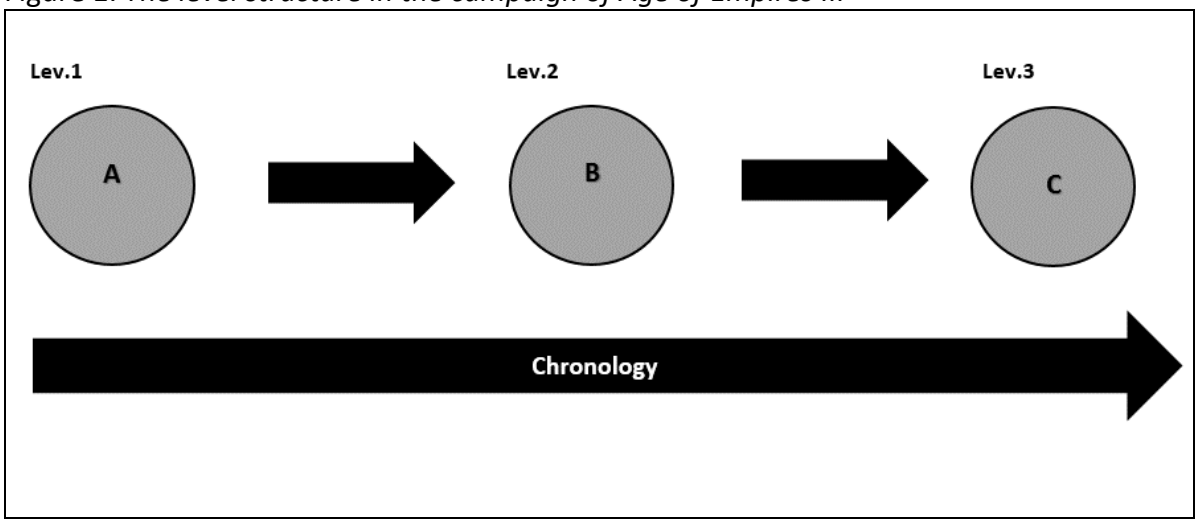
this time becomes independent from the map of the game. The age in which the game positions the player does not define the time of the story, but provides an account of the stage the player's society is set in. This becomes clear when we look at discrepancies between the stages in which the society of the player, and the societies of his opponents are set: these do not have to correspond to each other. It is perfectly possible for the entire game map to be simultaneously set in the discovery age and the fortress age. One player might progress the time of his society faster than the other. The path of development between ages comes closest to what we could describe as a plot. It is a predetermined path between moments in the game that the player is supposed to follow. We see here that the ludic structure constructs a development that each individual player follows. Every player has his own personal narrative that is structured through the stages of development. Next to this ambivalence of the time of the game world, the player can pit empire against one another, and has the liberty to make the scramble for the New World develop between Suleiman of the Turks, Napoleon, Ivan the Terrible and Maurice of Nassau, if he wants to.

All these possibilities change when the game shifts to its campaign mode, which is the story mode of the game. The game applies a structural division of levels in its campaign to tell a complex story that spans a few hundred years. Instead of letting the story develop in the abstract game space, the player now follows a multiple-level-structure in order to progress the game. After a series of cut scenes and dialogues, the player starts on a specific map with a static set of resources. This can be anything from a wagon (to build his first colony with) and a few workers and soldiers, up to entire villages, armies, and even the occasional fleet. This new starting point casts the player into a pre-established setting, which affects his normal gameplay. If the player starts with a village, his resource-distribution is already doing well, and he will spend time working on his defences. But if he start with a wagon, he will first have to set up a base camp and scavenge for available resources. Instead of slowly improving his colonies, the player must now also follow a series of objectives to win the game. If the player completes his objective at hand, the game will either give him a new task, or will declare his win. By winning the level, the player progresses to a new map, which is tied to a later point in the plot, through which the cycle of play repeats itself.

The linear progression in the time of the story can only develop because the game unfolds as a series of maps, which all exist in their own temporal bubble of abstract time. This is also obvious, as it would otherwise be impossible for the plot to predict the outcome of the player's actions. The plot is the decisive factor, and not the other way around. Furthermore, each level has a clear beginning and conclusion. Anything in between these points is open for free play, as long as the player meets his objective in the end. In each level, the player has the capacity to upgrade and advance his society to new 'ages' and build enormous armies. There is a clear idea of progression within the abstract game world, but the game does not share these progressions with the other levels. If the player moves to the next level, he will lose all of his technological progressions, and has to start over again in the new game world. The causality between these levels lies in their shared plot, and not in the

individual actions per level. In the abstract game world of the singular level, the player can achieve rewards of glory in the shape of 'secondary objectives'. These are objectives that the player can complete if he wants to, but do not influence the plot in any other way. The gameplay of the indivual level itself is only renewable if the player does not achieve his goal. For example, if the player needs to take over the town centre of his opponent, the game world will renew all of its cycles as long as he does not reach this ludus goal. This means that the player can try to reach this goal in a multutide of ways, and as long as he fails, he can change his strategy. As soon as the player completes his main objective, the game world freezes. The player is victorious, which marks the end of the story set in that level.

Figure 1: *The level structure in the campaign of Age of Empires III*



The projection of the structural development of the story in *Age of Empires III* through its level-divisions.

Figure 2: *A paidea rule in Age of Empires III restricting certain developments in accordance with the game's story*

Source: Ensemble Studios, *Age of Empires III*, Microsoft Windows (Microsoft Game Studios, 2005). The game normally allows the player to build ships. In this level this ability is lost due to the fact that 'the wood in this area is too poor'. Instead, the player cooperates with George Washington, who will provide ships to the player.

Within the levels, the paidea rules sometimes alter the game space by restricting certain elements that are normally available to the player.This can be either to tell the story in a more specific way, or to limit the renewability of gameplay by taking away additional options that the player might otherwise explore. For example, in many levels the game does not allow the player to develop his settlement all the way up to the imperial age. The paidea rules limit the age-progression at a pre-set level, which takes away some of the pleasure of playing the game in its free mode. Reducing the player's focus on his own societal development functions as a way to nudge the player into following the narrative. Some levels rely on additional paidea rules to force the player into a new way of playing the game. The game uses these paidea rules to give the player a disadvantage, or to make sure that the progression of the game (through the following of its objectives) is based on additional narrative or gaming mechanisms. Examples of these are levels in which the player starts in the discovery age, but does not have a wagon to start his base camp with. This will give him the experience of a traveller that must move through enemy territory without the normal military support. Other examples are levels in which the player does not have access to settler-units, which are responsible for the development of buildings and gathering resources. This alteration makes the player dependent on alternatives methods of resource transportation, or on the charity of specific characters in the narrative that are only available after the player completes a specific objective. A last mechanism is a time-induced countdown,which gives the player a hurried feeling in his completion of the objectives. All these mechanisms are restrictions that transform the free map into a structured space, which makes it possible for the game to tell a specific narrative and set up a peculiar gaming

experience. In general, the player can access the entire map of the game from the start, which makes the rewards of access not a very important function in structuring the narrative of the game within the map. The player mostly roams through the same map and completes his objectives. By completing the final objective, he gains access to a new level, renewing the gaming cycle, and progressing the story.

Figure 3: *Two mechanisms that structure gameplay: time limits (left), and the inaccesibility to create buildings (right)*

Source: Ensemble Studios, *Age of Empires III*, Microsoft Windows (Microsoft Game Studios, 2005). In the left image, the player has to defend a castle until the timer runs out. When he succeeds, he immediately moves to the next level. In the right image, the player is not allowed to create any buildings, which forces him to run away from the enemy army.

The skirmish-mode of *Civ* is even more elaborate than in *AoE*. The game generates a random game world (a map) for the player to play on. The variables that generate the game world take the weather, the size, and the sea level of the world into account. The player can choose his, and his opponents', preferred civilization to play as. He sometimes even has a pick in the leader of that civilization (e.g. the German civilization, with *Bismarck* or *Frederick the Great* as its leader). Each civilization has its own unique units and technologies. The player can also decide the length of a game by changing the 'game speed'. A normal game lasts a maximum of 460 turns, after which the game stops counting turns and declares a winner. Maps have infinite resources and do not change in size during the game. The borders of the player's empire do change, depending on the way the player develops his settlements. Similar to *AoE*, the game map is set in abstract time. The progression of time in internalised in the development of the player's civilization and its technological upgrading-system. This way of dealing with time will be discussed at length during the analysis of the represented time. Unlike *AoE*, *Civ*'s turn-based system does provide an external mechanism to measure time against: there is a timeline. With every turn of the player, the calendar year changes, which shows the player an implied change in calendar time. However, this calendar time does not necessarily run parallel with the development of the player's society. Later in

this paragraph I will discuss how both the turn of the player, and the time of the map of the game are set in abstract time. The game spans 6050 years, and develops over the course of 460 turns. However, the amount of years that passes per turn changes over time. In 4000 B.C. one turn equals sixty years, but this amount later decreases to one year. The amount of turns required for events or development to occur does not necessarily change with this decrease in time. To give a short example, if it takes a worker-unit two turns to develop his farmlands, this would equal 120 years in the beginning of the game, and only two years near the end of the game.

The game also does not actively use chronology in its structure of development. If societies want to use newer technologies and develop themselves, they first have to 'research' older technologies. *Civ*'s internal development is based on a *technology tree (tech tree)*, meaning that the player's civilization follows a path-dependent structure, which is directed towards specific developments in politics, science, culture and technology. These developments are only accessible through previous developments. Suppose the player wants to teach his society 'horseback riding'. In order to get to this point, his society first needs to master 'animal husbandry', 'agriculture', and 'hunting'. The options and paths in this tech tree make the game exceptionally versatile. The player meets the conditions for new discoveries when the path towards it becomes available, and is not based on any chronological development in the game. All these developments require a set of turns to study and adopt to, meaning that it can take many turns for the player to get to his perfect technologies and run his society as he wants to. This path of development acts as a structure that is comparable to the plot of the player's society. It arranges the developments of society and establishes them in a logical and coherent trajectory. Although the player is entirely free to expand and progress his civilization, this always happens through the pre-established paths of the ludic structure. This structure reveals a clear model of progression that acts as the plot of these technological developments. It assigns causal relations between various inventions and discoveries. First, a civilization learns how to keep animals, and only afterwards does it learn to ride horses.

Just like *AoE*, the player can reach specific ages, like the 'Classical Era', and the 'Medieval Era'. These ages differ for each individual player in a similar way as *AoE.* It is thus possible for one player to still be in the 'Classical Era', whereas his opponent is already in the 'Medieval Era'. The position of the player in one of these ages depends on the amount of researched technologies. For instance, after the player has studied five different technologies, his society will reach the Classical Era, etc., but this development does not affect the gameplay in any way.

The player can freely develop any amount of cities to expand his civilization, as long as he maintains enough resources to feed his population. The player must also expand the cities within his society by building units and buildings inside the city walls. The type of unit or building that the player will be able to build depends on his position on the technology tree. Depending on which technologies he has discovered, the player will also have the option to build the very special and useful 'World Wonders', like Stonehenge, or the

Pyramids

Figure 4: *A civilization set in the year 1680 BCE, in the skirmish mode of Civilization IV*

Source: Firaxis Games, *Sid Meier's Civilization IV*, Microsoft Windows (2k Games & Aspyr, 2005). The image depicts an Arabian civilization, led by Saladin (1138-1193 CE), in the year 1680 BCE, the green lines mark the borders of the civilization.

