RETURN TO THE
INTERACTIVE PAST

The Interplay of Video Games and Histories

Edited by:
Csilla E. Ariese
Krijn H.J. Boom
Bram van den Hout
Angus A.A. Mol
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1. Introduction

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Bram van den Hout & Krijn H.J. Boom

Welcome back to The Interactive Past! It's with more than a little bit of relief and pride that we, co-editors of this book and some of the members that make up a growing VALUE team, write these words. The first edition of *The Interactive Pasts Conference* (TIPC) started as a crazy idea in 2015 as a way to get people together who were as passionate about the past as they were about making and playing games. The conference took place in May 2016, right after a successful Kickstarter campaign that enabled us afterwards to publish *The Interactive Past* (Mol *et al.* 2017) as an open access book. Both the conference and the book were well-received. As Tara Copplestone (author in *The Interactive Past* and at the time PhD student at York University/Aarhus University) wrote in 2016 on her blog, TIPC was "a much needed start to a solid foundation and a supportive, diverse community" (Copplestone 2016).

This, and other positive feedback on *The Interactive Pasts Conference* and book, made it clear that we should just do it again! Such a thing is easier said than done, of course. While we did want to bring back the solid fun, support, and diversity of TIPC 1 and the resulting book, we did not want to repeat ourselves. Fortunately, fun never repeats itself in exactly the same way and *The Interactive Pasts Conference 2* in 2018 was certainly fun in many new ways. TIPC 2 was again such a refreshing, inspiring, insightful event that we again decided to create a book on the basis of a selection of presentations, choosing those authors who had not been included in the first book. Fittingly, this *Return to the Interactive Past* takes place within a gorgeous retro cover. Therefore, just like what happens when revisiting a cherished classic game, replaying a level for that extra star, or diving back in for an NG+ run, we are not so much back in the same Interactive Past but are instead returning to explore the same playground with new perspectives, more experience, and fresh energy.

Like last time, we do this together with you, beloved reader, and with an inspiring group of writers from the wide reaches of academia and the creative industry. This first chapter of *Return to the Interactive Past* does not only provide a short overview of the contributions you will find in the other chapters, but also a retrospective on how making and studying the interactive past itself has developed and how this field has grown in size and complexity.

A Rollercoaster Decade in the Past-playground

In contrast to the foundational 70s, the boom-bust-and-boom-again 80s, the golden age of the 90s, and the blossoming of HD and online play in the naughties, the 2010s may seem like a moment of consolidation, even stagnation, for the once-young medium of video games. Yet, upon closer inspection, the 2010s has been the most complex and tumultuous decade in games so far, perhaps not from a pure technological point of view but from one in which games and the people who play them felt the full complexity of their status as social and cultural fact. What, how, when, with, and as whom we choose to play, the 2010s reshaped our idea of all of these and more. It is also during these last few years that we have come to more fully feel and openly discuss the impact games have on our individual and collective lives. Perhaps the most famous example of this is the *Manifesto for a Ludic Century* (Zimmerman 2015). The manifesto argued that some of the defining features of the last century – moving images, systems, and information – had come together to play in this century. This influential piece called for embracing games as productive, creative, and empowering.

At no time before in the history of our planet (and maybe the galaxy) have so many games been made as during this decade. This is in part due to the success of game distribution platforms like Steam, GoG, Itch.io, and others and the democratization of game development through intuitive and freely available game engines (*e.g.* Unity, Unreal Engine, Love2D, Twine, ink). The Steam store alone listed more than 30,000 standalone games at the end of 2019, in contrast to around 1000 in 2010: a growth of 2,900%. More importantly, for people playing on PCs and consoles it is sometimes easy to forget that a wave of games on phones and social media platforms were a key factor leading to an immense rise in the number of games and players in this decade. This also meant that the diversity of the global community of developers and players is rising too. From South America, Africa, to mainland Asia the video game community is growing far beyond the traditional cores of North America, Europe, and Japan (Wolf 2015). This fact was on brilliant display during the *Culture Arcade*, an interactive video game exhibition of cultural games from across the world, held at the Prince Claus Fund in Amsterdam and curated and hosted by some of us in the fall of 2018.

The *Ludic Manifesto* and similar upbeat works from people like Jane McGonigal (2011), as well as the indie game explosion, stand as high-water marks of the positive vibe around games in this decade as we celebrated how many more people were playing as well as creating games in new, fun ways and were convinced games were going to provide new solutions to old problems.

This general success and celebration of games is a key context from which to understand the sparking off of this decade's academic interest in games and the past (Politopoulos *et al.* 2019; see also Chapman *et al.* 2017). Clearly, game developers and players alike were already convinced – since *The Sumerian Game* (Mabel Addis 1964), the very first game set in the past – of the rich and deep playgrounds offered by our histories and heritages. It cannot be denied that during the 2010s games in which you can play with the past in some shape or form have gone from success to massive success, opening up heritages and histories in both quantitative and qualitative terms like never before. For example, the *Assassin's Creed* series (Ubisoft Montréal 2007-2018) has allowed many millions of us to virtually visit Bronze Age Greece to industrial Britain with stops along the way that all read as 'history's greatest hits.' This was also the decade in which we learned that from 2010-2016 people had collectively been playing *Sid Meier's Civilization V* (Firaxis Games 2010) for more than 1 *billion* hours. A truly mind-boggling amount of time, eclipsing, for example, the time spent in the world's most visited museums. This past-playground seems to know no bounds: just stop to think about the vast number of heritages that have been recreated in *Minecraft* (Mojang 2011), from the millions of versions of Eiffel Towers, Coliseums, Big Bens and other heritage icons, to your own blocky build of that one special place for you and you alone.

The gears of academia move slowly, but the sustained popularity of games in general and the ever increasing numbers of games in which you can play in and with the past, meant that there was both an audience and a field so large and unexplored that its scholarly investigation was, in a way, inevitable. This opened up so many avenues of research that even a sustained and wide-ranging first wave of enthusiastic inquiry has not really begun to chart the full potential of the field. Looking back on the start of the decade when the study of the past in video games was only of occasional interest to game study scholars and almost never discussed by 'serious' scholars of the past, to a situation in which not a day goes by without new insights from and discussions between an ever growing group of people, it can be said that this development has been nothing short but a minor revolution for the disciplines that study the past.

