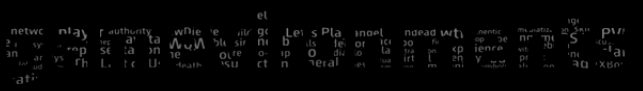
Novigrad in the evening sun. *The Witcher 3: The Wild Hunt* (CD Project Red 2015)

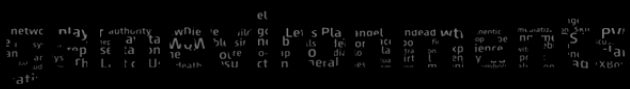


Special Issue

Gamevironments of the Past.

by

Derek Fewster and Ylva Grufstedt



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Developing Time: Representing Historical Progression through Level Structures

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Abstract
This article explores the use of historical events as a way to structure the narrative in historical action games. The author uses a comparative analysis to show how *Call of Duty: World at War* (2008) and *Assassin's Creed (1)* (2007) take different approaches in embedding the past in their stories. A constant representational opposition is at play in historical games. The games have to represent a historical setting, but also need to represent a passage of time within this setting to mark narrative progression. Mediating this opposition happens through the level-structure of these games. The analysed games take different approaches in establishing this passage of time. Both games refer to sequences of historical events to display their passage of time, but do so in a different way. *Call of Duty* re-enacts the historical events, and *Assassin's Creed* develops its story between historical events.

Keywords: emplotment, temporal progression, chronological time, historical connectors, level structure, temporality

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Introduction

Assassin's Creed (2007) and *Call of Duty: World at War* (2008) are video games that provide players with the possibilities to explore historical sites and scenes. In *Assassin's Creed,* the players take the role of a Levantine assassin during the Third Crusades, and *Call of Duty: World at War* gives its players a chance to experience combat scenes in Eastern Europe and the Pacific in the Second World War. When reviewed by players, these games often receive criticism on their simplified depiction of the past. With good reason, because the audience of these games seems to be captivated by the historical information provided by the games (Whitaker 2016). This

criticism usually aims at revealing a political bias in the ways these games use historical data to construct their stories (Nielsen 2015, Siraud 2014).
Ubisoft Montreal, the developer of *Assassin's Creed*, stresses the fictional dimension of their game by claiming that the past only acts as a source from which the writers draw their inspiration. It is for this reason that historians like Jeremiah McCall (2012) promote a new way of studying these types of historical fiction: within the constraints of their medium. This approach limits the role of historical knowledge in these games to their function. Jeremy Antley (2012) argues that historians should privilege the analysis of the production of meaning in historical games, which takes place through the joint operation of the audio-visual and mechanical structures in games (Chapman 2012).

In this article, I will focus more closely on one of these mechanical structures of meaning production: the ways historical games use their level structures to arrange the in-game events and actions into specific sequences. Singling out the level structure for this analysis has two purposes. Firstly, it will help us to follow the plot development of these games in a structured way, namely by assigning each level to a part of the plots that games present to their players. Secondly, it draws our attention to the way each level in a game represents its own point in time and space. Following the level structure will help us to trace the chronology of historical events and other historical representations that inspire game developers when they write their video game stories. Both of these processes, that of narrative development and that of chronological development, coincide through the concept of temporal passage.

Paul Ricoeur (1991, 21–22) emphasizes the role of a passage of time in the development of stories. He shows that a story is its own temporal unity in which plot development functions as the force that progresses the time of the story. In this article, I will show how game developers embed the past in historical games by

connecting the narrative development of these games to a progression in represented chronological time. Through a comparative analysis of *Call of Duty: World at War* and *Assassin's Creed,* I will show that game developers use distinctive strategies to embed the past in the level structures of these games. Both games refer to sequences of historical events to display a passage of chronological time, but do so in a different way. *Call of Duty* re-enacts the historical events, and *Assassin's Creed* develops its story between historical events. To make this distinction clear, I will develop a methodology which divides the concept of time in three temporal layers, namely: ludic time, represented time, and narrative time. Partitioning time allows us to study its three different features in the level structure of games: the way games use their levels to tell a structured set of stories, the way chronological progression unfolds between the levels, and the way how the level structure mediates both operations. The research question that will be answered in this article is the following: *In what ways do Call of Duty: World at War, and Assassin's Creed use historical events in their level structure to produce temporal progression?*

My analysis focuses on the ways games construct their historical narratives through level structures. Games that bind narrative progression and level-completion together follow an *embedded narrative*, which is a predetermined script that players discover and enact throughout their playing (Fernández-Vara 2014, 107–108). These games maintain the integrity of their plot by invoking a series of strict rules which align the possible performances of the players with the assigned role of their gaming characters in the games' stories. Present discussions distinguish two kinds of game rules that affect the actions of the players: *paidea rules* and *ludus rules.* Paidea rules are constructive forces that construct the game world as a sphere which facilitates acts of play. Ludus rules structure games by determining the victory conditions of the players. (Frasca 1999, Tulloch 2014, 335–336, 339–340). This second group of rules makes up the tasks that players pursue and defines the order in which the games

present the contents of their embedded narratives.

As Alison Gazzard (2011) shows, games use an interplay of paidea and ludus rules to confine players to specific places in games until they complete their tasks at hand. Playing well is an indication for the games to offer spatial rewards to the players, which allow them access to new areas. Games with embedded narratives not only provide the players access to new territories, but also reveal a further plot development of their stories through the succession of objectives that the players complete.

Theoretical Framework: Understanding Time in Games

In this section I will develop a methodological scheme for analysis that I can use to study the various functions of time in games in relation to historical and narrative development. I will first discuss the current academic state of affairs concerning time analysis in games, after which I will develop a model which facilitates the needs of my research question.

Any conceptualization of time in games depends on the rules of the games and serves a variety of individual needs in the game. Tychsen and Hitchens (2009) provide a model which shows how time, in games, operates and moves as a set of various temporal layers. By distinguishing between sets of time we can study exactly which kinds of time move forward through specific actions of the players (Tychsen and Hitchens 2009, 171–172, 189–191). Zagal and Mateas (2010, 844–848, 854) discuss the interaction between the various layers of time in games. Their research shows that the existence of multiple temporal layers within the same game system can lead to temporal anomalies. A common example is the in-game day/night-cycle which repeats itself over a few hours of playtime without actually progressing the date in

the game. Furthermore, Zakowski (2014, 59) shows how game stories consist of separate orders in time which provides the players with a multitude of stories affecting their experience of the games.