Figure 5: *A part of the technology-tree in Civilization IV*

Source: Firaxis Games, *Sid Meier's Civilization IV*, Microsoft Windows (2k Games & Aspyr, 2005). In order to progress his civilzation, the player must research various concepts and technologies. All concepts and technologies are connected to each other, and require an initial understanding of earlier, or 'premature' versions of that concept.

The player must complete the set of ludus rules that the skirmish provides to win the game. The game will declare a win to the player under six different condition. Every condition requires a specific type of gameplay. The player can win, for instance, by being elected as world leader through democratic elections held by the United Nations. But he can also win through global dominance, or through conquest. There are also other ways to win, like by becoming the cultural hegemon of the world, by winning the space-race to *Alpha Centaury* (the star closest to the Solar system), or by having the highest amount of points (based on the amount of cities and developments within one's civilization) when the game comes to its conclusion. The gameplay of *Civ* becomes renewable through its different winning *conditions*. The player will want to try his hand at each type of victory, which directly affects the way he develops his civilization.

The skirmish mode allows too many options to coherently tell a story in the game. This will become very clear when we compare this skirmish against the two historical scenarios I will analyse. Both the 'Desert War' and the 'American Revolution' scenarios lack the option of map generation. Whereas the player normally can 'build' his own world from scratch, the game now provides the player with a pre-made map and a set of specific participants. The player must choose a side in these scenarios (e.g. the Allied forces or the Germans in the Desert War), which will determine his goals and victory conditions. Next to the predetermined map the player finds himself on, the game also unfolds at a very specific point in time. Unlike the span of 460 turns, marked between the years 4000 BCE and 2050 CE, the games now spans a period of 'a couple of years'. The turns cover fewer units of time, and count in weeks instead of years, to stretch the game on this smaller temporal scale and maintain the 460 turns in wich the game takes place.. The game has already established the maps and civilizations, including a set of cities which exist at specific geographical locations, and the borders of each civilization. These are all additional paidea rules that are set up on top of the normal map to transform the game space into a space for the story to unfold in.

In the skirmish, the path-dependent *technology tree* acted as a marker for progression in the game. This progression is not affected by the represented calendar time on the game's timeline. It is very easy for the player to create anachronisms if he choses to follow a very specific path on the tech tree. In the scenarios, this should not be able to happen, as the game attempts to establish a distinct temporal setting for its story. Using the regular tech tree would ensure a much more free mode of playing, which might allow the player, for example, to change the politics-variable of Feldmarschall Rommel's society to communism, while developing space travel to win the space race. Next to this problem of free development, there is also a problem of time span. The technological development on the tech tree is connected to turns. In the original (skirmish) tech tree, the value of a turn-unit is much higher than the mere 'weeks' that the turns represent in the Desert War. This would surely speed up any kind of development on the tech tree (imagine building the pyramids in only ten weeks!). The game developers have solved these problem by abandoning the tech tree completely in the American Revolution scenario, and by creating an alternative tech

tree for the Desert War.

In the American Revolution scenario the player is stuck with whatever kind of development he starts with, and the Desert War scenario allows some player agency in its development. However, the most important elements on the tech tree in the Desert War arenot path-dependent, but are set to unfold after a specific amount of turns. For example, the Germans can only build transport ships, which are the only units that can pass the Mediterranean Sea, after the triggering of a specific event, which is dependent on the progression of a set of turns. After a series of turns, new spaces become accessible. The gameplay changes through these events, as the Germans now have the possibility to start their warfare in Africa. Each scenario contains its own list of deployable units and buildings that the player can use. These objects have the same characteristics as objects from the skirmish, but are named differently in order to make them fit the scenario. For example, each civilization in the skirmish can eventually build unspecified 'fighter jets', but in the Desert War, the players build *Curtiss P-40 Tomahawk* fighters, and *Messerschmitt Bf 109* fighters. These are exactly the objects as in the skirmish mode, but are not 'painted over with a historical coating'.

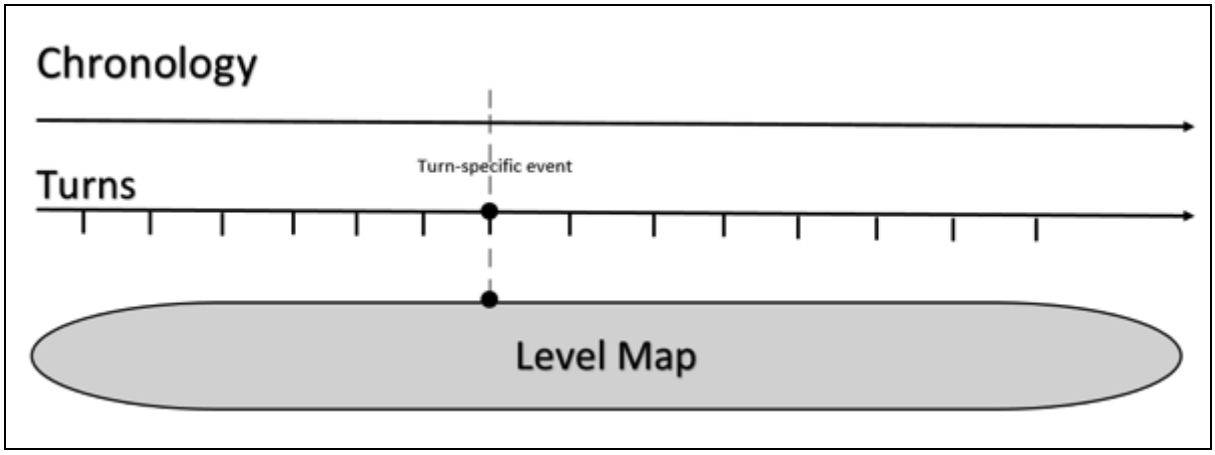
Figure 6: *Example of some available units and a geographical representation of the Mediterranean in the Desert War scenario in Civilization IV*

Source: Firaxis Games, *Sid Meier's Civilization IV*, Microsoft Windows (2k Games & Aspyr, 2005). The general representations of units are changed into historical representations of temporality-specific units. The general landmass is switched with a representation of the Mediterranean Sea.

The ludus goals, as victory conditions, help to nudge the player into following the plot, but only if he wants to. Next to the normal victory conditions of the highest score at the end of the game (as specified at a very specific date), or victory by conquest, the player can also

win by completing predetermined objectives. In the Desert War, this means that he has to capture ten specific cities, and in the American Revolution this means that 60% of the world population, and 70% of the entire map, need to be under control of the player. However, the paidea rules are much more important than the ludus rules in structuring the gameplay and the plot development. The player is basically free to do whatever he wants, but his actions are heavily guided by the restrictions that the game imposes on the player. For example, in the skirmish the player has the capacity to declare war to whomever he pleases. The game also allows the player to resolve wars by diplomatic or commercial measures. This is not possible in the scenarios. If the player is at war with the British, in the American Revolution scenario, this cannot be changed. Similarly, the paidea rules connect very specific events to specific amounts of turns. This inserts additional options and possibilities at set moments in the time of the game, regardless of what the player tries to do himself. After seven turns, Feldmarschall Rommel will gain control over a city in North Africa, whether he wants it or not. He will also suddenly obtain the ability to transport his troops around the entire map with his transporter-boats. This might change the player's gameplay, but it does not have to. However, given the terms of the game, it seems probable that the player will use his newly attained pieces for his goal of winning the game.

Figure 7: *The level structure of Civilization IV*



With each turn the player takes, the time on the level map is renewed. At set turns, specific events will occur, establishing an objective temporal movement that is comparable to the level structures of the other mentioned games. Note that the turn-specific events do not take place in the skirmish-variant of the game.

The same happens in the American Revolution scenario. Regardless of what the player does, the game will provide the player with additional troops or other kinds of bonuses at specific turn-changes, like a predetermined allegiance with France, that will help the player attain his victory if he plays on the American side. The game uses this technique especially in the American Revolution, where there is no tech tree. After an x amount of turns, the game triggers events that change the political or economic structure of the player's civilization. The game imposes additional paidea rules to change the gameplay. To normalise this change in gameplay, the game refers to specific events in the game world that explain these

new rules. These changes tell us something about the development of the wars, without being dependent on the player's actions in this war.

In short, the strategy games must include an additional set of restrictions in the normal gameplay to tell their predetermined stories. The games transform their game spaces from spaces for 'free play' (as far as is possible in the skirmish-modes) to a background against which their embedded stories unfold. This has to do with the incorporation of time in the player's own societies, which is measured by technological progress, whereas the games themselves exist in an abstract bubble of time. In order to move this time for narrative purposes, the games need to adjust their game spaces. Instead of one single space, a game can use a multitude of maps, which all connect to the linear progression of the story, like in *AoE*. Or the game can renew its singular map in time by including specific events that take effect at set points in the game, regardless of the actions of the player, like in *Civ*. We also see that the games must restrict their borders in time and space, in order to shape the direction of the development of their stories. Finally, the use of ludus rules is very important as a means to structure the narrative in *AoE*. In *Civ*, this does not seemsto be the case. Here the game has a predetermined ending point that concludes the game (and its story) after a set amount of turns regardless of what the player does.

4.3.2 REFERENCES TO HISTORICAL EVENTS OR REPRESENTING A HISTORICAL SETTING

We saw the first steps in how the games configure historical time with the analysis of the ludic structure of the strategy games: the games restrict and limit options, and bind the passage of time to a set of objectives or turns. I will now analyse how historical representations are added to this mix in order to transform the games into representations of the past through their setting. First, I will study the passage of time in the games. Here I will look at the way the games establish their passage of time, what kinds of sociocultural labels are used to show this passage of time, and I will explore what this means for the story of the games. Secondly, I will look at the representation of the specific points in time that the games focus on. Here I will analyse how the setting of the games become historical by looking at their historical connectors: calendar time, the succession of generations, and historical traces, which all inscribe fragments of the past onto the levels of the games.

Table 2: *Key points for the analysis of represented time in games*

Temporal layer	Type of time	Key points of analysis

Represented time	abstract representation of temporalities	• the passage of time through the set of sociocultural labels and temporal schemata as distinguished by ludic mechanisms
		• the establishing of represented temporality via historical connectors:
		  ○ calendar time
		  ○ historical traces/objects
		  ○ successions of generations
		• elements contributing to the setting of the story that do not affect progression of the plot

A scheme that summarizes the ways represented time supports the construction temporality and time in video games.

4.3.2.1 Passage of time

First, let us take a look at the skirmish-mode of both games again and ask ourselves the question whether this mode can provide useful information on the temporality or the passage of time in the games. The time of the games is abstract, and what we see as representations of specific points in time, as compared to our own time, is not based on chronological progression. Instead it relies on the technological and mechanical progression that the player initiates. This means that the setting does not signify a specific temporality, but signifies the progression of one of the players on this technological tree. There is no chronologically established 'objective time', nor are there historical connectors that lock this temporality down to a single point in time. It is possible for a society to have a very advanced military appartus with musketeers, and to simultaneously lack the knowledge of irrigation, and have an underdeveloped agricultural system.There are many different objects and traces that all inscribe different historical properties onto the game spaces. All of these objects in the game are historical connectors, but this does not tell us anything about their use in the game spaces. We cannot measure a passage of time by looking at the historical objects, like we did in the action games, because all of these objects can exist together at simultaneous moments in the games.