It is telling that this 'revolutionary' moment had its roots not in academic conferences or publications, but in the 'blogosphere,' a term that by its very antique sound shows the rapid developments in both online media and the field itself. Many of these early blogs, such as *Play the Past* (playthepast.org) which recently celebrated its 10th anniversary or *Archaeogaming* (archaeogaming.com), are still going strong today and have been joined by a host of new blogs, social media communities, YouTube and Twitch channels, as well as published books, chapters, and articles. Indeed, the field has grown so quickly, that it surprised even those who were its biggest supporters, like Andrew Reinhard: "when I started the Archaeogaming.com blog and @archaeogaming Twitter account in 2013, I had little idea of the depth of what archaeogaming quickly would become" (Reinhard 2017: 99). The same can be said for the field of historical game studies, which has more or less seen mainstream acceptance in academia.

More important than its status as an acceptable avenue of research is how this transdisciplinary project has been able to share its insights and aims beyond academia. Johan Huizinga, a cultural historian and a foundational figure of game studies, remarked in his notes for his book *Homo Ludens* that "the time when academics could retreat into unreadable professional publications is over" (Leiden University Library 1934-1938: ms HUI 72 I.V.6b; our translation). Unfortunately, unreadable professional publications are still around, which is why it is so important that accessible game-based research for and with the public has been one of the main cornerstones of this movement in which scholars, game makers, and citizens from around the world share the past. Connecting the 'ivory tower' with the playground is the core purpose of *The Interactive Pasts Conference* series, which also includes workshops and online events. Indeed, 'sharing knowledge playfully' covers the three key values of our VALUE Foundation (yes, we are aware of the horrible pun corner we accidentally painted ourselves into when choosing a name back in 2015). Whether we are re-constructing the Roman Limes in *Minecraft*, running Twine workshops, curating the *Culture Arcade* exhibition, or having fun with viewers during our weekly livestreams, we never get tired of exploring the boundaries of play and knowledge. And we are not alone in this: from frequent contributions to (game) news outlets, to growing social media presences on Twitter and Facebook, and open events held for and with the public (*e.g.* Glas *et al.* 2017), the movement of which VALUE is just a small part continues to show the larger value there is in making, playing, and understanding games at the intersection with the past.

Although the 10s have given us much to celebrate, it has also revealed that not all is well in the playground. The gaming market is heavily dominated by relatively few large titles. The result of this is that, bar a few 'American dream'-like indie successes,[1] most player attention and money go to a few widely known IPs held by established, relatively large corporations. This is also painfully obvious when looking at games set in the past, illustrated by ownership numbers of games tagged as 'historical' on Steam (see Figure 1.1). This data, taken from the Steam Spy platform, shows that the vast majority of these games are owned by only a few people – 0 to 20,000 – which is generally not or barely enough to recoup development costs. Much has been made of the abundance of low quality games on Steam, but in this segment you will also find absolute gems, such as *Herald* (Wispfire 2017; van der Schilden & Heijltjes 2017), *Heaven's Vault* (Inkle 2019), *Where the Water Tastes Like Wine* (Dim Bulb Games & Serenity Forge 2018; see Johnnemann Nordhagen, Chapter 2), and *Attentat 1942* (Charles University & Czech Academy of Sciences 2017), which would all deserve to be more widely played. At the same time, the games with the most owners are of the type we already discussed in the conclusion to *The Interactive Past* (2017): games which portray the past through a lens of action, violence, warfare, or resource competition and

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1   A recent exception has been the explosive success of *Valheim* (Iron Gate Studio 2021), which sold 4 million copies during its first three weeks into Early Access. By this time, it had already been played for a combined total of 10,000 years or 87.6 million hours. The game's developer, Iron Gate Studio, consists of a team of only 5 persons (Jagneaux 2021).

e.g. Ancient Cities, Attentat 1942, Aztez, Mulaka, Pendragon, Sumer, Through the Darkest of Times

e.g.
• Cross of the Dutchman
• Playing History
• This Land is My Land
• Where the Water Tastes Like Wine

e.g.
• Assassin's Creed III
• Cossacks 3
• Stronghold HD
• Total War: Napoleon
• Verdun

e.g.
• Ancestors: The Humankind Odyssey
• Assassin's Creed Chronicles: India
• CivCity: Rome
• Sid Meier's Colonization

e.g.
• Assassin's Creed: Freedom Cry
• Caesar IV
• Heaven's Vault
• Twilight Struggle

e.g.
• Assassin's Creed 2
• Crusader Kings 2
• Europa Universalis
• Kingdom Come: Deliverance
• Total War: Medieval II

e.g.
• Apotheon
• Citizen of Rome
• Never Alone
• Tannenberg

• Age of Empires II
• Chivalry: Medieval Warfare
• Day of Defeat
• Sid Meier's Civilization V
• Sid Meier's Civilization VI

e.g.
• Age of History II
• A Plague Tale: Innocence
• Dawn of Man
• Imperator: Rome