These prior models show that the analysis of time in games has to be tailored to the specific needs of the study at hand. An important limitation to my methodological model is that I will build it around games with an embedded narrative. This means that the model will not be suitable for the analysis of on-line multiplayer games, as these games often lack a traditional embedded narrative. These types of games are less connected to the development of a predefined plot, and instead tell a multiplicity of possible stories by assigning various objectives to the players, which all provide insights into the story of the entire game world (Gazzard 2011, Zakowski 2014, 59, Fernández-Vara 2014, 107).

To answer my research question, I have to trace the mediation of chronological and narrative time in games. With this in mind, we then have to dissect time in games into various parts and study them individually for their specific content. I will distinguish a threefold temporal structure in games, consisting of: *ludic time*, *represented time*, and *narrative time*. In ludic time we can take a closer look at the task-based structure that progresses the plot in games. In represented time we can distinguish the games as a set of represented temporalities. In narrative time we can trace the implications and uses of these temporal representations in the stories of the games through the narrative operation of *emplotment*.

Ludic Time

Ludic time is the temporal layer that is synchronized with the game world, which is the virtual world in which the players can engage. The game world itself is set in *represented time*. Ludic time has its own state of time, which is dependent on the intrinsic cycles of entities and objects in the game world. The duration of each cycle

equals a unit's (personalised) 'time' (Zagal and Mateas 2010, 849–850, Zhao and Szafron 2014). As long as the cycle of ludic time does not change, the player exists in a temporal bubble in which the chronological occurrence of events in time does not take place. The chronological time of the story freezes and suspends the progression of temporal shifts in the *represented time* of the game world (Zagal and Mateas 2010, 854–855). Games with embedded narratives develop their stories by providing the players with a linear sequence of tasks and divide the game world in a set of temporal bubbles through which the players move throughout their playing (Fernández-Vara 2014, 107). On-line multiplayer games are excluded from this analysis, as these games often take place in a singular temporal bubble that spans the entire game world.[i]

Ludic time directly progresses by completing tasks, which allow the players access to new areas in the games (Gazzard 2011, Hallford and Hallford 2001, 158). Through their structured mode of expansion, the games ascertain that their plot cannot progress without the players and vice versa. These structures are mechanical components that maintain the abstract time of the game world. When players complete the ludus goals that determine plot progression, the games push the represented time of the game world forward. For an analysis of the ways games establish a structure which produces temporal progression, we therefore need to focus on the points described in Table 1.

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 • Ludus rules in relation to the plot • Paidea rules as restrictions in relation to the plot

Table 1: *Key points for the analysis of ludic time as a means of storytelling in games.* A scheme of the ludic mechanisms that support the construction of temporality and time in games.

Represented Time

The layer of represented time establishes a historical reality that situates the games. Represented time operates on two levels. It is a representation of a passage of time, and it is a representation of a historical temporality.

Following the representations of temporal passage allows us to grasp the fictive duration of in-game events. Zagal and Mateas (2010, 850) show that games make an appeal to our temporal understanding by applying sociocultural labels that indicate time structures to their level-, or task-based structures. These labels range from conceptualizations of chronological temporal passage (days, weeks) to implied progressions of subjective structures (novice-expert). The set of labels allows the players to inscribe their in-game experiences into a temporal scheme, which allows them to make sense of the in-game events that concern duration of time and progress (Zagal and Mateas 2010, 850).

The representation of a specific temporality operates at the surface of the game world and represents a specific point in time. Game spaces are constructed environments with the ability to establish a historical temporality via associations with more traditional media that represent history, and through historical objects that refer to a certain point in time (Ricœur 1988, 99–100, 104, Tychsen and Hitchens 2009,

188–189, Zagal and Mateas 2010, 850). These are historical connectors that create a temporality within the story.

Zakowski (2014, 59) explains that games not only tell their stories through a plot, but also include all actions, interactions, and possible events that (could) take place in the game world. The represented temporality of game spaces is thus a source of information to players in various ways. In general, we constitute narratives by either progressing a trajectory in time (through plot development) or in space (Baynham 2003, 362, Zagal and Mateas 2010, 851, Zakowski 2014, 63). In the latter, players learn more about the game space set in a represented temporality through exploration of this space. Both the passage of time and the representation of temporality influence the knowledge of the player about the story they follow in the game. Table 2 marks the most important ways the passage and representation of time are constructed in games.

Temporal layer	Type of time	Key points of analysis
Represented time	Abstract representation of temporalities	• 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 • Elements contributing to the setting of the story and do not affect progression of the plot

Table 2: *Key points for the analysis of represented time in game.* A scheme of how represented time supports the construction of temporality and time in video games.

Narrative Time

The final temporal layer that I will explore is the layer of narrative time. The importance of this layer is twofold. Firstly, it is the temporal layer that reinstates the

passage of time in both the game world's chronology and its plot development (Ricœur 1991, 21–22). Secondly, the games reveal their homogeneous story through narrative time. Through a narrative temporality, we can distinguish a (chrono)logical account of the unfolding events and points in represented time as a coherent sequence, which establishes a story through the operation of emplotment. Emplotment is a narrative operation that integrates individual and heterogeneous events in a poetic composition and converts them into a homogeneous unity: a plot in which every element has meaning in light of the whole (a story). The emplotted sequence leads to a meaningfully configured story that leads to narrative closure (Frissen et al. 2015, 31, Ricœur 1991, 30–31)

The (chrono)logical unfolding of events in games coincides with additional narrative effects that provide the events with additional meanings. These effects consist of dialogues, cut-scenes, and other storytelling tools, and with their support games disclose new stories that draws all individual events into its plot structure. Specific ludus rules in the games trigger the narrative effects at set points in the story and in this way, the embedded narrative finds itself between acts of play and the unfolding of a story.

Together, the represented temporalities, the narrative triggers (as ludus rules), and the narrative itself, present the players with a story. For this research, the narrative layer concerns itself with the construction of a story through the individual sets of levels and tasks that players work their way through. Whereas the layer of represented time emplots history in its space, the narrative layer emplots the sequence of points and events in represented time into a singular story. In games, the time of the story progresses through narrative triggers, which are embedded in the ludic structure of the games. Table 3 shows the key points required for a narrative analysis of the plot of historical games.

Temporal layer	Type of time	Key points of analysis
Narrative time	Progressive time	• Plot structure • Use of dates in chronological time in the plot structure • Use of historical elements/actors in the plot • The ordering of narrated events

Table 3: *Key points of the analysis of narrative time in games.* Scheme concerning the way the construction of a progressing time of a narrative is established.