Barthes and Ankersmit describe the reality of the past as a *reality effect* caused by association with historical objects. The set of historical objects represents the historical reality. It is important to note here that there is no fixed reality of the past; historical objects constantly reconstruct and invent it.[152] The skirmish modes of both strategy games construct their historical reality by using historical objects. In the process these objects weaken their own referential quality to objective time as historical connectors because we have to take every object into account as a reference to a point in time. We always perceive these objects in a set, and the set itself serves as a group of historical connectors in which every object connects to a different point in time. Every object, internally, is a connector that refers to a specific temporality. In *AoE*, for example, we find a Dutch *Wisselbank*. We can use the historical encyclopedia of this game to find out that the *Wisselbank* really did

[152] Frank R. Ankersmit, *The Reality Effect in the Writing of History*, 22.

exist, and is in this way a representation of the seventeenth century *Wisselbank*. This makes the object a historical connector to this period in time. But this object, as a single connector, does not necessarily define the entire temporality of the game's setting, which consists of the set of historical connectors. We have nothing to measure the *Wisselbank's* existence against in the game world, especially because each player follows his own trajectory of progression.

Figure 8: *A historical description of a Wisselbank in Age of Empires III*

Source: Ensemble Studios, *Age of Empires III*, Microsoft Windows (Microsoft Game Studios, 2005). Additional information about the Wisselbank in the built-in Encyclopaedia of *Age of Empires III* . The object here connects to its own history, even though it is used in various temporalities in the skirmish itself.

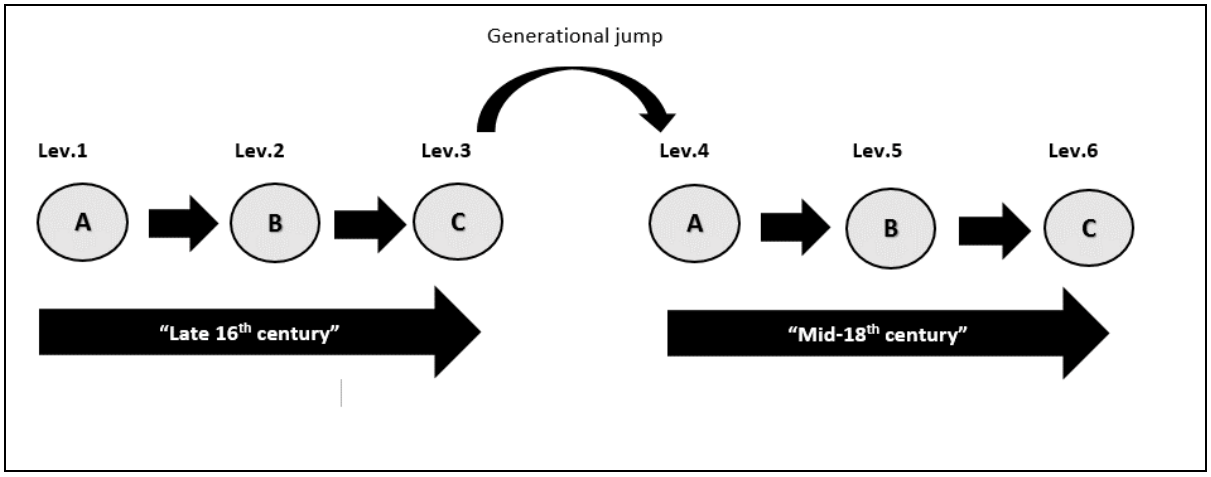
The skirmish mode in *Civ* uses its historical objects in the same way. At the start of the game the player chooses his civilization and the leader of this civilization. If the player takes *Otto von Bismarck* (1815 - 1898) as the leader for his German civilization, he starts in the year 4000 B.C., with the city of Berlin, which is defended by a group of warriors armed with clubs. Eventually, the calendar of the game will strike a point in time in which the existence of both 'Berlin' and 'Bismarck' will make sense, but this does not make the match itself a representation of the past. As the saying goes, even a broken clock is right twice a day. In the campaign of both games the games want to depict more accurate historical stories. They do this by externalizing the passage of time through a narrative that establishes exact point in time, which represent the time on our own calendar. Through this operation, all representations refer to, and reinforce the idea of a set temporality. In doing so, the games develop their historical setting.

Both *AoE* and *Civ* create their historical setting by referring in their stories to events that took place in the past. These events provide us with a point of reference to the time of the stories. *AoE* starts its first act in the campaign by stating that game takes place in the 'late sixteenth century'. The game presents each level within this act as a temporal bubble, which is set in abstract time through its ludic structure. It is not clear how much time passes between the levels. The game does not define its socio-cultural labels, which makes the passage of time between the levels unclear. After the player completes of the first act, the game starts its second act, which takes place in the 'middle of the eighteenth century'. Between the acts, the game refers to sociocultural labels to mark a shift in centuries. The labels mark the movement between acts, but not between the levels within these acts. The game ties its acts together through the principle of a *succession of generations*. In the second act of the game, the grandson of the main character of the first act grows up to become the new centre of attention in the story. This information reveals that the second act is a continuation of the previously told story. This allows us to understand the world of the game as one that is set in its own history (as we played that part of the story in the first act). This structure shows that the game continues its chain of historical agents, which take over the place of the dead. In generational terms, grandfather and grandson fulfil the same role in the same society.[153] With its third act, the game repeats this trick, but this time with a granddaughter.

In the story of *AoE*, time passes as the movement between three generations of people from a common ancestor in a three-act-structure. Within the acts, each level mostly represents its own temporality by referring to historical events that unfold in the setting or context of the game, and in the story that the game tells around these events. Sometimes the levels rely on triggers and countdowns to give the player a hurried feeling, like when the player has to hold off the enemy for an x amount of time, or when he must complete an objective before a specific time. These effects are simple mechanical tricks, as the time that the countdown uses is given in minutes, and we cannot possibly know how to translate this back to the passing time in the game world.

[153] Paul Ricœur, *Time and narrative Vol.3*, 109.

Figure 9: *Temporal passage in Age of Empires III*



Each level is its own temporal totality, but is also part of a plot structure set in a generally represented temporality. Through a generational jump, a new lead character appears, and a new plot, set at a later temporality can be followed.

Civ, on the other hand, actively refers back to our calendar time. In the Desert War scenario, each turn refers to a week in the actual war, showing us, by the means of our calendar, how much time has passed since the player's last turn. In the American Revolution scenario, the game repeats this mechanism, but now in terms of months. The game uses the sociocultural labels of 'weeks' and 'months' to make the theoretical amount of time passing per turn more relatable to the player. This allows him to get an understanding of the passage of time in this game world. Unlike in the skirmish, we know that time, in this case, is not always an 'empty' abstract time. We can verify the passing of time by looking at the events that the game triggers when the calendar reaches specific points (turns) that refer to events in our own history. Let us take an example to clarify this. In the Desert War scenario, the player starts in 'week 1, 1941' on a map of the Mediterranean. This space is divided between Axis and Allied parties. *Civ* uses a geographical space, and a time on the calendar, to establish a historical representation of an event that also happened in the past. In the seventh turn (week 7, first of May), Feldmarschall Rommel's *Afrika Korps* reaches Tripoli, by the means of an external mechanism (a paidea rule). This event did in fact happen around that time, which makes this event a representation of that point in time. This shows us that the player shifts from one historical setting (week 1, 1941) to a more recent historical setting (week 7, 1941). The game uses these events to establish an external movement of time in the game through the shifting of turns, which triggers these events. This is similar to the transition from one represented world in a level, to a new represented world in a later level. See figure 7, the turn-specific event would here be such an event that creates an external movement of time.

Both games establish a passage of time by shifting between points in time that become more recent, and refer back to points on our own calendar. The games use their campaign timelines to connect their events to points in time in which similar historical

events unfolded. There is a passage of time between these events, and this movement follows our calendar.

4.3.2.2 Representing historical settings

Next to referring to our calendar to intertwine the progression of the games with our history, games also configure historical time through their spaces as historical decors. The configuration of historical time unfolds by connecting the story of these games to historical connectors: historical traces, objects and documents, the succession of generations, and calendar time. As we have seen, the calendar serves an important function, as it acts as a point of reference in time for all historical traces that are connected to it. We must complement our analysis of the historical connectors in these games with the knowledge about the temporal setting to which the connectors refer. Calendar time is one of the ways that allow us to compare a point in chronological time to its represented counterpart in games. Similar to the analysis of action games, the strategy games will be analysed from a problem space point of view. It is only fair to focus on the historical connectors that the game developers use to construct their historical settings.

Age of Empire's first act is set in the 'late sixteenth century', but what does this mean to us, and how does the game represent this? I will answer this question by analysing the represented temporality of the first act of the story. *AoE* does not label each individual level within the acts with a sociocultural label of time. This relaxes the passage of time witin the act itself. The setting of the game does not convey a series of historically represented points in time, but only provides a general 'historical setting' in which the entire act unfolds. The first act of *AoE* connects its story to the past through the development of a series of historical events. Morgan Black, the main character of the first act, is a Knights Hospitaller of the Order of St. John. In the first level of the first act the player must defend the Maltese fort of the Knights Hospitaller from an Ottoman invasion. This event connects the story of the game to the Great Siege of Malta in 1565. The participants in the war are similar, the temporal frame fits, and the geographical location also coincides with this event.[154] Next to this event, the game also uses other historical events that allow us to establish a historical frame of reference. In the game, Morgan finds a secret map revealing that the legendary *Fountain of Eternal Youth* is hidden in Florida. Through this legend the game initiates a story that takes inspiration from the past. Juan Poncé de Leon, the legendary discoverer of large parts of the New World, believed that the Fountain of Youth was located somewhere in Florida. De Leon's travels to Florida took place in 1513, which does not completely fit the profile of the 'late sixteenth century', but it does show a connection between the temporality of the game's setting and the factual history surrounding it.[155] In the New World, Morgan Black will help the Aztec and Inca warriors in their fight against the Spanish

[154] "Malta prepares for an imminent Ottoman Invasion," accessed June 20, 2015, http://www.heritagemalta.org/1565/malta-prepares-for-an-imminent-ottoman-invasion/.
[155] Greenberger, *Juan Ponce de Leon*.

conquistadors. Again, this does not correspond to what the game calls 'the late sixteenth century'. The last Aztec emperor was hung by the Spanish in 1525, and it would take another hundred years for the Order of Saint John to become active in the Caribbean.[156]

The game draws its inspiration from historical events in the early sixteenth century, as well as the early seventeenth century. The story and setting of the game blend the historical events together and set historical actors from different time periods up against each other in its story. It is possible for the game to do this because it labels all events under the same temporal denominator. The game takes a snapshot of a very large timespan, after which it uses individual elements from this period (the sixteenth century) to establish a historical setting. Doing this results in a similar use of the historical objects as in the skirmish modes of the games. We lose the historical objects as representatives of an exact temporal setting, and their referential value of objective time remains internalized in the objects themselves. The events refer to their own temporality, but the set of events does not resonate to a chronological point in time in the setting of the game. Instead, the game uses its historical events as references to an abstract period in time and esablishes a *reality effect* of the 'late sixteenth century', which is a very open interpretation of the sixteenth century as we know it. All historical objects and events that the game uses existed somewhere between 1523 and 1632, but never at the same time. By projecting these events from various temporalities onto the game's setting, the game establishes a reality effect that replaces the chronological time that is used for the reinscription of subjective time in the configuration of historical time. Instead of a specific point in time, the game depicts a fictive construction that is branded ' the late sixteenth century'. This is a general sociocultural label that the game usesto invoke a feeling of immersive historicity, rather than an actual depiction of the late sixteenth century. In the second act of the narrative, the game repeats this trick, but now to establish a later 'historical environment'. By shifting from the 'late sixteenth century' to a more recent historical point in time ('early eighteenth century'), the game establishes a passage of time.