• Heroes & Generals
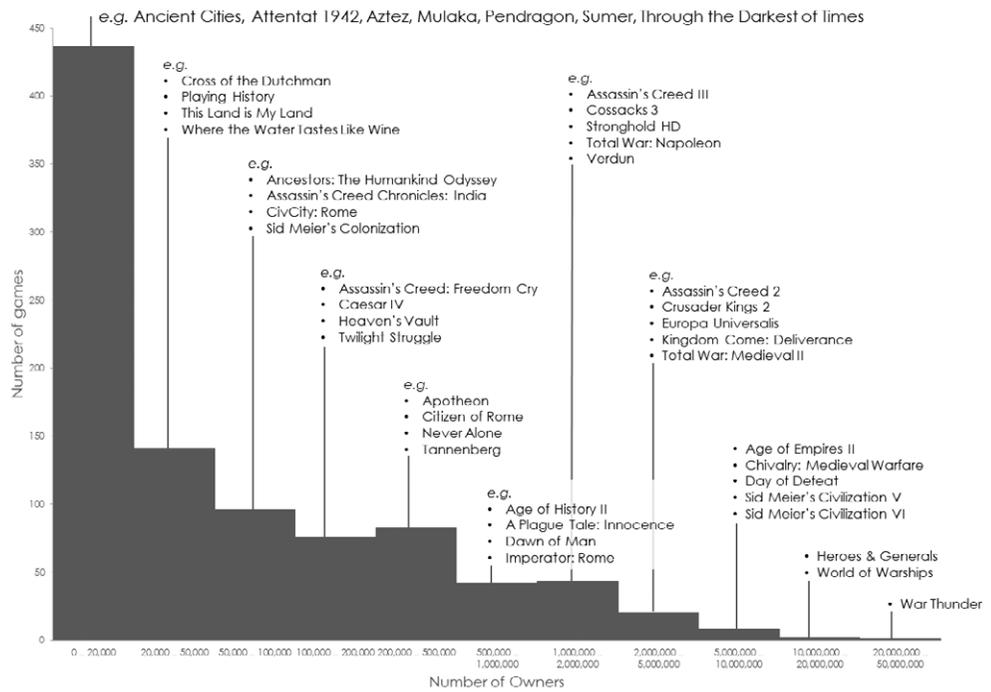• World of Warships

• War Thunder

Figure 1.1: Historical games on steam and their amount of owners based on data from Steam Spy (image by: Angus Mol 2021).

extraction. So, while innovative indie and smaller game studios have brought a lot of welcome innovation, games which are set in the past have, on the whole, been mostly creatively stagnant in this decade.

In conjunction with this imbalanced consumer market and the game industries growing market cap, the human economy of game making has improved little. Game making may be more accessible from a technological perspective, but it is still hard to live a life that is either economically or personally viable while doing so (*e.g.* compare the letter by EA_Spouse from 2004 with the stories in Schreier 2017). This is due to the labor practices in a global industry that are often aimed at increasing (shareholder) profitability by profiteering off of their employees' passion for game making or sense of collegiality. Whether you work as part of a development team that is a thousand, or more, people strong or as one-person studios, what we understand from our game developer contacts is that it is fun and rewarding but also hard and stressful to work in an industry that is defined by extreme competition, crunch, shifting but strict deadlines, and low job security. This is even more so the case for game makers who are non-white and non-male, as they have to face, amongst others, issues of harassment, exclusion, and biased hiring policies besides. This naturally puts a further damper on diversity in the professional field, which ultimately translates into the (hi)stories and other elements that make it into the games we play and research.

It is also telling that Gamergate reared its ugly head less than a year after the, in hindsight rather too triumphant to be true, *Manifesto for a Ludic Century*. Without wishing to give more exposure to the nasty fever-dream arguments of its proponents, it is clear that Gamergate was really a case of playground bullying taken to its extreme, with threats, harm, and other violence aimed at shutting others out from play. Sadly, but unsurprisingly, Gamergaters mostly targeted others for exclusion with bodily or cultural identities different from the average member of this group of so-called 'hardcore gamers.' Specifically, anyone that did not identify as male was (and are still) prominently targeted.

Games set in the past are a small but noteworthy proxy of this ongoing war that is being waged on diversity and inclusivity. A particular lowlight is the firestorm that raged in the *Battlefield* subreddit, ostensibly a debate concerning historical authenticity but really a case of internet identity politics, which took place after the *Battlefield V* (EA Dice 2018) trailer showed that players could play as female combatants[2] (see Mol 2020: 6min). Another depressing example was how some sexist players celebrated and cheered on the virtual violence against suffragettes in the game *Red Dead Redemption 2* (Rockstar Studios 2018). On the side of game makers, *Kingdom Come: Deliverance* (Warhorse Studios 2018) provided a lowlight when, after clear evidence to the contrary, they still denied the fact that persons of color were present in medieval Bohemia (see for an overview Medievalpoc 2018). Indeed, POCs were altogether lacking in this historical roleplaying game branded and believed by players to be 'hyperrealistic.' Arising from 4chan and other cesspits of the internet and focused on games, Gamergate has been a defining moment of this decade, not only for games themselves but also as an early sign of the ugly coming of age of digital culture at large.

In short, it has been a wild rollercoaster ride for games in the last decade – a ride that may become even wilder with the current crises of the Covid-19 pandemic, social inequality, climate change, and big tech. Whether you make them, study them, or play them, games set in the past are impacted by large, global cultural, societal, and economic currents and, in turn, also make their own mark on them. Moreover, through what they provide access to, these games are also entangled in (sometimes) equally wildly positive and deeply negative ongoing historical processes. Making and playing games that let us understand the past in its full diversity has never been more relevant and studying these has never been so richly complex as in this present. This is why we are extra happy to have a wonderful line up of chapters for you, dear reader.

Chapter Trailers
The authored chapters that make up *Return to the Interactive Past* are divided into three parts: narratives in and of video games; representations and intersectionality in video games; and historical research and learning through video games. The

2   For the *Battlefield* series, this was the most audible debate concerning the supposed inauthenticity of the presence of female combatants. However, this was not the first game in the series to include female combatants (e.g. the *Battlefield 1* expansion *In The Name of the Tsar*, EA Dice 2017) nor was it the first to be criticized by its player base for this, leading to counter posts about the real-life WW1 unit of the 1st Russian Women's Battalion of Death (e.g. Sarkar 2017).

book concludes with a collective chapter, *Stories Around the Campfire*, in which various people from the Interactive Pasts community share their personal stories showcasing meaningful examples of video game play. Curated by Csilla Ariese, it offers a beautiful and diverse overview of the ideas, experiences, emotions, and memories that are at the root of our love for playing video games and playing with the past.

Narratives in and of Video Games

Our return to the interactive past begins with chapter 2, authored by Johnnemann Nordhagen, who is the main developer behind *Where the Water Tastes Like Wine*. Nordhagen takes us on a trip around the Depression era United States and the development process of the game. He describes the creation of the characters, the vignettes, and the setting, and shares his insights into the false boogeyman of historical accuracy. Fighting against conservative political trends, the game celebrates immigration and diversity, giving voices to those histories that are often left untold.