By following the level structure or task-based structure of historical games, the temporal representations in games join into a comprehensible whole. By focusing on the mechanisms that establish a passage of time, we find the narrative causality of the events as the games frame them. By separating the time structures of narrative time and represented time - which only is possible if we find the structure of ludic time first – we are able to reveal the ways games rely on specific historical events and representations to demarcate the development of their stories in time.

A Comparative Analysis of Time in *Call of Duty: World at War,* and *Assassin's Creed*

In this section I will use the framework of the threefold analysis of time in games to find out more about the way *Assassin's Creed* and *Call of Duty: World at War* intertwine chronological historical developments with narrative development in their levels. I will first embed the games in the historical contexts they use as a source of inspiration. I will then apply the threefold division of time to show how this inspiration takes shape and influences the level structure of these games at three levels: firstly, 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 explore the games through the layer of represented time, in which I will focus on the games as

represented points in time. Lastly I will approach the games through the layer of narrative time. In this final layer I will study how the games establish their plot through sequences of historical events. Consequently, I will be able to give an analytical overview of differing approach towards the application of historical events and chronologies in video games.

Contextualizing Soviet Veterans and Levantine Politics

Call of Duty: World at War (Call of Duty) has two campaigns (storylines): one takes place at the Eastern European front and one at the Pacific front. Both storylines present a story in which a heroic male soldier works with a team-based effort to bring his missions to a good end. I will focus solely on the game's Soviet campaign because it has a clearer story, and both storylines have their own chronological development – so combining both would blur my analysis. This campaign follows the young Soviet private Dimitri Petrenko during the Second World War. Dimitri is active in the war at the Eastern front of Europe. His campaign spans multiple levels in which each level acts as a single mission, set at a specific moment in the war. The story starts with the rescue of Dimitri by his Sergeant, after which the game follows the journey of these two soldiers through German territories, all the way to the roof of the Reichstag.

Dimitri's campaign follows the historical advance of the Third Shock Army, which was organized under General Zhukov's *First Belorussian Front*. This Front attempted to hurriedly break into Berlin and raise its victory banner to beat the other Soviet armies to the punch (Beevor 2003, 64, 255). This movement towards Berlin was planned as the *Seelow-Berlin Offensive Operation*: the operation was initiated by Soviet troops who attacked the German-held Seelow Heights with the plan to encircle, attack, and capture Berlin. Yevgeny Khaldei captured this last event in the iconic (and staged) picture of a Soviet soldier raising a Soviet flag over the Reichstag to signal the defeat

of the Third Reich (Antill and Dennis 2005, 36, 18).

Assassin's Creed follows the story of Desmond Miles, a present-day bartender who travels back in time through a genetic connection with his ancestor, Altaïr Ibn-La'Ahad: an assassin in the Third Crusade (1189-1192). For the sake of my research question I will especially focus on the historical part of the game's story. Desmond taps into Altaïr's *genetic memories* to experience the life of Altaïr, who is a member of the mysterious clan of the Assassins: one of the Levantine-settled political organisations active during the Crusades. Throughout the game Altaïr fulfils a set of 'kill orders' to prove his devotion to his clan. In the process he starts to question his clan's leadership up to the point where he confronts his masters.

The Third Crusade was led by King Richard I to take Jerusalem from Saladin, a Muslim ruler who managed to claim (back) significant parts of Palestine in the years before (Lloyd 1999, 38, 57, Phillips 1999, 125). Around the same time, the clan of the Assassins was also active in the Levant. Its leader, Rashid Ad-Din Sinan, decided that the Assassins should remain neutral in the war. During the Third Crusade, the Assassins mostly operated from their fortified castle in Masyaf (Runciman 1979a, 410). The story of *Assassin's Creed* revolves around the retaking of Acre by siege warfare, and the decisive battle of Arsuf (Folda 1999, 147–148, Runciman 1979a, 55–57, 1979b, 47–48, 54).

Structuring the Past in Ludic Time

Ludic time is the mechanical layer of time that mediates the actions of players with the represented time of the game world, and the narrative time of the story. Ludic time works as follows: it establishes the game as a set of temporal bubbles which each represent a temporal instance in the game world. Ludic time is not only reserved for chronological developments, but also accounts for the development of

narrative events that indicate a sequential progression without chronological time moving.

The level structure of *Call of Duty* divides the story of the game in a sequence of levels which operate as a set of temporal bubbles. The game uses paidea rules to set up the levels as maze-like structures with closed surroundings that also demarcate the spatial and temporal boundaries of the level (as it is set at a place, a date, and at a point in the story). The only way for the players to progress to a new level is by completing their tasks at hand, which renews the cycle of abstract time in the level to a next point in chronological time. When the players complete the entire mission, the game forces an entirely new game world (level) on the players. This new level is unaffected by their earlier achievements and has its own borders of spatiality and temporality. Passage from one temporality to the next depends on a set of objectives that the players receive as ludus rules.

Through these sequential objectives, the players enact the linear story of the predetermined narrative. This is a key characteristic of the *embedded narrative*: it creates an artificial pathway for the players to follow (Fernández-Vara 2014, 107–108). Here we see the practical use of Gazzard's (2011) reward structures in an embedded narrative: it makes sure that everything happens at the right place, and at the right time (Fernández-Vara 2014, 107–108). The objectives of the players almost always relate to capturing specific geographical locations, or to taking out a specific person or object. Arriving at specific locations is often enough to trigger a narrative sequence or a new objective. The pursuit of objectives imposes changes in the temporality of the game's story, but the gameplay itself takes place in abstract time: fires in the background never stop burning, and the game never progresses without the participation of the players.

The level-based and objective-based structures of *Call of Duty* function as mechanisms that delineate at what moments which events will take place. The level-based structure complies with the chronological and narrative progression of the game. *Call of Duty*'s levels follow a structure in which each level represents one specific mission, which takes place in a singular temporal setting for the players to play in. As we will see later, it is the narrative layer of time that reconnects these individual parts into one narrative whole. Through the objective-based structure, the game tells another story within its game space by arranging the way the players access certain spaces through the ludus rules (the mission objectives).