It is important to mention that I do not analyse elements like the available units used in the act, which would seem more useful from a problem space point of view. This is because the game provides its units with generic names (e.g. 'archer', 'farm', 'musketeer'), which makes them almost untraceable in a historical analysis. I also believe that the game developers were aware of the fact that they were not constructing settings that represent one specific temporality, and chose for the method of referring to the past, rather than trying to make a historically accurate story. One of the game-characters, for instance, is 'Francisco Juan Delgado de Leon'. If we take away 'Francisco' and 'Delgado', the name of Juan de Leon, searcher for the Fountain of Youth, remains. *AoE* does not establish historical settings that act as representations of specific temporalities. The game creates settings that represent

[156] David Allan F., "The Social and Religious World of a Knight of Malta in the Caribbean," *Libraries and Culture* 25, no. 2 (1990), 147.

history through a reality effect. The settings exist on their own, as spaces for stories that refer to history.

For *Civilization*, we can ask ourselves the exact same question. What does the game refer to, what does this mean to us, and how is this represented? Let us take the first 1,5 years of the American Revolution scenario as a case for further analysis. In this scenario, each turn in the game represents the passing of one month in the Revolution. The game starts in July 1775, on a map that represents the map of a part of North America. If the player chooses the American side, the game opens with a speech by *George Washington*, who tells the player that 'we' are at the verge of war with the British. Compared to our calendar, we see that this message probably represents the 'Olive branch petition', during which the Continental Congress asked *King George III* one last time to recognize the American rights. King George III denied this, and the fighting commenced.[157] Some turns later, the game will offer the player to alter his 'civic options', (this is one of the adjustable variables in a normal game of *Civ*) as a new type of government has become available. This change is set on the game's calendar in August 1775, a point in time that refers to King George III declaring America to be in open rebellion.[158]

The game uses historical events throughout the progressing of the match. For instance, the event that the game triggers when the counter hits November 1775, which represents the measure of Congress to found a colonial navy. Other examples are the publishing of Thomas Paine's pamphlet '*Common Sense'* in 1776, and the French that start providing aid to the player's colonies after May 1776.[159] The scenarios of *Civ* rely heavily on representations of historical events, which connect the represented game-time to the calendar time of the American Revolution. Next to this, the setting uses historical units like *Minutemen*, famous for their participation in the American Revolution.[160] Similar to *AoE*, however, most units have ambiguous terms like 'cannon' or 'artillery', which makes it hard to connect the objects with their historical counterparts.

[157] Shaw, "The American Revolution - Timeline from 1763-1787."
[158] Ibid.
[159] Ibid.
[160] Garry Wills, *A Necessary Evil: A History of American Distrust of Government*, Reprint edition (New York, NY: Simon & Schuster, 2002), 25.

Figure 10: *French support to the American Revolution in Civilization IV*

Source: Firaxis Games, *Sid Meier's Civilization IV*, Microsoft Windows (2k Games & Aspyr, 2005). As soon as the turn representing May 1776 passes, an event occurs and the colonies receive gifts from France. This event depicts a historical event used as a game mechanism.

The Desert War scenario differs from the American Revolution scenario in the way it uses its ludic mechanisms to structure the playing field. The game refers less to external historical events to influence the game, and takes more effort in establishing a historical context by replacing normal units for representations of units that were used during the period of 1941-1943, between Axis and Allies in the North African desert and Mediterranean Sea. The players fight with *Hawker Hurricanes* (fighter jets), *Douglas Bostons* (strategic bombers), *B-17 Bombers*, *Fiat BR.20 Cicognas* (tactical bombers) and a variety of other weaponry that was available in that specific historical setting.

Next to using historical events and units, the game also establishes its historical setting through the available set of actors in the scenario. The available parties and military leaders in the Desert War scenario represent the actors and parties who participated in the struggles for domination in the Mediterranean and North Africa. *Civ* constructs its setting to fit and represent historical points in time. The set of historical traces is connected to those specific points in time. This allows the setting itself to become an representation of time, as they all refer back to the time of the calendar. The entire set of historical traces depicts a specifc point in time, which we find back in the game. The game makes use of its own calendar time, but bases this kind of measurement on our own historical calendar.

Figure 11: *One of the available parties in the Civilization IV Desert Campaign, showcasing his main military units*

Source: Firaxis Games, *Sid Meier's Civilization IV*, Microsoft Windows (2k Games & Aspyr, 2005).

This paragraph showed us how strategy games establish a passage of time, and how settings in strategy games represent the past in their setting. The strategy games establish a passage of time through shifting between points in time that refer to an external source of time, like a calendar or a plot structure, which forces the players to accept a passage of time in the game world. This lacks in the skirmish modes of the strategy games, but not in their campaigns. The time in the game world must be measured *against* something, like the structure of the game's story. This external source is established through a representation of points in chronological time, or connected to a reality effect of a specific period in time. In both cases, the games use historical traces to establish a point in time that is comparable or relatable to a point on our calendar.

4.3.3 STRATEGIC STORYTELLING: PLAYING IT OUT, OR LETTING IT BE

In this final sub-paragraph I will take a look at the narrative of the games. The narrative time connects the represented historical game worlds (as levels) through a story. Understanding this narrative time in strategy games is important because it is the plot that propels the passage of time of the story itself. The plot decides when the story commences. The focus of my narrative analysis lies on the involvement of the player's actions that complete events in the game world, and on the way the game connects these events through a narrative structure. The games create broader stories out of the set of represented temporalities, which are separated from one another through the ludic structure of the games. By following this structure we will be able to see how the games give the player the possibility to propel the time of the game world and develop the plot of the games.

First, I will analyse the plot of both games to get an understanding of how strategy game configure historical time in their narratives. I will start my analysis by focusing on the historical connectors that the games use to mark historical developments in the plot of their stories. This requires an analysis of the way the games emplot the historical connectors in

their singular stories. I will also look at the narrated events of the games to see whether their development is static or dynamic. Following, I will study whether the outcomes of the events in the games are predetermined, or allow for player agency in its storytelling. Additionally, I will focus on the narrative effects that narrate the stories of the games.

Table 3: *Key points for the analysis of narrative time in games*

Temporal layer	Type of time	Key points of analysis
Narrative time	progressive time	• plot: actor, reasoning, objective • plot structure • use of calendar time in the plot structure • use of historical elements/actors in the plot • the ordering of narrated events • triggers of the narrative and their connection to ludus rules) • narrative effects to tell the story

A scheme that summarizes the ways narrative time establishes a progressing time of the narrative.

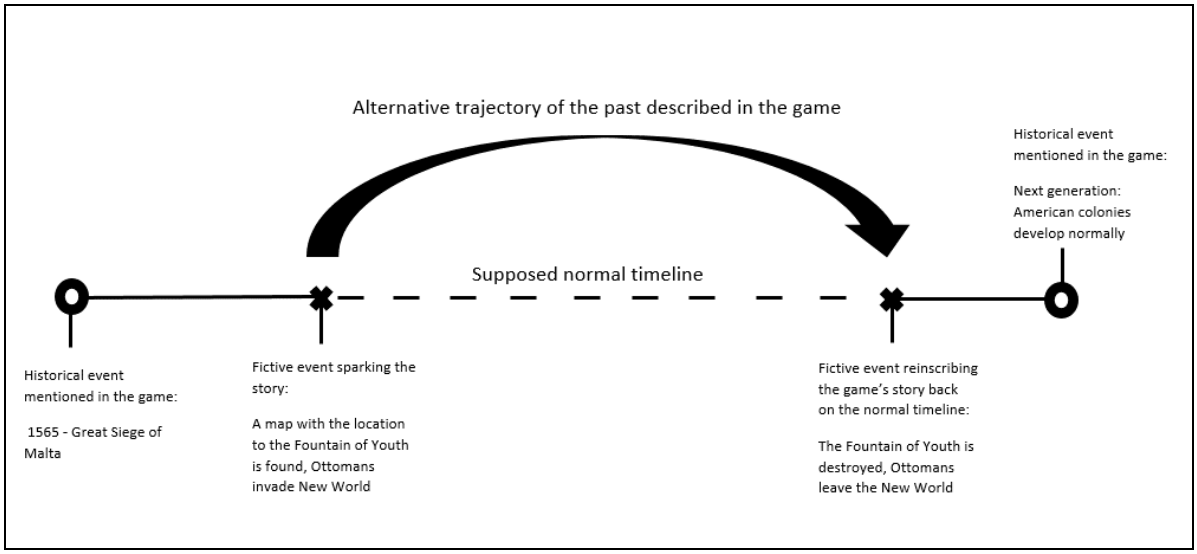
Age of Empire tells its story through three acts. These acts all have their individual plots, but there are two key elements that intertwine the individual acts. First, the lead actors are all part of the Black-family bloodline. Secondly, all acts have something to do with the Fountain of Youth. In the first act, the player follows Morgan Black, a fictional Knights Hospitaller, who embarks on a journey to the New World in the 'late sixteenth century'. Morgan, a Scotsman who fights in service of the Order of St. John in Malta, gets entangled in this epic quest after freeing Malta from Ottoman belligerents. During the battle in Malta, he finds a map to the Fountain of Youth in a hidden cave. But he was not the only one who found the map, the Ottomans were there first and are already on their way to obtain it! Morgan must sail to the New World in order to stop the Ottomans from getting this powerful device. The plot of this act actively use historical elements and traces to construct its story. The story ties in with the legend of Juan Poncé de Leon's search for the Fountain of Youth, which the game uses as the catalyst for its story.

Next, the game pits two groups against each other. Who could be the heroes, and who could become the enemies of this story? Because the game takes place in the 'late sixteenth century', the game makes use of this historical context. At the time, there was an on-going war between the Knights Hospitaller and the Ottoman Empire, so the game uses these historical groups as the protagonists and antagonists of the story. The game emplots all of these historical references in the same story, even though the myth of the Fountain of Youth did not have anything to do with the Ottomans and Knights Hospitaller. In the New World (in the game), both the Hospitaller and Ottomans find out that they have been tricked by an evil organisation, the *'Circle of Ossus'*, which was after the Fountain all along. And even worse, the leader of the Hospitaller was involved in this evil scheme as well. Morgan seeks help from the Aztecs, and with their help, he manages to reach Florida and destroy the Fountain of Youth.