The concept of untold narratives continues in chapter 3 by Iain Donald, Emma Houghton, and Kenneth Scott-Brown, who showcase *Their Memory* (Abertay University 2018). This was a virtual reality project that explores how game design and immersive technology can be combined to enhance historical research and to preserve and meaningfully share the experiences and memories of veterans to a wider, younger audience. This latter aspect is key to the chapter which illustrates both the need to tell such stories, but also how virtual worlds allow veterans to have their stories heard. The authors openly discuss how the project changed from conception to completion and what did – or did not – work.

Chapter 4 changes tack by revealing a reverse-engineered biography of a video game, exploring a video game artifact. John Aycock and Hayden Kroepfl investigate the story of the elusive game *Desolation* (Barry Cambell 1984), a game bundled together with the Osborne Vixen portable computer. By reconstructing the digital existence of *Desolation*, they deal with issues such as the preservation of code, programming practices, and digital artifacts, asking: how can we learn and reconstruct the archaeology of video game artifacts when we do not have access to their creators anymore?

Focusing on the construction of fictional narratives in and about games, Dennis Jansen analyzes the role of online communities in archiving and preserving virtual histories in chapter 5. Through a close reading of the *Elder Scrolls* web archives, he studies how fans of the series have archived, interpreted, and re-interpreted parts of the lore of *The Elder Scrolls III: Morrowind* (Bethesda Game Studios 2002), using the Battle of Red Mountain as a case study. He showcases how in-game lore is treated by an online community and can be hotly contested, debated, and re-written, and how archival hierarchies come in to play to determine 'the truth.'

Representations and Intersectionality in Video Games

Mata Haggis-Burridge presents the conception and development of their game *Fragments of Him* (Sassybot 2016) in chapter 6. In an exemplary study of game and narrative design, they explore how game creation and storytelling is affected by personal experiences and societal norms, especially when it comes to stories taking place in past

settings within living memory. By including characters from different generations in the game, changing perspectives on queer identities and gay relationships become a point of discussion. These game development choices inevitably demand a vulnerable tapping into the identities of the developers themselves.

In chapter 7, Dunstan Lowe surveys representations of classical antiquity in versus fighting games from the 1980s and 1990s. This unexpected choice of genre, which rarely features in historical game studies, produces surprising results. Despite the fact that most of these games are set in modern or futuristic settings, they include significant mentions or allusions to classical pasts. Lowe shows how six major franchises have exploited antiquity for level design, characters, and lore, and analyzes the various patterns and discontinuities that emerge. He furthermore discusses imitations of games and those featuring softcore pornography to "reveal what has truly soaked through from the background cultural fabric."

Ashlee Bird offers an important and critical review of the problematic narratives and representations of Indigenous cultures in video games in chapter 8. She discusses misrepresentations of race, the myth of the 'vanishing race,' and the de-evolution of Native peoples through several well-known games. Violent representations and misogyny are main themes in her chapter. However, through Indigenous-made games and her own ROM hack experiment, she demonstrates that decolonization is possible. If approached properly, Indigenous cultures offer unique creative spaces for designers and novel experiences for players.

In chapter 9, Florence Smith Nicholls takes a critical look into the field of archaeogaming by looking at the ways in which its scholars create and interpret video game maps. They begin with a discussion on cartography itself and note some of the well-known (*e.g.* colonial) problems of the field. This is followed by three case studies which illustrate the role of the archaeogamer and the various analogue and digital tools that can be used in the mapping of video games for their study. Crucial for this, they highlight, is collaboration, self-reflection, valuing autoethnography, and embracing the messiness of play.

Historical Research and Learning through Video Games

Robert Houghton writes about video games as means for teaching and learning in the history classroom in chapter 10. In doing so, he focuses not so much on learning historical data, but more so on constructing historical arguments. Thus, he argues, games can facilitate scholarly debate and be used as an entry point to engage with historiographical issues. Furthermore, he suggests methods that could be used to design games that would be able to be used for this kind of teaching.

In chapter 11, Juan Hiriart takes us to the primary school classroom. Through his own process of designing a video game set in medieval England, he shares the challenges and revelations of game making for this young target audience. During development, the game was also play-tested with the pupils, who reflected on the game through drawings and conversations. By playing, the students were able to experience the hardships of medieval life.

Jeffrey Lawler and Sean Smith provide a practical overview of their own teaching experiments in the college classroom in chapter 12. Setting out to combine history, game studies, and computational skills, they share how they changed their history

curriculum. Using the platform Twine, they had their students make their own histories by creating fictional characters based in a historical reality. The authors reflect on several courses, their outcomes, and the students' responses.

Finally, in chapter 13, George Vlachos takes a multidisciplinary approach, combining the study of environmental history with games studies. He discusses the differences between ecosystem and landscape by applying the concepts to the virtual worlds of video games. For his case studies he includes first-person survival games and walking simulators, genres not often analyzed in terms of interactive pasts. In doing so, he illustrates the potential of games to convey historical information, even when they are not strictly historical.

Conclusion

In short, for those of you who return with us to the interactive past, you will find many new smart, challenging, and fun ideas in these pages. For those of you who are on their first trip to the interactive past: great to see your interest in scholarly and creative work on games and the past! If you like what you read here, we suggest you check out the first *The Interactive Past* (Mol *et al*. 2017) as its pages contain similarly engaging writing, but by an entirely different set of authors.

Whether you are an Interactive Past veteran or greenhorn, we are glad to have you along on this journey because remember: "it's dangerous to go alone!" (*The Legend of Zelda*, Nintendo 1986). We definitely did not walk this path alone, so we would like to give a big thanks to the Netherlands Institute of Sound & Vision and especially our co-organizer Jesse de Vos for providing us with the amazing space in which TIPC2 took place, as well as incredible coffees and lunches and our favorite throwable microphone cube. Thanks to the wonderful AV support, it is possible to watch the presentations of the entire conference on the VALUE Foundation's YouTube channel. Yet, you will note that the chapters in this book go far and above those presentations thanks to the hard work of all the authors in fleshing out their ideas and research. Finally, we would like to thank all our amazing conference speakers, participants, community members, stream-watchers, and all the other people and games that make this *Return to the Interactive Past* a good one!