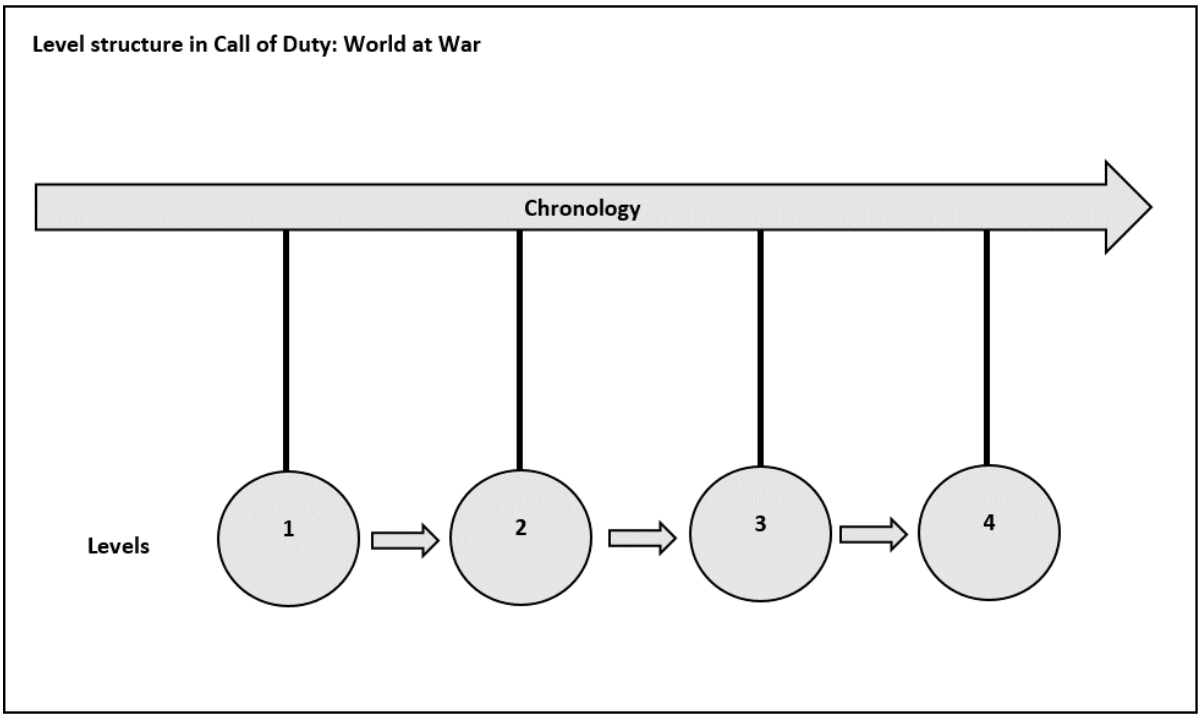


Figure 1: *The level structure in Call of Duty: World at War*. Each level represents its own point in time and space. With the passage to a new level, the time and space of the level renews entirely because players move from one represented point to the next.

Similar to *Call of Duty, Assassin's Creed* also presents its story through a level structure which distinguishes the game as a sequence of levels. However, in *Assassin's Creed* the game uses the spaces in its levels differently. Instead of having a linear structure of individual levels, the development of time and space in *Assassin's Creed*

takes place through a ripple effect. Every time players complete a level (which the game calls a 'memory block'), the game expands in space, i. e. the ripple expands, while also renewing the temporality of the already available locations. With this temporal shift, the game renews the playability of the old territories by assigning new ludus rules to the players.

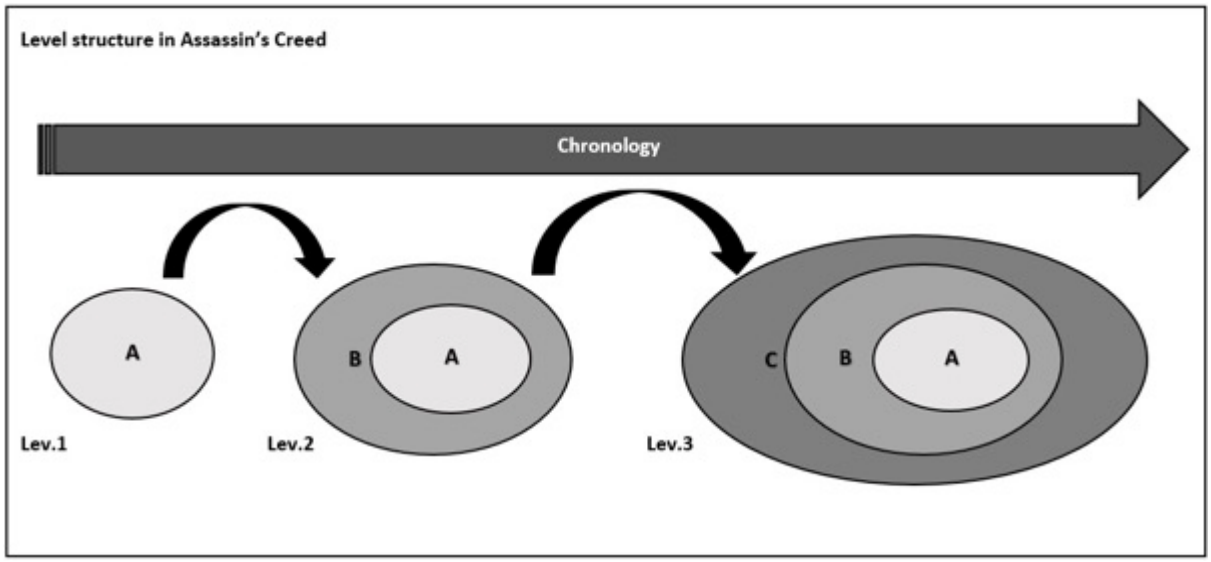


Figure 2: *The level structure in Assassin's Creed.* Each level represents its own point in time and space. With the passage to a new level, space expands, and the initial space renews in time.

Within each level there is a sub-division of temporal bubbles that follow an objective-based structure which is similar to the structure of *Call of Duty*. However, *Assassin's Creed* marks the progression of the players in two ways instead of one. Firstly, we see the normal progression of the ludus rules that connect to plot progression. This happens within the levels itself and initiates temporal progression of the world and the story. Secondly, the game also stimulates players to explore the game space by publishing additional ludus rules that do not affect plot progression. These ludus rules rely on a transcendent objective-based structure, which has its own time structure, regardless of the shifting temporalities in the game. The game presents collectibles (special flags, for instance) which are bound to this structure and appear in every level at the same geographical coordinates. When the players collect them,

the game removes the collectible from all other instances in time: it disappears in all later and prior levels as well. The behaviour of the players at one instance in time affects their surroundings at all other levels by altering the space permanently, which shows the developing ripple effect through game's temporality.