AoE uses an interesting approach towards its use of calendar time and historical

actors for its plot. The game does not directly use the calendar, in each individual act, to establish a plot structure. This would also be impossible, since there is no actual point in time that the game is set in. Our ideas of the game taking place in the past revolve around what the game shows to us in its setting, and around the historical events that take place in the story. The narrative unfolds its plot, and this plot is dressed up 'historically' with actors and elements that existed somewhere in the past. *AoE* emplots all of these historical elements in the fictional story of the game, and creates a fictional point in time by associating these elements with one another. Aside of this fictional point in time in which the plot develops, *AoE* bases itself around a historical legend. The story starts when Morgan finds a fictional map leading the way to a legendary object, the Fountain of Youth. This event drives both the Knights Hospitaller and the Ottomans into the New World at a point in time when they did not 'belong there'. This event establishes an alternative historical setting. With the destruction of the Fountain of Youth, this alternative historical setting closes without altering the trajectory of the past too much. This makes it possible for the game's future to commence along the lines of our own historical development.

Figure 12: *Timeline marking the historical events as borders of the storyline of the first narrative arc in Age of Empires III*



My own projection, the represented historical events near the beginning and ending of the game provide the player with a point of reference to the temporal setting of the game, with a fictive story in between. Somewhere near the first historical event, a fictional event occurs, which sparks a chase to the New World between two historical factions that never went there. Near the end of the plot, the catalyst of this change is destroyed.

Figure 13: *Sahin, the Ottoman, leaving the New World after the destruction of the Fountain of Youth*

Source: Ensemble Studios, *Age of Empires III*, Microsoft Windows (Microsoft Game Studios, 2005). Final cut scene of the first narrative arc. The cut scene is accompanied with the following quote:"Sahin knew the Europeans were carving out territories in the Americas, and he knew the Ottomans were as much relics of the past as the Knights of St. John."

The other two acts of *AoE* follow a similar structure. The 'bad guys' renew their evil activities, which influences a specific historical development. A descendant of Morgan Black rises up and defeats them to reverse the history-altering events. The general structure of the plot is as follows: the game opens with a story that contains historical elements and looks like a depiction of the past. Shortly afterwards, an event occurs which pulls the 'factual historical development' off its tracks. Throughout the act, the player has to reverse the effects of that event, so history can progress 'as intended' again. This process unfolds against a context that refers to events of the past. The Ottoman-Hospitaller struggle, for example. Events of this magnitude are a device similar to calendar time. The events place the game in a historical context. The difficulty with these events-as-calendar-time is that, as we saw in the previous sub-paragraph, we are dealing with a *reality effect*, and not with the representation of an actual moment in the past. The game also uses other events and traces to establish its historical setting, like the existence of the Aztec Empire. Both events configure historical time, but their mutual existence excludes them from representing a specific historical point in time. The elements and events are historical traces, but the setting is the product of a reality effect that is based on our knowledge of things 'being historical'.

The levels and acts of the game structure the sequence of the narrated events. The structure of the levels is static. The player enters a map and the game briefs him with a

primary objective, which he must complete over the course of the level. After reaching his objective, the player receives a new objective, or completes the level. Morgan, and the other main characters of the story, cannot die in the game. This shows how predetermined the story of the game is. The death of Morgan (and his successors) is unthinkable because the story relies on him to revert the course of history. Furthermore, Morgan would otherwise miss out on his chances for reproduction, which would break up the Black-lineage that is so important for the game's narrative.

Within each level, the player is free to reach his objectives as he sees fit (with a huge army, or perhaps with some tactical moves). However, the player only triggers a new narrative event after he reaches the goal set by the ludus rules. Through this narrative event the player learns more about the development of the story. After the player clears a level, the game will present one or two cut scenes that contextualize the events of the level. *AoE* mostly tells its story between the levels through these cut scenes. Within the levels, the ludus goals, as the primary objectives, place the actions of the player within the context of the broader story. For example, the primary objective in the last level of the first act is 'destroy the Fountain of Youth', after which the game tells the story of the destruction of the Fountain of Youth. The game has a completely predetermined outcome, because the player must clear all primary objectives, and must complete each level to win the game. Even though the playing style of the player may vary, the outcome is always the same. The objectives tie the actions of the players to the story.

Figure 14: *A primary objective in one of the levels in Age of Empires III*

Source: Ensemble Studios, *Age of Empires III*, Microsoft Windows (Microsoft Game Studios, 2005).
The outcome of the story is predetermined because the winning condition of the game is tied to the existence of the Fountain of Youth.

The scenarios of *Civilization* do not really follow a general plot structure, because the plot is determined by the player. Let us take the Desert War as a case-study. The game starts with historical actors, in a historical setting, and with a specific goal in mind: winning the war. The plot of the game, as well as its historical outcome, depends on the playing-style of the player. He actively writes the plot of the game through his actions. However, as we saw in the temporal layer of ludic time, the game does connect predetermined events to calendar time in its internal turn-structure. The game scenario represents the past by providing a historical setting, and by acting out events at set points in time.We can relate these points in time to the events of the past. The pieces that the player plays with represent historical traces that connect the game to the historical setting of January 1941. Throughout the game, at specific turns, the turn-change triggers the enactment of historical events. For Civ, this comes the closest to what I see as the use of calendar time in the unfolding of a historical plot; these event-specific turns mark the development of the war, and give the player the idea that he is still on a timeline that runs along the timeline of the war's historical process. The plot is not necessarily historical as a one-on-one representation of the war, but we can see that the war itself is represented through the emplotment of historical traces, like objects and actors that all played a role in this war.

Calendar time has an important function in the story of the game and the actual progression of the actual war. Events like the arriving of the Afrika Korps in May 1941, or the entering of additional US troops with Operation Torch in August 1942, clearly show the development of the war. These external events tell the narrative of this war in a more serious way than the players would be able to enact it by inserting paidea rules that allow new modes of playing after these events. If we look at it like this, we can see that the narrative of *Civ* configures historical time by triggering events that are predetermined through the paidea rules, and will come true, regardless of the player's own playing style. These events are representations of historical missions and connect the playing of the game to the chronological progression in history.

The broader narrative, of the game as a playable scenario, is dynamic. The scenario is well-balanced enough for all available parties to win the game. This means that sometimes the outcome follows the course of history, and sometimes it does not. It is, for instance, possible for the game to have Feldmarschall Rommel win the entire war. As we have seen, the game triggers its narrative events at set points during the change of turns. The movement from turn to turn represents a progression in time, which coincides with the events that construct this historical narrative. These events are perhaps predetermined, but the outcome of each game is uncertain. With every game, the playing style of each player will differ. Perhaps we should say that this game's scenarios configure historical time in various modes, depending on the way the player plays the game. This would offer us room for variations between the historical re-enactment of the entire war and the playing out of possible alternative developments of the war in a historical setting. The narrative effects that tell the story are basically all actions that the players understake, together with the

unfolding of the predetermined historical events. These events are placed in a historical context through additional information, which the game provides to the player as text-balloons. Each scenario also begins with a text-balloon that offers a short overview of the background of the historical event that will be played.

Figure 15: *The beginning of the Desert War in Civilization IV*

Source: Firaxis Games, *Sid Meier's Civilization IV*, Microsoft Windows (2k Games & Aspyr, 2005). As soon as the player starts the scenario, the game offers a short historical context of the Desert War.

Looking back at the narrative layer in both games, we see that *AoE* provides a very distinct story, and does its best to maintain this story, regardless of historical accuracy. The game emplots the historical elements to fit the story, rather than the past. The story intentionally keeps the represented time of the calendar ambiguous, which opens the possibility to group events and representations of a large and unspecified temporality together, even though these events do not necessarily have something in common. The game follows its own story, with its own history, while drawing parallels with events that happened in the past. This latter move also keeps the option for the story itself to have happened open, as the events that would have changed the course of history, are revoked again near the end of the story. The game is set on telling its own specific story. In order to do this the game maintains a static plot with predetermined outcomes in the game levels.

Civ works in the opposite direction. The development of the game does not follow a predefined structure and is based on the actions of the player. But at the same time the game already establishes a narrative of the war by emplotting a series of historical traces that all refer to the war itself. Similarly, the game uses calendar time as a measuring-device of the progression of the war. In this way the game tells a story about the war through its

affiliated military operations. The matches that the player plays are in this sense always intertwined within a historical narrative. The calendar time has a leading role in this. The game emplots various historical traces to establish a historical setting. But in the end, the calendar time is the vehicle that triggers the military operations, which divide the game into frames that represent specific points in time and also construct a historical narrative.

4.4 CONCLUSION

This chapter started with the question: *how do strategy games configure historical time?* To answer this question I analysed two historical strategy games using the threefold analysis model of temporality. In doing so, I looked at the games as spaces for play that unfold through its ludic structure, as spaces that represent the past, and as spaces in which stories unfold. Historical time is established through the reinscription of lived time onto cosmological time.[161] To understand how this process materializes in strategy games, I looked at the way time itself progressed in these games on three levels: ludic time, represented time, and narrative time.

By looking at the ludic structure of the games we saw that strategy games rely on additional sets of paidea rules to configure historical time. This adds on the normal paidea rules that establish the game world in general. The games apply these additional rules as soon as they impose a set narrative on their game board, as opposed to the 'free' skirmish variant. Instead of allowing the player to choose his own 'building blocks' (e.g. types of houses, units, political systems), he has to follow a pre-established plot. This plot restricts the use of many options that are normally available to the player. In *Civ* the player can develop his society as he pleases, as long as he follows the technology tree. But as soon as the player follows the *American Revolution* scenario, the game only allows him to play as either the Revolutionaries or the British Empire. The scenario also drops its traditional tech tree because it would allow for too many alternative developments of the story. Instead, the game links technological development to the narrative triggers of the game itself. *AoE* uses similar mechanisms when the game shifts from the skirmish to its campaign mode. The game applies a series of restrictions to shape the game space in such a way that it can represent historical worlds. Without this set of limitations, the use of historical objects would be entirely arbitrary, without logical connections between the historical elements.

Both games spread their narrative over a multitude of temporal bubbles. In *AoE* the game sets up a structure of multiple levels, with each level being part of a linear progression in time. Every level is a follow-up of the earlier level, but shifts in its temporal representation, which allows the game to progress in time. *Civ* demonstrates an alternative way of development. The game maintains the same map, but suggests a temporal progression through its turn-structure. Each turn links to a progression in calendar time. We see this in the historical developments that unfold at set points in time (at set turns) in the

[161] Ricœur, *Time and narrative Vol.3*, 99-101.

game. These points provide the player with a point of reference to compare to the time on the calendar. The *Afrika Korps* reaching the coastline in May 1941, in the *Desert War* scenario, is such a mark: it shows that the Desert War is progressing.

Following the ludic structure in strategy games provides us with a narrative 'spine' of the game. We see the most important historical events and representations that the games use to establish temporal progression. The arrival of the Afrika Korps is not a simple historical representation, but a key historical element that changes the dynamic of the game. After this, the German grip on Africa becomes much tighter. In *AoE* the ludic structure demonstrates a similar mechanism. The player's main characters (Morgan and his sucessors) are never allowed to die. The main character has to survive because he (a) has a leading role in the game's story, and (b) has to carry on the lineage. Both of these examples show that ludic mechanisms in strategy games configure historical time by establishing a foundational structure, which emplots various represented temporalities in a broader narrative. This structure itself is the result of the sets of paidea and ludus rules in the games.