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Part One

Narratives in and of Video Games

2. The Role of Historical Research and 'Historical Accuracy' in *Where The Water Tastes Like Wine*

Johnnemann Nordhagen

Introduction: *Where the Water Tastes Like Wine*

Where the Water Tastes Like Wine (Dim Bulb Games & Serenity Forge 2018) was released on 28 February 2018 for PC, Mac, and Linux platforms. It is a game about stories and folklore set during the Great Depression era of the United States. Part of the game is a 3D world, a large map of the United States, with the player controlling a skeleton hobo figure in third-person (see Figure 2.1). The player walks this character slowly over the various states and regions of the United States and can engage with various objects on the map, such as cities, buildings, and campfires. Interacting with these enters a 2D perspective, focused on static or near-static art and text.

In the fiction of the game, the player has lost a poker game with a mysterious stranger and as a result is compelled to wander the United States collecting and spreading stories. The player's main task is to collect the life stories of the major characters and the game is over when they have completed that task.

The game takes a unique approach to story and writing: rather than prioritize a strong central narrative, there are 16 major characters scattered around the map, who each have their own individual and separate story to tell (see Figure 2.2). In addition, each of these characters was written independently by a different writer, giving each of them a unique voice and perspective.

As well as the major characters and their stories, the game also includes hundreds of small choice-based text stories, which we referred to as 'vignettes.' These vignettes provide the main mechanical interaction in the game, giving the player an inventory of stories to tell after they've interacted with the text within. These stories fit into one of 16 categories, representing broad themes of storytelling
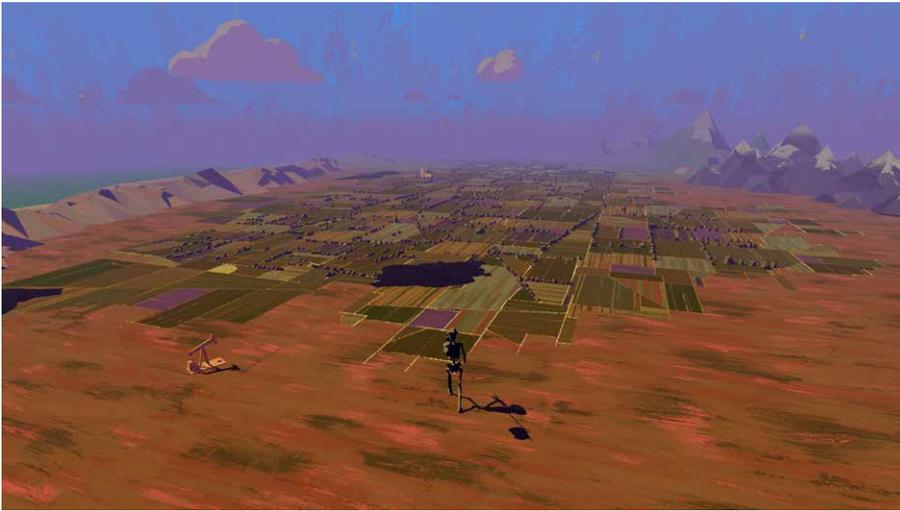
Figure 2.1: Screenshot: the player wanders the United States. Image courtesy of Dim Bulb Games.

It's important to have that place, that origin point for what you put into the world.

Continue

Figure 2.2: Screenshot: the character of Cassidy, the Beat Poet. Image courtesy of Dim Bulb Games.

such as 'family,' 'death,' or 'travel,' and also have an associated mood, ranging from funny to scary.

The stories provide the means of interaction with the main characters: the player sits across a campfire from the characters and trades stories with them. If the mood of the story matches what the character has requested (*e.g.* "I want to hear a scary story!" answered by the tale of an encounter with a ghost), then the character's affinity for the player increases, which will unlock future chapters of the character's story over time. The category that the story takes place in determines what the character will share in return – if the player tells a story about love, for example, the character will relate something from their own life having to do with love.

When the player tells a story to a character, that story transforms itself, growing more fantastical and exaggerated in the manner of folklore. The player can hear these transformed stories back again around the world, thus mechanically upgrading the stories in their inventory.

Thematically, the game is about the myth of the American Dream, and the conflict between what America mythologizes itself as and the reality of the United States as it has existed through history. It also considers folklore and storytelling, and the formation of history through storytelling. And lastly, it attempts to relate past historical situations in the United States to current politics, taking a very strong political stance.

Historical Contexts and Research in *Where the Water Tastes Like Wine*

There are three main components to consider in relation to the historical nature of the game: the setting, the characters, and the vignettes.

Setting

The setting of *Where the Water Tastes Like Wine* is, nominally, the Great Depression era of the United States, roughly the period between 1929 and 1939. This era was chosen for a few reasons: it has certain parallels to today, politically and culturally; it is a time largely romanticized by storytelling and popular culture, a time of hoboes happily riding the rails and living a life of true freedom and easy travel; and it is at the end of the era of folklore in the US, as folk traditions were slowly being replaced by mass media.

In order to reinforce the setting, the development team did a large amount of research into the era, attempting to capture the struggles and mood of the time. However, at the same time, we made many decisions that were purposefully ahistorical, in order to better express the themes of the work. For instance, Las Vegas exists in the game, as a city of glittering capitalist excess and gambling. The historical Las Vegas of that time was a tiny desert town and did not become the outsized gambling city until after the Great Depression, but it plays such a large role in the myth and symbolism of the United States that we felt we needed to represent it more as it is known today. We also created a hitchhiking mechanic to allow the player to travel around the country more easily, even though this resulted in far more long-distance car traffic on the roads than would probably have existed at the time. But again, hitchhiking is such an essential part of the American myth of travel and freedom that we needed to include it.

Characters

Each of the major characters in the game is related to a particular facet of American history, focusing on history that is often not examined deeply or at all in American culture or schooling.

Because this is an anthology game, and the narrative comes through the stories of these characters, this portion is the core of the game and critical to its narrative and thematic success.

For the process of writing these characters, I first came up with the rough concept of the character, based on aspects of American history I wanted to focus on or on classic archetypes from folk songs and stories that I felt would best capture the feeling of the world and the themes that we wanted to explore in the game. These included characters like an Appalachian coal miner, a Navajo woman who had experienced the Long Walk, a blues musician who had sold their soul to the Devil, or a cowboy who had seen the end of the Wild West.