Here, we see how *Assassin's Creed* uses two different objective-based structures. One that stimulates plot progression, and an additional structure that stimulates free exploration of the surroundings of the game. Gazzard (2011) assumes that players play games to attain rewards. She distinguishes between ludus goals that provide the players with spatial rewards, *rewards of access*, and goals that provide the players with *rewards of glory*, which do not serve a purpose other than showing off in the game. The transcendent objectives (i.e. collecting flags) are rewards of glory. They have no real connection to the plot of the game but function as a way to maintain the interest of the players in the game space that they are involved in from the start of the game on. For the objectives that do instigate plot progression – the rewards of access – *Assassin's Creed* uses the same strategy as *Call of Duty*. The game establishes a movement from temporal 'bubble' to temporal 'bubble' through a set of objectives that the player must follow. Differently from *Call of Duty,* the players of *Assassin's Creed* must break down the mission in a set of smaller objectives, which they can pursue at will. Whereas *Call of Duty* offers a very linear experience in a linear game world, *Assassin's Creed* embeds narrative objectives in a structure that reflects a list of non-chronological tasks. The players have a set of six possibilities of which (at least) two have to be completed to press the plot forward. When the players complete their list of tasks, the game moves its temporality forward up to the point where the *assassination targets* are exactly where they are supposed to be for the mission to be finalized.

Assassin's Creed emphasizes the idea that the player is a contemporary who explores the memories of his ancestor. As soon as the players get close to their objective the game initiates a 'memory imprint', which is the 're-playing of the memory as it occurred to Altaïr'. If the players fail their goal, the temporality of the game is re-established up to a point before the players tried it. If the players succeed, the game marks it as a 'truth' in history. The paidea rules cleverly lock the spaces that the players should not access yet by establishing 'memory failures'.

Both *Call of Duty* and *Assassin's Creed* use their level-based structure and their objective-based structure to build up the momentum of the plot by configuring their game spaces as sequential temporal bubbles that only progress in time when the players have acted out all prerequisites for the story to continue. This shows us that we need to take these structures into account if we want to see how games establish a passage of time: *Call of Duty* relies on a linear temporal structure, and *Assassin's Creed* uses a rippling effect to develop their game spaces in time and space. It is especially noticeable that *Assassin's Creed* uses its game space differently from *Call of Duty*. Instead of leaving the space empty to stimulate the progression of the plot, *Assassin's Creed* also relies on a secondary objective-based structure, which provides rewards of glory, to keep the gaming experience of the players interesting. This shows us that next to the embedded narrative of historical games, other objective-based structures can also affect the way the players engage with these games.

Constructing Historical Settings in Represented Time

Represented time is the temporal layer through which the game world receives its temporal associations and allows the players to situate the games in history. This layer of time operates in twofold. Firstly, as the representation of *temporal passage* between sequences of temporal bubbles. We can trace these temporal shifts by studying the sociocultural labels the games use to indicate temporal passage within

and between their level- and objective-based structures. Secondly, these games use historical connectors, which are objects and events which, through association, refer to a specific point in chronological time to construct a *historical temporality* (Ricœur 1988, 99–100, 104, Tychsen and Hitchens 2009, 188–189, Zagal and Mateas 2010, 850).

Both *Call of Duty* and *Assassin's Creed* refer to moments in chronological time to indicate temporal shifts between their levels, and to establish a historical temporality. The games evoke the idea that their settings represent a point in time that is comparable to a date in historical discourse. Each level in *Call of Duty* is marked with a location and a date, which provides the players with specific insights regarding their temporal and spatial coordinates. Each level exists as a specific day within this structure, which follows a subsequent temporal progression. The first level immediately stands out in this structure, as it takes place far before the other events. I will get back to this in the layer of narrative time.

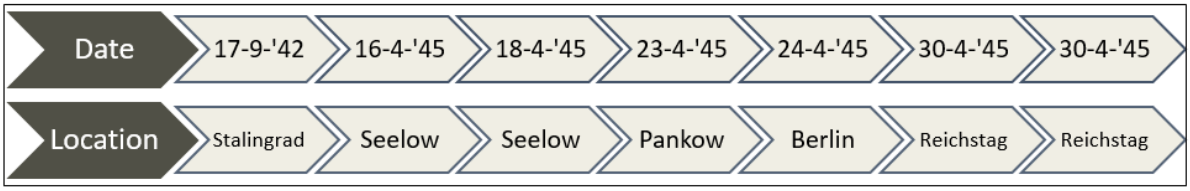


Figure 3: *Timeline of the individual levels in Call of Duty: World at War.* Each level is assigned a specific date and location. Every arrow corresponds to the arrow beneath it.

Call of Duty labels its levels with the sociocultural label of 'days', which allows the players to fit the unfolding events into a recognizable temporal scheme. This temporal knowledge transforms the levels into a fast-paced offensive on German soil near the end of the war. The game also triggers temporal schemata within the levels. For instance, when Dimitri's sergeant yells at him to attack before the bomber-planes stop flying over, this intuitively creates an awareness in the players that their operating time is only limited.

Assassin's Creed does not establish a clear passage of chronological time. Instead, the game uses the sociocultural label of 'memories' to label its levels. This allows the players to recognize a temporal progression in the game's story without actually finding out the chronology of the events. *Assassin's Creed* uses an alternative way to establish its historical temporality: instead of linking its temporal progression to a calendar, the game uses two historical events to mark the passage of chronological time. The first event is the historical *siege of Acre*, of which the players see the aftermath somewhere near the beginning of the game. When the players later are involved in the battle of Arsuf, which is the second historical event the game refers to, we can use these events to demarcate the chronological space in which *Assassin's Creed* takes place. When the players move from the Siege of Acre to the Battle of Arsuf, we see an implied progression in chronological time, as these historical events took place within months of each other. These two events function as historical connectors which intertwine the story of *Assassin's Creed* with history.

As the timeline in figure 4 shows below, the event that sparks the development of the game's story is not a historical event in itself. The game establishes its chronological passage of time through its use of historical connectors – the events – which construct a chronological representation of the year 1191 by demarcating the temporality of the game with exactly these events. The players can safely assume that the game unfolds in a similar world and timeline as ours because there are two events (the siege on Acre and the battle of Arsuf) they can use as a point of reference. This sequence of historical events evokes the idea that the game's story follows the common historical trajectory.