The layer of represented time allowed us to study the setting of the game spaces. Here we can explore what kind of temporality the games represents, and what the games focus on as a means to mark temporal passage in this temporality. As we know, games exist in abstract time, and can only represent the past through their setting. The games use the historical traces in these settings to establish a connection with a point on our calendar. We see a pyramid and know that there was a point in our past when humanity made pyramids. The historical object acts as a referent to that point in time. However, *Age of Empires* employs a set of historical traces that cannot be connected to a temporal point on our own calendar. It establishes a reality effect of the past, rather than depicting a fixed temporal point. The game builds the perfect setting for the story to unfold on by emphasising specific historical traces in the construction of its historical setting.

The levels carry a plot within them exactly because of the use of historical representations. *Civ* demonstrates this in its Mediterranean scenario, in which the player suddenly fights with WWII-specific aeroplanes, like the *Fiat Br.20 Cicogna,* as opposed to the more generic 'tactical bomber'. The use of special operations (e.g. operation Torch) helps developing the war as a hostile conflict. Each act in *AoE* revolves around interactions with a specific historical figure or event, like George Washington, or the Great Siege of Malta. These historical connectors draw parallels to points on the calendar of humanity. They function as a reference to the past. *AoE*specifically focuses on the way a succession of generations is established within a family. This is not 'just a narrative trick', the lineage of the Black-family represents this succession, and with it, a passage of time. This is the central development that the game focuses on.

Through the set of levels, or turns, the player follows the narratives of the games. In this broader narrative the represented historical connectors obtain a new meaning through their new configuration into a poetic composition. Together the connectorscreate the historical story of the games. *Civ* and *AoE* both construct their story very differently. *Civ* focuses on the re-enactment of a historical development. The game emplots various

historical events, which unfolded over time, to mark the temporal passage of its story. This does not occur through a traditional poetic composition. The development does not really serve a narrative purpose aside of marking down temporal progression and providing the player with 'proof' that he still follows a narrative that occurs in a similar chronology as the events of the represented past. The development of events is more or less a means to make the gameplay more balanced and fun. It is a mechanism for ludic purposes that is disguised as a historical representation. The changes in game rules that take place during these events do not serve the plot, but the play of the game. Here we see that the poetic composition takes on a new guise. That of a *game mechanism*. This also happens in the skirmish mode of the *of Civ*. Here the game lacks a clear plot, but through the technology tree the player does follow a predetermined path, which also serves as a way to structure the gameplay in a meaningful way. These paths follow technological development, and in this way tell a story about the technological progression of humanity. But it is up to the player which paths he will follow.

In *AoE*, the historical events that connect the game's story to our past are (forcibly) made to fit the story through its poetic composition The historical events and traces seem more or less arbitrarily picked to function in a fictional story. The poetic composition of the story has a leading role, and the historical traces that act within it only serve a narrative purpose. Their connection to objective time is of secondary importance. The game configures historical time by allowing points of reference to events that occurred in our past, at a somewhat similar calendar time. This provides the player with just enough clues to interpret the story as something that has happened in the past. The story of *AoE* opens up paths of alternative history and later closes these paths again to maintain the idea that the world of *AoE* is similar to our past.

In strategy games, the process of configuring historical time is closely intertwined with the possibilities and restrictions that the ludic structure of the games provide. In the comparison between the free skirmish- and story modes of both *Civ* and *AoE*, the historical connectors that the games use only become meaningful referents to the past when the games strictly impose their predetermined stories. The ludic structure of the games ascertain that the emplotment of these historical connectors becomes meaningful and logical. The games configure historical time through the restrictions and possibilities they impose on the game sphere, set in the represented time. In the narrative time, the narrative structures of the games draw the sets of temporal bubbles together in a new plot. In *AoE*, this means that the game configures historical time for the second time, this time in a narrative structure that ties all historical representations and temporalities together. The turn-taking structure in *Civ* keeps on renewing its own game sphere, meaning that there already is a logical connection between the events. Here historical time maintains its configuration through the represented time. However, within ludic time, we see how the game converts certain historical events into additional game mechanisms to change the gameplay. Here, again, we emplot these events and configure historical time for a second

time, through a new narrative structure. This narrative structure, however, is not given as a traditional narrative, but as a new, ludic, narrative that relies on gameplay.

CHAPTER 5
CONCLUSION

In this thesis I have searched for an answer to the question: *what are the differences and similarities in the configuration of historical time in action- and strategy games, and how can these differences be explained in reference to different game mechanisms?* To answer this question I have created a scheme that took both narrative mechanisms and ludic mechanisms into account in the construction of temporality in games. It was my goal to find out how historical video games configure historical time. This requires a point of view that takes the passage of time within games into account.

In the end, my analysis is still a narrative analysis. This will always be the case for historians, as the analysis of historical games implies that the player is interpreting games as historical narratives. However, I analysed the narrative from a point of view that took the formal elements of games, rooted in game studies, into account. It is an analysis from the point of view of the games, with a focus on the formal elements of the games. These formal elements are the *ludic mechanisms,* and cover a range of subjects. I specifically focused on the ways these mechanisms were used in the construction of the plot of these games, but any kind of historical game analysis would benefit from such an approach. Games are inherently rule-based systems.[162] Underneath the objects central to a historical analysis in games lies a rule-based structure that is predefined by the medium of the game.

5.1 HISTORICAL TIME IN GAMES: MIMESIS$_2$ AND LUDIC STRUCTURE

Paul Ricoeur defines historical time as the reinscription of subjective (lived) time onto objective (cosmological) time, as a mediation of both conceptions of time. This inscription happens through the means of a configuration in a poetic composition, mimesis$_2$, which takes a set of historical connectors and arranges it in a plot structure. This process establishes historical time.[163] The historical connectors first exist as normal objects or events in a prefigured mode: they have no narrative value attached to them. But through the configuration, the objects and events go from their prefigured mode, mimesis$_1$, to mimesis$_2$. In this mode, the objects and events attain a narrative meaning through their inscription into the poetic composition. With this new narrative meaning inscribed on the events, the reader is able to interpret the events as a refigured story, which is mimesis$_3$[164] Calendar dates are of one these connectors. A date itself has no meaning, unless it is drawn

[162] Juul, *Half-Real*, 36.
[163] Ricœur, *Time and narrative Vol.3*.99-100, 104.
[164] Ricœur, *Time and narrative Vol.1*.64-66.

into a poetic structure, in which case a date can become an important milestone, marking the beginning or ending of an era.

As Ricoeur shows, a plot can only progress over time. And through mimesis$_2$, the historical connectors are inscribed into such a plot.[165] Next to the progression of a plot, games allow the player to exist in the 'in between'. There is a constant opposition between the games existing in the abstract temporality of the 'in between', where the player moves in an 'abstract time', and the game as a progressive narrative, in which the time of the story passes through the development of the plot. This means that the historical image of the game world, as 'temporal representation', will start to distort when the player engages with the game. Games balance this opposition by connecting the concept of 'temporal passage' to their internal ludic structure. Passage of time becomes the progression of a list of tasks that the mechanisms and structure of the games provide. It is the level-structure that divides the games into various temporal bubbles, which all represent a different temporal point. Within each temporal bubble, the games configure historical time through the use of their historical connectors. These connectors have the ability to tie the time of the story to an objectively measurable point in time. Examples of these connectors are calendar dates, and weapons that belong to a specific time period, but any representation of the past that we can connect to a specific point in time would do. However, this configuration can only exist because of the ludic structure of the game, which *allows* for *these specific historical connectors* to exist in that specific bubble. The *paidea rules,* the rules that construct the game world and its possibilities, play a significant role in this. The internal structure of games decides where which items will appear. They make sure that the events and items belonging to later temporalities in the game are excluded from the initial temporal bubble. The *ludus rules,* the rules determining the winning (and losing) conditions of the game put the player on a specific (narrative) path to follow and progress in the game.

Because games, as narrated stories, exist as sets of temporal bubbles, we do not only have to look at the way games configure historical time in a single temporal bubble. We also need to study how this process takes place in the entire set of temporal bubbles. Historical games, as stories, follow a specific (chrono)logical structure. Historical games will establish this structure by clearly marking what is possible and what is not in their game spaces We find this logical structure in the ludic structure of the game: the system of rules that enables play, but only a specific kind of play. One allowed by the paidea rules and encouraged by the ludus rules. It becomes the task of the historian to see how game-narratives makes use of historical connectors in the construction of their stories.

Games reverse the structure of the inscription of objective time onto the subjective time of the story in the configuration of historical time. It is not objective time that decides on the ordinal measurement of time in games, but it is subjective time that decides how far the player is along in the story. This subjective time, the time of the narrative, is always a part of the poetic composition of the games. Either as specific plot, or as the set of rules

[165] Ricœur, "Life in Quest of Narrative."21-22.

that structures the game. The games inscribe features of objective time onto this composition through the use of historical connectors, which function as markers that establish fixed temporalities. Make an alteration in the game's story, and the reality of the game alters its temporal representation in accordance with it. The temporal bubble pops and a new bubble appears. Simultaneously, the given point in subjective time is already a product of the configuration of historical time: the games use historical connectors in their spaces to establish historical levels, in which the player must engage. The games spaces are always a product of refigured historical time, and within these spaces the games tell their stories.

5.2 ANALYSING HISTORICAL TIME IN ACTION- AND STRATEGY GAMES THROUGH A THREEFOLD ANALYSIS

In my analysis I have looked at the action- and strategy games from a threefold perspective. This perspective allows us to take the structures of *ludic time,* of *represented time,* and of *narrative time* into account. This paragraph will discuss the results of this comparative analysis between both types of games. To study the action games, I looked at *Assassin's Creed*, and *Call of Duty: World at War*. For the strategy games, I analysed *Age of Empires III,* and *Sid Meier's Civilization IV*. I followed the *embedded story* of each game. This means that I played the narratives provided by the campaign modes (or similar variants) of thes games.

In the layer of ludic time, the mechanical structure of the game lies at the core of analysis. Here I specifically focused on the analysis of mechanisms that were used to construct time and temporal passage in the games by following their objectives. These objectives arethe ludus rules that shift the games from one temporal point to another after completion. I used the scheme of ludic time to capture how the abstract time of the game world is set in motion through various triggers, like objective-based progression.

In the layer of represented time I have studied the games as a set of represented temporalities. Here I focused on the means that the games use to configure historical time through their historical connectors. I also focused on the sociocultural labels and temporal schemata that the games use between and in the represented temporalities to represent the passage of time. I did this in order to see how games represent the passage of time itself. In the layer of narrative time we can follow the shift in temporal representations and the implications this has for the stories that the games tell. In this layer I have analysed the plot structure, and the way the games use the historical connectors of the represented time to contribute to this plot structure. Next to this, I have looked at how the games use the objectives of their ludic structure as a means to order the narrative, and establish narrative triggers, like dialogues between actors, at the right time for the story.

Applying the layers of ludic time, represented time, and narrative time, helps us understanding games from various points of views. Ludic time plays a key role in how both action- and strategy games tell their stories. The ludic structure of games allows the existence of their multiple temporalities next to each other. The player follows a logically

constructed story in the games by following the ludus rules (the winning conditions) that invoke plot progression. The games tell their stories through the set of temporal bubbles, or, levels. Each level acts as its own temporal representation of a certain space, which contributes to the gaming experience. Maintaining the story logic requires an enormous set of restrictions, which consists of objects, events, and spaces that the player cannot (yet) engage in.