The next phase of character creation was the historical research aspect. I also did this portion mostly by reading nonfiction books about the particular circumstances I wanted the characters to evoke. However, because there's a large aspect of folklore and myth to the stories, I also read and watched popular fiction media to get a sense of the fictional archetypes. As an example, for the blues musician character I read biographies of Robert Johnson and Memphis Minnie, but also researched the folklore around legends of the Devil at the crossroads and the Devil in blues music. For the coal miner, I read books about the mine strikes throughout the country and the struggles of coal mining, but also watched the John Sayles film *Matewan* (1987). For all the characters I tried to build as much historical context and grounding as possible, because the information would be filtered twice: once by the authors in deciding how to tell the story of this character and build a believable human story from this history, and again by the players, who might only see pieces of that story but ideally still would have an idea of the historical struggles referenced within.

I collected my notes about the historical period, particular interesting facts, and prominent themes, and gave those to the writers of the individual characters. Because part of the goal of the game's production was using individual authors with individual voices for the characters, at this point the writers were given almost total freedom in what they wrote, even to change the basic outlines of what they had been given. This resulted in several characters having a different focus than what was originally conceived, but in all cases this made for a stronger character and better game. For instance, the cowboy character was initially designed to be a sort of Buffalo Bill character, living through the end of the mythic Wild West and ending up with only 'Wild West' shows. However, the writer, Jolie Menzel, recast this character as living in a later era – someone who had never lived in the Wild West but fantasized about that life and tried to recapture that dream from a future perspective, fighting against the US government's attempts to use the Southwestern deserts for nuclear testing after World War 2. This cast them as a libertarian ecoterrorist, but also mirrored the 1950s/60s romantic nostalgia for the cowboy era and the whitewashed, sanitized version of that fantasy that was invented during those decades (see Figure 2.3). It was a very interesting take, more so (I felt) than an actual cowboy. Of course, it was not really the historical era that the game took place in, although it was historically based. However, the themes that it brought in and the ideas about the American dream were something new and interesting.

For another example, Gita Jackson, the writer of the blues musician, decided to tell the story of the character selling her soul to the Devil as a metaphor for the unwinnable situation of black Americans. She made the whole story into one

Figure 2.3: Screenshot: Ray, a cowboy past his era. Image courtesy of Dim Bulb Games.

of 'damned if you do, damned if you don't' in a literal way, comparing the Devil against the white record label owners against the life of misery and poverty that awaited the character if she was not a successful musician. This is not the same kind of relocation in history as with the cowboy character, but it is a reframing and reinterpretation of the classic folklore into something that resonates much more strongly with the themes and aims of the game as a whole.

The themes and requirements of the characters, in broad strokes, were:

- The character should be on the edges of society, marginalized in some way.
- The character is on the road not entirely by their own choice.
- The character is seeking something that is impossible to find.
- The character's story is often related to organized labor in some way.
- The character should have 3-4 chapters in their story, representing a story arc of some kind.
- The character is always challenging the orthodoxy of politics, identity, or some other facet of past and current American life.

We had several goals that we wanted to achieve with the game, and these themes hopefully reinforce those goals. First, we wanted to surface stories that are not heard as often, that are perhaps buried or glossed over in current retellings or understandings of American history. This is an important theme and in fact this is the player's goal as well as the game's: the player is tasked with finding the "true [stories] – the ones people will tell you about their own lives. These often get lost [in the bigger story of America]" (*Where the Water Tastes Like Wine* 2018). Since these stories are often the ones told by marginalized people, many of the characters the player encounters are immigrants, refugees, people of color, queer, poor, or hold beliefs outside the mainstream.

Another goal was challenging the generally rosy picture painted of the hobo life and the freedom of the open road. The road is romanticized throughout American history, in stories ranging from Mark Twain's *Adventures of Huckleberry Finn* (1884) to Jack Kerouac's *On the Road* (1957). The hobo life and the Great Depression which was its peak is even more so – from songs like *Big Rock Candy Mountain* and *King of the Road* to movies and other pop cultural artifacts showing hoboes as free, unattached, and able to survive and live a simple and happy life traversing the country. The reality, of course, was that very few chose that life during the Great Depression – most were displaced by poverty and lack of work, and traveled to attempt to find food for themselves and sometimes their families. In *Where the Water Tastes Like Wine*, the character of Quinn addresses this most directly: they are a kid tossed out of their home to fend for themselves, a common story during the Depression. Families would decide they could barely afford to feed themselves and that their older, 'working-age' children should leave and provide for themselves, rather than be a drain on family resources. The road, however, was a tough place for anyone, especially children or teens.

The title of the game comes from a series of folk songs, titled things like *Blowing Down the Road* or *Going Down the Road Feeling Bad*. These songs often contain the line "going where the water tastes like wine," derived from a folk saying about a place where that's true, meaning a place where worries are limited or gone entirely and everything is as wonderful as can be. This has obvious parallels with the conception of the American Dream and also with the United States' perception of itself. In service to this theme, each character is seeking something impossible to actually find, their own place where the water tastes like wine. For some, like the coal miner Little Ben, this is freedom from bosses, a worker's paradise of 'honest pay for an honest day.' For others it is racial equality. For some characters, like the immigrant farm worker Rocio, it is tied more explicitly to the American Dream.

Tied into this, and into the current and Depression era politics of the United States, is the issue of labor rights. Many of the characters are oppressed by the system of capitalism under which they work or try to survive, and either speak of political change such as Socialism or Communism, or belong to labor organizations, like Rocio's United Farm Workers, Franklin's Brotherhood of Sleeping Car Porters, or Little Ben's striking miners.

More broadly, each character challenges some aspect of politics or identity in the most commonly projected American image – that of a straight, white, middle-class family. By being queer, or non-white, or poor, or an immigrant, the characters show a side of America that is not often brought to the surface, and may not align with the mythic image of the country.