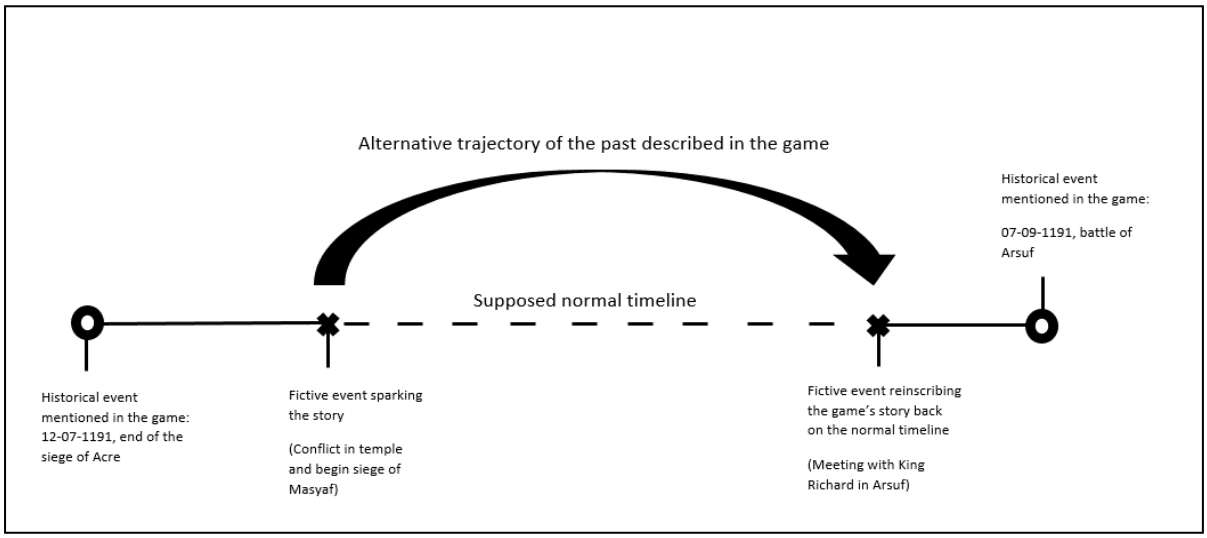


Figure 4: *Timeline marking the historical events as borders of the storyline in Assassin's Creed.* The represented historical events near the beginning and ending of the game to provide the player with a point of reference to the temporal setting of the game, with a fictive story in between. This fictive 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.

Call of Duty and *Assassin's Creed* both connect their level-structure in a way that lets the player experience temporal passage. But, as we have seen, the historical connectors play different roles in both games. *Call of Duty* especially relies on calendar dates and spatial coordinates to configure a trajectory in time. Whilst doing this, the game benefits from being as specific as possible. *Assassin's Creed*, on the other hand, relies more on an implied temporal passage that the narrative establishes. At the same time, however, the game connects to specific points in chronological time that allow the players to historically demarcate the temporality of the game's story.

Within the levels as *represented temporalities*, both games use historical connectors to establish their game spaces as historical decors. *Call of Duty* focuses, for instance, on weaponry that was used in the same time period as the game's represented levels. The game developers even made a distinction between the weapons that were available from 1942 onwards, and the weapons that were developed later in time,

and are subsequently only available in the later levels. Next to this, *Call of Duty* uses a multitude of images and symbols common to the Eastern European front in the war. Some examples are the recreated combat sites, but also the use of the Communist hammer and sickle on clothes and banners. The game draws parallels with actual historical events by basing its ludus rules on these events, like when the players must plant the Soviet victory flag at the top of the Reichstag.

The campaign of *Call of Duty* follows a pattern which is structured around three historical events, which serve as historical connectors for the game's story: The *Battle for Stalingrad*, parts of the *Seelow-Berlin Offensive Operation*, and the *Capture of the Reichstag* (Antill and Dennis 2005, 36, 18, Beevor 2003, xxxiii, 64, 255). Between the levels the game uses cut scenes to reveal a temporal passage, and to construct a historical background against which the story of *Call of Duty* unfolds. For example, the game displays troop movements on strategical maps, and emphasizes on real video footage of the war in which the players are confronted with the executions of officers and civilians.

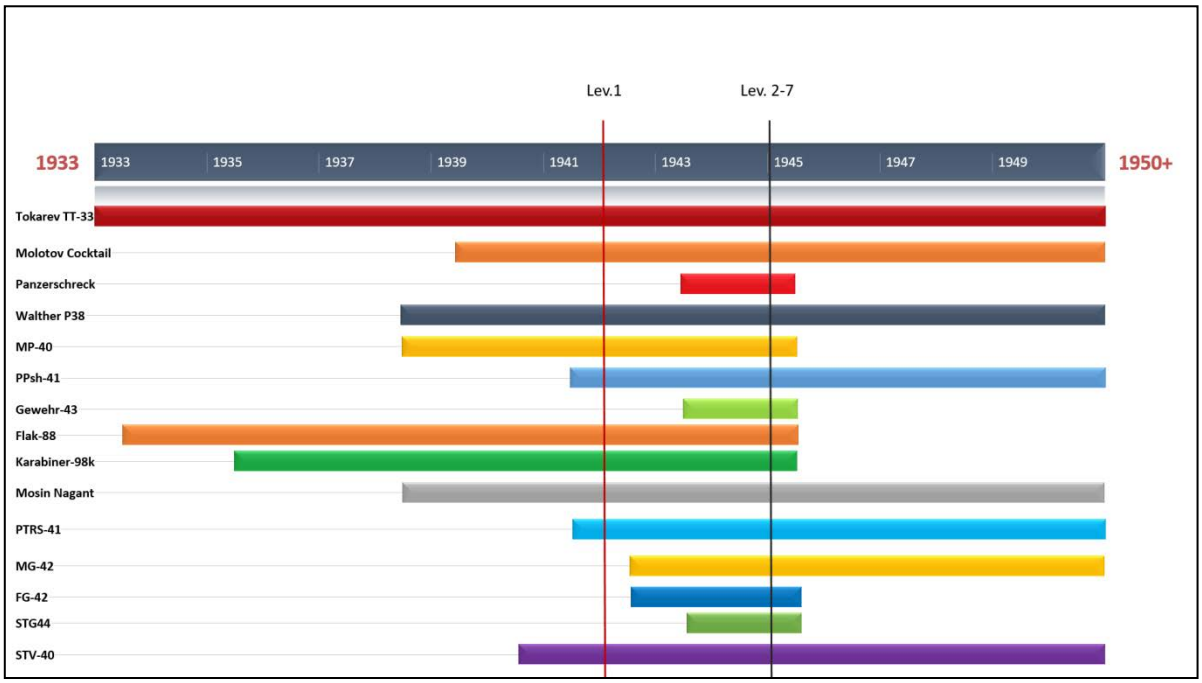


Figure 5: *Weaponry in the Call of Duty: World at War Soviet campaign compared to their service years.* Source: "*Call of Duty: World at War* - Internet Movie Firearms Database - Guns in Movies, TV and Video Games," accessed March 19, 2016. My own projection. The horizontal lines show the used weapons 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 campaign levels. It is only after the game moves to the temporalities set in 1945 that some of the later-used weapons become available.