Action games construct their environments in such a way that the expansion of their game spaces coincides with the progression of their stories. In *Call of Duty*, the player must access an entirely new level when the the story progresses. *Assassin's Creed* allows the player access to areas in the game that were restricted earlier on in the game. The areas that are already available to the player are 'renewed in time'. The game space remains the same, but the time of the story affects and slightly alters the space. Through this mechanism the player can visit an earlier discovered town, which now has renewed its space by progressing in time.

The strategy games follow a similar structure. Only here the restrictions are more visible because the player can choose between the unrestrained skirmish mode, and the more restrictive campaign mode. At first the player is free to play with a range of characters, in a range of available maps. But when the games want to impose their fixed stories onto the game world, the game locks all of these options away. The player must play with a set of characters, objects, and locations that correspond to the stories of the games (and their established temporal representations). Both *Age of Empires III* and *Civilization IV* follow a structural division in their narrative structure that is similar to the action games. The ludic mechanisms divide the games into sets of temporal bubbles, which represent a series of temporalities. The time of the story progresses when the player shifts between these bubbles. In *Age of Empires,* the progression in time is based on task-progression. These tasks are based on the ludus rules. *Civilization* relies on the paidea rules to progress in time. The game uses a turn-based structure instead, where after x turns, the temporal bubble is renewed regardless of the player's actions. This is a key difference with the other games.

In the layer of represented time we can look at the ludic spaces of the game as represented temporalities. Both action games and strategy games configure historical time through their use of sets of historical connectors in the game spheres to establish a certain temporality. This happens through the inscription of historical connectors, representing objective points in time, onto the subjective time of the story in the game worlds. Games emplot various historical elements to reaffirm the represented temporality. In *Call of Duty*, for instance, we see backgrounds that correspond to WWII-based landscapes, filled with weaponry from that time period. We also see the representation of various historical events coming back to the player in the shape of ludus goals, like the objective 'enter the *Reichstag'.* Through the use of such connectors, with a clear reference to a specific point in time in their core, the game world starts to represent this temporality as well. Each analysed game made use of this strategy. To name some examples, *Civilization* and its references to WWII-based weaponry

in their Desert War scenario, *Age of Empires* and its references to political figures in the New World, and *Assassin's Creed*, with its references to the activity of various political factions in the Levant.

Only *Age of Empires* uses its historical traces to construct levels that cannot be connected to a specific point in time. Instead, the games uses the historical traces to establish the past as a *reality effect* pointing towards 'the past'. This past exists as a multitude of temporal points and not as a single 'represented point in time'. The game refers to multiple events from the 'late sixteenth century', without a logical chronological order attached to the events (compared to the actual progression of the events in the past). This construction establishes the game's 'past' as a fictional space that does not correspond to any point in time in the sixteenth century, but more or less to a general notion of this century. All the analysed games differed greatly in the way they established a passage of time between the represented temporalities. This difference was not directly between action- and strategy games, but between the genre-specific games amongst themselves. All games refer in some way to the existence of time on the calendar. Even if a date is never mentioned, like in *Age of Empires*, there are always some clues that provide us with an indication of the represented temporality. The reference to the Great Siege of Malta, for example. Or, in the case of *Assassin's Creed*, the existence of certain historical characters. But next to these similarities, we can divide the games between two groups: games that incorporate the calendar in their temporal passage, and games that base their temporal passage on the fictional elements in the game.

Call of Duty and *Civilization* incorporate the calendar time in their historical stories. Each level in *Call of Duty* is a representation of a specific historical date and place. These levels combined reveal a temporal progression of the story. The player thus plays the game as a sequence of represented historical events. *Civilization* follows a similar structure in its turn-based progression. Regardless of the player's actions, certain events, which all refer to historical events, will take place. In the *American Revolution* scenario, Thomas Payne's pamphlet will always be published, marking a point on the calendar to show that the player follows a historical trajectory in his play.

Assassin's Creed and *Age of Empires* keep their passage of time more abstract. In *Assassin's Creed*, we mostly see time progress through the personal progression and development of the game's lead character, *Altaïr*. In *Age of Empires*, the progression of time unfolds through the lineage of the *Black*-family. The players play as the character of a grandfather in his younger years, and later plays as his descendants. The games make references to the passage of chronological time, but on a different level than *Call of Duty* and *Civilization*. Instead of establishing the games as sets of representations of various historical events, these games place themselves *in between* historical events. Through this operation, the games confirm their existence on the historical time path of humanity. Temporality is here more or less a means to provide some narrative context for the games. When the story of *Age of Empires* opens with the Great Siege of Malta, this is a means to fill the game sphere with representations of this specific era. This is different from the way *Call*

of Duty and *Civilization* use their historical connectors. Here, the historical connectors provide a vantage point for the story. At a later moment in the game, the player will find himself playing along the side of George Washington. Washington acts as a historical connector that reaffirms the existence of the fact that the game still follows a historical development. The game establishes a sense of temporal passage by using different historical events in its temporal schemata. We all know that the Siege of Malta took place before the battles of George Washington. By playing levels that seemingly surround these events, the player contextualizes the existence of his characters on a historical timeline. The timeline of the game is in this way intertwined with the timeline of the real world. Passage of time is already an indication of a narrative operation, which is why it is so important to understand in which way time is progressing in these games.

In the final temporal layer of narrative time we gain insights from the games as sets of temporal representations. In this layer the game assigns a new meaning to the individual represented temporalities through a narrative structure. The difference between historical action games and strategy games was, again, not significant. Instead, I found differences between the games in their respective genres, and similarities with games outside of their genre.

In both *Call of Duty* and *Civilization* the set of temporal bubbles, the levels set in represented time by the ludic structure, constructs a story which captures the progression of a historical process. The games re-enact the past by following the represented temporalities. This is very clear in *Call of Duty*. Each level acts as a single temporal representation, but together, configured in a poetic composition, the game re-plays the historical process of the *Seelow-Berlin offensive operation*. The ludic structure, as a chain of represented temporalities, tells the historical story of the game. Because the chronological logic of progression is so important in this narrative, the game follows the historical process step-by-step. Each representation is a recognizable point in time, which makes the player aware of the fact that the process is unfolding over time. *Call of Duty* does this skilfully by assigning each level with coordinates in time and space. All these coordinates together tell the story of an entire combat operation.

Civilization renews its temporality with every turn, with each turn labelled as a week, or month (depending on the scenario) in the war. Historical events unfold depending on the turn of the player. On the seventh turn in the *Desert War* scenario (May 1, 1941), the player who fights under the German flag suddenly obtains troops in Africa. This is an event representing the foothold that Feldmarschall Rommel's *Afrika Korps* got in Tripoli around that time.[166] By using several of these events, the game establishes a narrative on its historical map. This narrative does not follow a traditional poetic composition. Instead, this narrative composition is imposed on the game by assigning these historical events to *game mechanisms*. The game tells its story through the player's experience of the effects of

[166] Toppe, "German Experiences in Desert Warfare during World War II (vol. 1)", 13.

certain events. This is a great example that marks the way game mechanisms become storytelling mechanisms in historical stories. The military operations mark the progression in time in the war, which tells us through this narrative about the development of the war.

Both games re-enact parts of historical processes. However, whereas *Call of Duty* is completely pre-structured, and does not allow for alternative options, *Civilization* does not maintain this strict outcome. The player is able to win the game with any historical leader that the game provides. It is possible for Feldmarschall Rommel to win the game, even though he lost the war. The narrative provided by the game mechanisms is more or less a general construction that the game uses to give the war a course of development. The event-based narrative is a means to balance gameplay. But at the same time it still tells us the narrative progression of the actual war as a series of military operations and their influence on the Mediterranean strategical field.

Assassin's Creed and *Age of Empires* follow a significantly different strategy in their stories. Again, the games tell their stories through the causal narrative logic established by the set of their individual levels, which are set in represented temporalities. However, the games here reconstruct the past in a way that fits the needs of their own stories. The games startat a certain historical temporality, but then distort the past with their own fictional constructions. A rupture takes place between the historical past, and the newfictive story of the games. In *Assassin's Creed* this happens when the main character, *Altaïr*, initiates a conflict between the Assassins and the Knights Templar. This is a fictional event that takes place in a historical setting. Or take *Age of Empires,* where the player, as *Morgan Black*, voyages to the New World to stop the Ottomans from reaching the Fountain of Youth.

The player finds himself in a historical world, but one that does not correspond to our own notion of past any more; it has become an alternative timeline. This allows for new events to occur that did not necessarily take place in the past. The important thing in such a structure is that the games, at a certain point, reinscribe themselves back on the 'real' timeline of history again. For such a construction to be possible, *Assassin's Creed* and *Age of Empires* follow a narrative course that reverts all processes put in motion by the evil forces. By reverting these processes, time is able to restore itself to match our own interpretation of the past. *Altaïr* talks things over with King Richard, and establishes a peace between the Crusaders and the Assassins. *Morgan Black* vanquishes the evil forces and makes the Ottomans aware of the fact that they did not really 'belong in the New World'. The entire games actually function as non-events. Understanding this movement requires the stories of the game to inscribe themselves at at least two points in that are comparable to our notion of history. By starting and closing the game at a recognisable historical points in time, the player is ascertained of the fact that this game unfolds on a timeline that is at least somewhat identical to ours. Between these points in time, the game follows its own trajectory, as a sort of fantasy space.

5.3 DIFFERENCES AND SIMILARITIES IN THE CONFIGURATION OF HISTORICAL TIME IN ACTION- AND STRATEGY GAMES

By analysing the games per temporal layer, we have seen that the greatest differences in the configuration of historical time do not lie between action- and strategy games, but between the ways the games use their historical connectors in their narrative. Constructing a story in a game requires additional ludus and paidea rules to establish a causal logic of the story. The ludic structure of these games plays a significant role in this. Through the ludic structure, the games establish a narrative spine in their game worlds through which they can recteate a set of represented temporalities. This structure is responsible for the correct progression of the story between the multiple temporalities to. From the point of view of plot development, this structure is the same in all analysed games.

Through ludic time the game levels can exist as individual spaces which configure historical time. Again, all games apply a similar strategy. The games draw in historical representations, which the games use as historical connectors, to inscribe referents of an objective (period of) time onto the subjective time of the game world. In the surrounds of *Call of Duty*, some might use a *Panzerschreck*-rocket launcher. The use of this weapon refers to the years 1943-1945, which in turn becomes the time of the story. Not all games configure historical time to fit an exact represented temporality. Sometimes a reality effect of a certain period works better because it allows the games to tell their own specific stories about the past.

In narrative time, the games join all represented temporalities in a newly constructed narrative structure. Here the games configure historical time for a second time, this time as a story. The games tell two kinds of stories through this structure. First, there is a story of the development of a historical process. We see this in the way *Call of Duty* and *Civilization* make use of the past for their own story. In the second way, however, the fictional narrative of the games locks itself between historical events and intertwines itself with the actual progression of the past. *Assassin's Creed* and *Age of Empires* use this strategy to configure historical time. An important difference between these two kinds of games is that the first uses historical representations to explore the past as a historical process and re-enacts this. The second type of games uses the past as a background for its own story to unfold. Here, the narrative configures historical time to assure the player that the course of history remains unchanged.