To dive more deeply into the character process and show examples more closely, I would like to present two characters. The first is Dehaaya, a woman of the Diné (Navajo). She was a little girl when the US Army General Christopher 'Kit' Carson attacked her nation, destroying their homes and farms, and killing anyone who did not surrender. The Diné were driven hundreds of miles through the harsh desert of the American Southwest, with no aid from the soldiers, away from their traditional lands and into an internment camp with other Indigenous people, including some of their historical enemies. This story is not one that is usually taught in history

classes in the US, or if it is, it is often glossed over. The Diné were and are highly marginalized within American society. For the game we hired a Diné writer, Demian DinéYazhi, to capture this story and relay it, using his own experiences and his own point of view to recount it. If history courses do teach this story, they rarely do it from the direct perspective of the Diné. This is one reason we focused on having individual writers tell these stories, so we could properly elevate their points of view and their own stories.

The next character is Cassidy, the Beat Poet. The Beats were a counterculture group in the 1950s and early 1960s, most famous as poets and novelists. Jack Kerouac, Allen Ginsberg, William S. Burroughs, Neal Cassady, and Lawrence Ferlinghetti are all famous Beats. They were rebelling against the constraints and rigid morality of the era, pushing back against the materialism of that age. Of course, this is far past the Great Depression setting of the game, though. I decided to include this character because it ties in well with the themes of romanticizing the open road and travel, and because of this political struggle that the Beats epitomized, pushing back against the common conception of the American Dream and asking what else there might be, what that might be neglecting. Matthew S. Burns wrote this character and did a spectacular job creating a tragic love story with a Beat background. This character may not fit the period of the game, but he is not ahistorical: we did a lot of research on his period and he fits perfectly into it.

Vignettes

In order to delve into the stories of the characters, the player must collect their own stories. This happens through encountering 'vignettes,' small branching-choice stories that the player navigates through, and when they finish they have the story of their encounter to tell. The vignettes, in general, were even more free rein than the characters. The writers were given a piece of art, a general thematic category for

Figure 2.4: Screenshot: the tale of La Llorona is part of the folklore drawn from in the game. Image courtesy of Dim Bulb Games.

the story to fit into, such as 'family' or 'love' or 'death,' and a mood, like 'funny' or 'scary.' At that point they were free to make up whatever they liked within those constraints. Sometimes we started with traditional American folklore, like Paul Bunyan or Johnny Appleseed (see Figure 2.4).

This allowed the writers the freedom of their imagination, and as a result we got lots of wild and interesting stories from this. We had fish-men catching and eating humans, tentacle monsters in boxes, cursed violins, and talking ravens. But since the writers knew the themes and aims of the game, many of the same ideas crept into their stories. An image of a metalworker becomes a member of the Alabama Communist Party, secretly organizing. A story about Seattle becomes about the West Coast Waterfront Strike of 1934. Johnny Appleseed was a real person, John Chapman, and the story about him becomes about his faith and love of nature. The talented writers managed to inject little-known histories into even these small stories.

The False Boogeyman of 'Historical Accuracy'

We went to great lengths to keep *Where the Water Tastes Like Wine* grounded in actual history, doing copious research on the historical background of our setting and each of our characters individually. Of course, with such an emphasis on folklore and the fantastical, as well as the deliberate mixing of characters and occurrences from different eras, it would be incorrect to call the game "historically accurate." However, we would not claim this term even if it were true – in recent times, this term has been gaining a lot of attention in games, but mostly in a negative way. This has become a front in the ongoing culture wars in gaming and the wider political world. Games and gamers use historical accuracy as an excuse for why games cannot include women, queer people, or people of color. Gamers have attacked *Total War: Rome II* (The Creative Assembly 2013) for the fact that generals can be female (Alexander 2018). *Red Dead Redemption 2* (Rockstar Studios 2018) was criticized for having black cowboys (Perry 2018). *Battlefield V* (EA DICE 2018) has been attacked for the existence of female soldiers in its World War 2 setting (Farokhmanesh 2018). On the other side of the coin, *Kingdom Come: Deliverance* (Warhorse Studios 2018) has been praised by the same people for its commitment to historical accuracy – an accuracy that includes historically-modeled weapons and armor, but also a lack of gender and racial diversity, and a very particular opinion about who was on the right side of history in the 1403 Bohemian struggle it depicts (Inderwildi 2018). The game clearly portrays the Turkic Cuman as being evil and perfidious invaders and the white Bohemians/Holy Roman empire as being upstanding moral warriors defending their homeland against the incursion. The mapping on to current politics is unmistakable, as throughout Europe and the United States racist attacks on immigrants and refugees increase.

In each of these cases, 'historical accuracy' is a shibboleth for a particular conservative viewpoint, a longing to preserve the existing status quo, especially the role of history as told by the victors and representing most strongly the interests of those in power. It is a desire not just for the preservation of whiteness and other power structures, but also the right to control what history looks like by presenting only the dominant narrative. It is never asked whether this view of

history is actually accurate or who benefits from constructing the narrative in a particular way. What is sought is validation for those in power to remain in power, and for those suffering to continue to suffer – ideally in silence.

Where the Water Tastes Like Wine explicitly rejects this notion, both in the stories that it tells and in the in-game goals of the player, to seek out and elevate the hidden stories of the marginalized. It is a game that loves history, that thrives in and celebrates it. But it does not worship it. It uses history to lift up the people who have not had the opportunity to tell their stories to the same degree as the powerful. It attempts to add the stories of its characters to the popularly understood historical record.

In contrast to current political trends in the United States, and to an extent the world, *Where the Water Tastes Like Wine* celebrates immigrants, diversity in race, gender, and sexuality, and promotes labor activism and the resurgent US socialist movement. It does this partly by seeking out and reminding the audience of those trends in the periods of US history that it covers, although as we have seen the game also takes artistic liberty where appropriate.

Regardless, the game's mission as a work of art is not to be accurate. This is an empty goal for a work of art, and self-serving at best; who gets to define what accuracy means?

The goal of the game was to interrogate American society and our current moment, by using history to point out that the problems we are having now we have always had, that for some of them we found solutions in the past that we have since forgotten, and to bring these lesser-known moments of history to light.