Assassin's Creed uses the calendar year 1191 as a point of departure to construct its historical *represented temporality*. The assassination targets of *Assassin's Creed*, together with other political actors in the game, reinforce and produce the idea that the game is set in 1191 because all of these people actually were present in the Levant somewhere around 1191. These actors function as historical connectors that provide the setting of the game with historical properties. It is important to note that the assassination targets in the game often survived the year 1191, which could be one of the reasons why *Assassin's Creed* never exactly specifies which point in time wants to represent. By keeping this deliberately abstract, the game can draw inspiration from historical connectors without having them overshadow the game's own story.

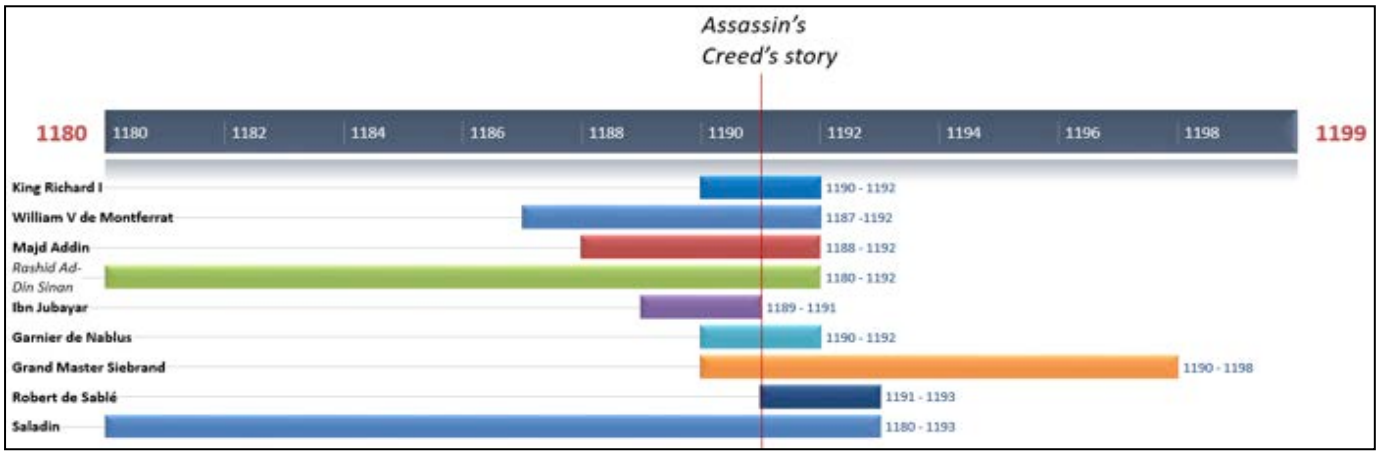


Figure 6: *Timeline of the activity of historical actors in the Levant on whom the assassination targets in* Assassin's Creed *are based*. The timeline shows how various historical actors all were in the Levant somewhere around the year 1191, the exact year the story of *Assassin's Creed* is set in. *Al Mualim, the Assassin Leader, is most likely based on his historical counterpart, Rashid Ad-Din Sinan.

Next to its political actors, *Assassin's Creed* draws from a wide field of other historical connectors that establish associations and draw parallels with the Levantine past, like references to specific cities, and more general historical representations, like clothing and architecture, to set up a historical setting for the game.

Both *Call of Duty* and *Assassin's Creed* rely on their historical connectors to draw their own historical worlds while they also start to represent a specific temporality. This allows the players to feel like they travel from the present to the represented time in the game, even though the game in fact depicts a group of historical connectors which create associations with the past (Kingsepp 2006, 80, Tychsen and Hitchens 2009, 188–189, Zagal and Mateas 2010, 850). This reveals an interesting phenomenon in the use of historical connectors in games: history and fiction become blurred and start to produce new ideas of the past, which are based on the connectors used by the games. But next to the ways these games use their historical connectors to establish their represented temporalities, the games differ in their use of historical events to establish a temporal passage through the events. While *Call of Duty* allows its players to follow a specific chronological trajectory in time, *Assassin's Creed* only loosely refers to chronological progression while mostly focusing on narrative

progression. To trace this last pattern, we will need to emphasize the study of the layer of narrative time in both games as well.

Telling Stories in Represented Temporalities: Narrative Time

In the layer of narrative time, games integrate their individual temporal bubbles and represented temporalities into a narrative structure through the operation of emplotment, which is the homogenization of heterogeneous elements by configuring them into a narrative (Frissen et al. 2015, 31, Ricœur 1991, 30–31). This operation allows us to see the twofold structure of temporal progression in games. Firstly, narrative time binds the represented temporalities in a sequential structure which allows the players to perceive a chronological progression of time in the games. We already saw how this structure appears at the layer of temporal passage in *represented time*. Secondly, narrative time binds the events which all take place at different points in the games and binds them to a coherent plot structure. In this final part of my analysis, I will focus on the ways the games emplot the historical connectors of the *represented time* in a broader plot structure and, in the process, provide these connectors with new narrative meanings. Next to this, I will focus on the ways the games use historical connectors in their *embedded narratives* and bind them to the objective-based structure of the games.

In *Call of Duty,* the players effectively follow the narrative of the historical *Seelow-Berlin offensive operation* (Antill and Dennis 2005, 36, 18). This operation was a great success for the Red Army and entirely took place on German soil. The game emplots three historical events: The *Battle of Stalingrad*, the *Seelow-Berlin offensive operation*, and – through the iconic picture of Yevgeny Khaldei – the capture of the Reichstag to tell a vindictive story about the war. Through the level structure of the game, all these historical events become inscribed into the same story.

Call of Duty's story starts at arguably one of the most traumatic points for the Soviet Army: when the German soldiers subjugated them in their own city (Beevor 2003, xxxiii). To understand why the game relies on this specific event to begin a story which takes place almost three years later, we need to turn to the concept of *moral disengagement*. Moral disengagement is a strategy for players to avoid moral concern of their in-game violent actions by looking for ways to justify or play down the consequences of their actions (Hartmann and Vorderer 2010, 98, Klimmt et al. 2006, 313). Two of the strategies players apply to manage the negative consequences of their actions (e.g. killing people) revolve around looking for moral justification and attributing the blame of their actions to the targets of violence (Hartmann et al. 2014, 312). *Call of Duty* uses its first historical event to provide the players with the justification and blame-shifting they need to enjoy the game. After the first level, the game structures each mission around a specific point in time and space, which establishes a narrative of the *Seelow-Berlin Offensive Operation* through the pattern of movement that the players follow: from Seelow to Pankow, and from Pankow to Berlin.