To answer my initial research question: *what are the differences and similarities in the configuration of historical time in action- and strategy games, and how can these differences be explained in reference to different game mechanisms?* I pose the following answer: there is no distinct difference between the configuration of historical time between both game genres. I have mostly focused on the game mechanisms that divide the games into multiple levels, and join them through a plot structure. All the analysed games use these mechanisms to tell their stories in a similar way: the plot structure divides the game in a set of represented temporalities, which are joined together in a narrative structure. The

games configure historical time in this structure by refering to historical connectors in the individual temporalities of the levels. There is, however, a great difference in the extent the games connect their represented spaces, which have been configured in historical time, to the plot development of the games. The plot of the games can unfold in historical worlds to function as the background for fictional stories about alternative realities. Or the plot of the game can follow a historical process, configuring historical time, *over time.*

5.4 THE CURIOUS CASE OF THE SKIRMISH MODE COMPARED TO THE CAMPAIGN MODE IN STRATEGY GAMES

One last type of games has not yet been mentioned in the previous analysis: the skirmish mode of the strategy games. This is because this thesis studies games as embedded stories, and not as modes for free play. In the skirmish modes, strategy games do not follow a direct narrative. Instead, the player develops his society as he pleases, and focuses on the development of historical processes he himself finds important. In other words, the paidea and ludus rules allow for much more 'free play' than their narrative counterparts, the campaign modes.

What we see here is that historical objects and traces become like chess pieces that represent something, but in the end they are subjected to playing a role in the player's own story. At this level of storytelling, we could imagine soldiers from Ancient Rome fighting the Prussian army. Although the objects themselves are historical representations, the objects cannot act as referents that construct a temporal setting. Their emplotment is not homogenized by temporality, but by something else: they are interesting pieces to play with. The temporal representation that lies within the objects is internalized, but does not function as an reference to a period in the time of the game space. Here, temporal progression becomes visible through the historical development of individual units. The games configure historical time through the development of an object or technology, when it is placed on a prestructured path of development. This happens when the player moves from animal husbandry to horseback riding in *Civilization*. Or in *Age of Empires,* when the society of the player moves from the Discovery Era to the Industrial Era. The games configure historical time in groups of related historical connectors which are all part of the same progressive timeline.

Understanding temporal development here requires us once more to follow the paidea and ludus rules of the games. The fact that we first need animal husbandry before we can ride on horseback is also part of a small narrative. But here, the narrative operation is invisible because it resides in the rules of the game. There is an interconnectedness between these two skills. 'animal husbandry' is not used to establish the rest of the game space as a temporal representation, no, it tells its own small story. First the civilization learns to keep animals, after which the civilization will 'evolve' into gaining knowledge about 'horseback riding'. A similar story might be the development of soldiers, once with pikes, later with machine guns. In the skirmish modes of these games we see all these mini-

narratives of specific units and groups of historical connectors. The games configure historical time -within- these groups and units, but not outside of it. It becomes impossible to pinpoint one reference of the past to be the indicator of temporal representation because there are so many developments in the game world. There are simply too many narratives to follow. Time, as the represented time the story is set in, distorts, and this has effects for the configuration of historical time. Instead of being a referent of objective time, the historical objects here lose their quality as a historical connector to a specific temporality. Instead these historical connectors become objects that refer to their own temporal progression in their own, progression-based, individual narratives .

This small case of skirmish modes immediately shows the importance of following the narrative structure that the paidea rules provide in any kind of game. It is these rules which decide -what- can be developed, and -when- this development takes place. When the skirmish modes of the analysed strategy games make way for the campaign modes, the paidea rules restrict these developments for a large part, and connect the progression of these historical objects to the time of the story. It is then the paidea rules, and the ludic structure of the games, that always lie at the foundation of plot development and temporal progression in games.

5.5 A DOUBLE CONFIGURATION OF HISTORICAL TIME

Games configure historical time in a double structure. Games first configure historical time in the layer of represented time, and then they configure historical time in the layer of narrative time. At the first level we follow the represented time and explore the timeless zone: the temporal bubble in itself. This allows us to study the objects in their prefigured state, without an attached poetic composition. Through this level of analysis we ask questions about the way game spaces configure historical time. What do the historical connectors focus on here, and how does this support its linear counterpart of the plot in the games? The game spaces themselves are already the result of an emplotment of historical connectors, as they need to convey the representation of a specific temporality. And let us not forget that the temporal bubbles, in the end, are created to be part of a poetic composition. Even without narrative progression we already see the first traces of the stories that are to be told. This means that we should consider $mimesis_1$ in games as a direct product of $mimesis_3$, the refigured events with a narrative meaning attached to them. This is something that present historical game theoreticians overlook. I will discuss this further in the final paragraph of this chapter.

The second configuration of historical time in games takes places through the way time passes within the story of the games. How do the games establish their sets of temporal bubbles, and wat do the historical connectors focus on in this structure? Following these traces allows us to look at the ways games emplot their historical connectors in a poetic composition. The games use historical connectors to tell specific stories about the past. Here we see the full mimetic process at play. First, the game spaces configure

historical time through their use of historical connectors. The games use their historical connectors to establish a representation of a temporality. Later, the game arranges the set of these temporal representations in a poetic structure through its ludic structure. The games configure historical time for a second time by linking the represented temporal bubbles to a plot. This operation transforms the set of historical temporalities into a historical story. The second level of the analysis of historical time in games follows the linear progression of time within the set of temporal bubbles in the game sphere.

It is important in historical game analysis to find out where and how this first and second configuration of historical time cooperate; analysing the problem space alone is not enough. There might not always be a visible narrative plot to trace, but the ludic structure of the game is working hard to establish a setting that is in concordance at the layer of the setting, and at the layer of the story. If games are mediums that combine play and story, historians need to take both layers of the configuration of historical time into account. Both play and story are intertwined with the past in the playing of historical games, and correspond to one another in a complementary manner. This thesis has considered games as rule-based systems that allow for play to come into being. But the play must be considered as part of the story, and the ludic structure is definitely part of the plot.

5.6 AMENDING THE PROBLEM SPACE: CROSS-SECTIONAL ANALYSIS AT MULTIPLE TEMPORAL LAYERS

In the analysis of historical games as problem spaces, one easily loses track of the vaster narrative of the game. The problem space of a game helps us to understand the game in its first configuration of historical time. However, it requires the set of problem spaces to understand the game's story after it has gone through its level-based poetic composition, which configures the individual events for a second time. When McCall focuses on games as problem spaces, he undercuts the complexity of the narrative structure of the games.[167] We see this with my earlier example of *Call of Duty* in which a problem space-approach would not capture the role of the event as a tragic setup for a heroic narrative. This narrative only appears when we follow the entire structure of the games. It is particularly important to focus on the structural division of time, which divides the temporal bubbles of the game into individual levels. Tracing the lines of moments that initiate a temporal progression provides an indication of the narrative progression that the game actually follows.

The distinction between games that follow historical processes, and games that follow their own fictional stories in historical settings, might shed more light on the way historical games make use of historical representations in their narrative constructions. Both types of games configure historical time in the same way on the first, represented level, but their configuration of historical time on the second, narrative level, differs. The games either use the past as an anchor to draw parallels with historical points in time, or as a means to

[167] McCall, "Historical Simulations as Problem Spaces."

tell a specific story through the use of historical events. Both types of games require a different narrative approach to understand the use of these historical representations. This is important because in both configurations of historical time the games aim to establish immersive historicity to let the player feel like he is 'in the past'. As Kingsepp explains, this happens through the use of historical representations.[168] But this immersion serves a different role to the two types of games. Indeed, all analysed games try to immerse the player in their represented temporality in the layer of represented time. However, some of the games go beyond this immersion into a historical world, and want to immerse the player in a historical process. This requires a different approach towardsthe games and their use of historical connectors, which begins with an analysis of the layer of narrative time in these games. Problem spaces are a great approach towards historical game analysis, but such an analysis must include the entire structure of the games to account for meaningful historical analysis. From the problem space point of view, the historical connectors are secondary to their functioning in the game *as a problem space*. In my own analysis I looked at the interaction of these historical representations with the narrative, the represented temporality, and the ludic structure of these games. I consider such an approach to be more fruitful because it reveals how the historical connectors function in a multitude of structures. The connectors lies at the centre of such an analysis, and we can then distinguish how the games use these historical connectors historical in a narrative, or logical, structure, like a progressive path of development.

Historical games are the embodiment of a causal relation between historical events. Follow the ludic structure and look how the games use their historical connectors in this structure. This is the core of the story in games. Such an approach does not only show how these games use history in their stories, it also provides us hints on how the games emplot their historical connectors: by homogenization in a group (in represented time), or through a poetic composition (in narrative time). Clearly we see the games as representations of the past, but what is the purpose of these representations in the games? We must asnwer this question by backtracking the way the game developers use the past in their narrative and ludic construction of the game itself.

The proposed model of time analysis in games through three temporal layers allows us to make a clear distinction between analysing the linear progression of time, and between a possible cross-sectional analysis of a single point in time, in video games. We have seen that the games configure historical time at both levels. To understand the meaning of this configuration, we have to take both levels into account through a complementary analysis. The idea of Ricoeur's configuration of historical time through the mimetic process is not simple in games. Every historical connector is chosen for its very narrative purpose, and is presented to us through the ludic structure of the games, which is a poetic composition in a multitude of ways. The double configuration of historical time in games, both in their setting and in their story, requires us to study them both as separate

[168] Kingsepp, "Immersive Historicity."

levels. One from a traditional narrative point of view, but this must be amended by a second view. A game studies point of view, which takes the ludic structure of games into account. Through this structure, game spaces themselves can be analysed as narratives that present us historical connectors with a very specific goal in mind. Zakowski has already stressed that games always contain various narrative structures which all contribute to the main story of the game.[169] In a similar way we can only comprehend the historical stories of video games if we look at the configuration of historical time in their game spaces and in their plot development.

One of the difficulties in this approach lies in gauging which historical connectors we should analyse. It is not easy to understand which historical connectors should be subjected to a critical historical analysis. This difficulcy lies exactly in the fact that every historical connector might have a different function within the game's structure. Focusing on different connectors thus will give the researcher different results on the ways the games use (a piece of) the past. I think this can only be overcome by letting go of the idea of any historical game as a total representation of the past. Instead, we could focus on a combination of historical connectors and their corresponding function in the game. Such a focus would help us to understand how these connectors produce new meanings by arranging them in new ways.[170] A second problem concerning this approach is that we, as researchers, can never be sure if the connectors that we analyse are also the connectors that the player perceives as historical.

The meaning of storytelling radically changed with the introduction of video games. Focusing on the traditional narrative tells us a good deal about the games, but it cannot capture their entire story. This is because a large part of the narrative has been made invisible by the structure of the game itself. Instead, new modes of historical game research should focus on the historical connectors themselves, and see how these traces interact with the ludic structure of the game. Any historical story starts with its connections to the past, but it is this structure that decides on the use ofthe historical connectors. Are they used to establish a historical setting, or are they used to trace historical developments over time? And if the latter is the case, what kind of development are we then speaking about? The interaction with the historical connectors by the game and the player is decisive for the narrative in which the historical connector placed -in-. We should then not only look at the historical connector, but also at its emplotment. For such an analysis, the historian should follow the game's inner ludic structures first.

[169] Zakowski, "Time and Temporality in the Mass Effect Series," 59, 63.
[170] Antley, "Going Beyond the Textual in History."

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