The game revolves around the *Seelow-Berlin offensive operation*, but starts its story with the trauma of Stalingrad. To finalize its story, the game makes the players re-enact the planting of the Soviet victory flag on top of the Reichstag. Every historical event, as historical connector, attains new meanings through their emplotment in the structure of the game. This is important when we want to understand how historical games use their historical connectors: the players not only re-enact the historical event and play in a represented temporality, but they follow the entire set of these events and temporalities. This set tells its own story through a new poetic composition. Dimitri's narrative wraps up at the top of the Reichstag, after he places the victory flag on May 30th. During this act, an enemy soldier wounds him critically. We know from historical sources that the fighting in Berlin did not stop on May 30th,

but for Dimitri, the war is over. This allows the game's plot to naturally come to a conclusion without colliding with the facts of history regarding the ending of the war.

As we saw in figure 4, the timeline of *Assassin's Creed*, depicts a sequential structure which combines fictional and factual historical events. The game starts with a fictional event – the siege of Masyaf – but then quickly embeds its story in the historical context right after the factual event of the siege of Acre. It is interesting to see how the fictional siege of Masyaf blurs the historical development in the game. By inserting an additional narrative event (a confrontation at Solomon's Temple), *Assassin's Creed* initiates its story with a confrontation between two historical parties who never met in historical discourse: The Assassins and the Knights Templar. Through this event, the game binds the political faction of the Assassins to the Third Crusade, which did not occur in reality.

For the Assassins to actually meet with De Sablé, the leader of the Knights Templar, *Assassin's Creed* relies on a backstory in which both parties search for the Ark of the Covenant. After the story draws the Assassins into the Crusades through this event, it steps away from a historical chronology and instigates its own chronological and narrative development. However, near the conclusion of the game's story, the players kill the antagonists responsible for this redirection of history. The death of these persons marks the closing of the alternative timeline that was created by implementing the fictional siege of Masyaf. When the game depicts the attack on Arsuf, which is the second historical event the game relies on to establish chronological progression, this event functions as a historical connector that inscribes the game's story back into the initial trajectory of historical development.

Although *Assassin's Creed* follows *Call of Duty* in its emplotment of historical events to draw its own story, there is a difference in the way these games emplot their

historical connectors in the plot structures of their stories. *Call of Duty* emphasizes a trajectory between historical events through which the game presents its own story. *Assassin's Creed*, on the other hand, relies on historical connectors to draw its own story into a historical world. In this structure, the historical connectors demarcate the space between a chronological historical development at two set points in time, and the space in which the game tells its own stories in between these events.

Conclusion: Historical Connectors and Temporal Passage

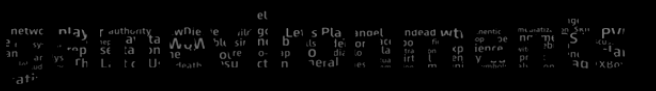
In this article, I have studied the way *Call of Duty: World at War* and *Assassin's Creed* use historical connectors in their level structures to mark progressions in chronological time and progressions in their stories. I developed a theoretical and methodological framework which distinguishes between three temporal structures in games, namely ludic time, represented time, and narrative, which will allow me to formulate an answer to my research question: *In what ways do* Call of Duty: World at War, *and* Assassin's Creed *use historical events in their level structure to produce temporal progression?*

Ludic time divides the game space in a sequence of temporal bubbles that progress the relative position of the players in the game's space and time. Both *Call of Duty* and *Assassin's Creed* connect their plot progression, as well as their spatial and temporal development, to a sequence of objectives through which the players act out the story of the game. *Call of Duty* attempts to hide the abstract time of its bubbles by pressing the player to carry on with the plot, while *Assassin's Creed* stimulates the players to explore the game space through additional reward structures.

In both cases, the temporal bubbles represent a specific temporality, whereas the progression of the plot of the games takes place through a development of both chronological and narrative time. Hence, these games represent history in two ways: firstly, as a representation of a specific temporality, and secondly as a dynamic development in chronological time. The analysis of historical games within the constraints of their medium, as McCall (2012) pleads for, should then also account for this difference. When McCall argues that the criticism of historical representations in games should be limited to their function, this should also include additional narrative functions. When the players play the first level of *Call of Duty*, it is a represented temporality of a specific point in time. However, as the game progresses, the meaning of this first event (the *Battle for Stalingrad*) starts to slide and becomes a vindictive point of departure for a revenge story. Zakowski (2014, 59) emphasises that games present their holistic stories through all possible interactions with the game space. This approach is more useful to understand the multiple ways historical games produce meaning by connecting in-game temporal progression to different combinations of historical connectors.

We can study the use of historical connectors in game structures more clearly by separating the represented time and narrative time. This is important, as this distinction shows how both games take different approaches in constructing their temporalities. Firstly, historical events belong to the category of *historical connectors*, which are historical elements that contain a reference to a point in chronological time and evoke a sense of the past through association (Kingsepp 2006, 80, Ricœur 1988, 99–100, 104, Tychsen and Hitchens 2009, 188–189, Zagal and Mateas 2010, 850). Both games rely on a series of historical connectors, like the use of weapons, dates, and symbols in *Call of Duty,* to establish and reaffirm a represented temporality in their game spaces.

But in narrative time, we see how the historical connectors that make up the represented temporality also carry a second narrative meaning when we place them in a new context: that of narrative and temporal progression. It is at this level where we see the biggest differences between the ways both games use their historical connectors in their stories. *Call of Duty* produces a new narrative meaning of historical events by using a sequence of chronological points in time and emplotting them in a narrative structure. *Assassin's Creed,* on the other hand, demarcates its own story between to anchored points in chronological time. The point is that in both instances, historical connectors produce different narrative meanings. In *Call of Duty*, it is more productive to focus on the narrative time of the story, whereas in *Assassin's Creed* it is more productive to focus on its represented temporality. Analysing historical games with a focus on their function is something that indeed should be promoted, but let us not forget that these functions depend on the ways the games themselves use their historical connectors in various temporal layers as well.



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[i] In on-line multiplayer games, all participants in the game would have their own variation of a 'personalised time' that accounts for their cycles of ludic time (Zagal and Mateas 2010, 849–850, Zhao and Szafron 2014). Generally, these types of games establish a game world set in *represented time* and then connect every individual player to this world through their personalised time. This personalised time can account for temporal changes by measuring, for instance, the completed objectives that the players have been involved in.