Where the Water Tastes Like Wine can be purchased on Steam or Itch.io
https://store.steampowered.com/app/447120/Where_the_Water_Tastes_Like_Wine/

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3. *Their Memory*: Exploring Veterans' Voices

Iain Donald, Emma Houghton

& Kenneth Scott-Brown

> Stories are for joining the past to the future. Stories are for those late hours
> in the night when you can't remember how you got from where you were to
> where you are. Stories are for eternity, when memory is erased, when there is
> nothing to remember except the story.
> *O'Brien 1990: 36*

Introduction

Their Memory (Abertay University 2018) is a Virtual Reality (VR) project that
explores how game design and immersive technology can be used to enhance
existing historical research, expand real-life narratives, and bring a more rich and
expansive experience of commemoration and memorialization to younger and
potentially harder-to-reach audiences. As an AHRC Immersive Experiences funded
project, *Their Memory* brought together interdisciplinary researchers from Abertay
University, two game development companies (Ruffian Games and Pocket-Sized
Hands) and the veterans' charity Poppyscotland. The partners in the project were
key to understanding the issues and participated in co-designing and developing
the response with the audiences. Poppyscotland is a veterans' charity that supports
all those who have served in the Armed Forces, those who are still serving, and
their families. The organization was originally established in 1921 as The Earl
Haig Fund and is best known for running the Scottish Poppy Appeal which raises
approximately £2 million annually. Together with Poppyscotland's year-round
fundraising the money raised is used to provide tailored support to the Armed
Forces community. The charity also provides services in advice, employment,

housing, mental health, mobility, and respite. For military charities that support veterans and aim to ensure that the memories do not fade, it is increasingly challenging to engage with young people and the wider under-35 demographic. There are specific challenges ranging from the impact of austerity, a perceived lack of awareness of conflicts post-1945, and the perception of remembrance as a tool to promote militarism, nationalism, and war (Snowdon 2015). One potential way of engaging with this audience was through using game design and game technology to access the stories of veterans that Poppyscotland support. The core aim of *Their Memory* was therefore to consider how commemoration is changing.

Background

The two most significant conflicts of the twentieth century have almost faded from living memory. Their impact has shaped commemoration and memorialization activities for the past century. We are, however, at a juncture where both the existing historical narratives and remembrance activities of conflict are now being shaped by generations that have far less direct experience of war (Keren & Herwig 2009). At the same time, these generations have more access to the visual imagery of conflict than at any previous point in history. From news and propaganda presented via print and screen media, through to the virtual playgrounds of *Battlefield* (EA DICE 2002-2018) and *Call of Duty* (Infinity Ward *et al.* 2003-2019), young people and society in general are surrounded by war. Yet, we often know little of the impact it has upon those that served.

The relationship between games and war remains blurred. Games have been utilized by the military for recruitment and training, and game developers both reflect the political machinations of the period in which the games are made and extend those to fictional scenarios where fact and fiction merge (Dyer-Witheford & de Peuter 2009; Lenoir & Caldwell 2018). Yet, unlike literature and film, games have not proven to be fertile ground for anti-war themes. Games typically do not treat the conflict, participants, or victims with any degree of reverence (though there are notable exceptions such as *This War of Mine*, 11 bit studios 2014; *Liyla and the Shadows of War*, Rasheed Abueideh 2016; and *Valiant Hearts: The Great War*, Ubisoft Montpellier 2014). Gameplay is generally prioritized over historical accuracy and military games have tended to focus on clear good versus evil narratives and empowerment mechanics. Though there are games such as the *ARMA* series (Bohemia Interactive 2006-2013) or various flight simulators that do focus more on realism, they also tend to be the exception rather than the rule. When it comes to loss and commemoration, games are notorious for the unsubtle way in which these complex emotions are dealt with. A scene from *Call of Duty: Advanced Warfare* where the player character, at the funeral of his dead comrade, is prompted to "Press F to Pay Respects" has developed into a meme poking fun at the forced element of interactivity that contrasts with the solemnity of a memorial service. It is not that games cannot do this, just to do it well is difficult. In 1993 *Cannon Fodder* (Sensible Software 1993) created controversy for its use of the poppy in its advertising, but in the game each of your squad of soldiers are simply replaced by a white cross on the hill of the main menu screen when they die. New recruits then march past these gravestones to potentially

repeat the cycle (Smith 2017). The message to the players was clear, war inevitably had consequences. In *Battlefield 1* the disempowerment of the individual (Muncy 2016) was demonstrated in the opening mission where the player is told that they are not expected to survive. When they die a name and dates of birth and death briefly appear as they respawn in another body. The message ties the brief epitaph and commemoration directly to the death and loss. Undoubtedly, there is an inherent challenge for games to provide appropriate interactivity to retain player interest and balance that with enough reverence for the stories that are being told of war and conflict. *Their Memory* sought to explore how Virtual Reality could be used to engage young people with the memories of veterans and raise awareness of their needs. The project developed a short thought-provoking, narrative-driven prototype that enables players to experience the memories of Scottish veterans, exploring the different conflicts and situations they have experienced. It was hoped that in doing so each player would walk away from the experience with a deeper understanding of veteran issues and sense of empathy.

Concept Development

We began *Their Memory* with a view to creating a project based on visualizing the stories of veterans. The initial concept was to use existing oral histories that are often languishing in museums, archives, and library collections and put a modern spin on them. The pitch was to take an audio interview of a veteran talking about a key event in World War One, such as the eve of first day of the Somme, and place the user in that person's story. The initial concept was focused around the big moments and historical significance of key events. The reasoning was that the more historically significant the event, the more likely there would be corresponding collected oral histories. The alternative was to find oral histories, analyze and then reimagine them for VR. From early discussions with Poppyscotland it became clear that the focus on the centennial of the Armistice was understandably dominated by the conflict that preceded it. Although the roots of many veterans' charities can be traced to the First World War, the challenges that they face in the present were just as important. The concept therefore shifted from doing a project based around the First World War to exploring the many conflicts that had occurred since the end of the Second World War and whose veterans Poppyscotland was more likely to be supporting. The message was shaped partly by a desire to ensure that younger audiences recognized both the historical significance of remembrance but also the continuing need to provide support. In looking for suitable stories we explored the checkered history of British conflicts post-1945. Whilst there were many conflicts to research, it quickly became apparent that oral histories for many of these campaigns and conflicts were going to be more limited and less accessible. These conflicts had fewer participants and surviving testimony was not always available. With that in mind the project began conducting co-design sessions to try and figure out what sort of experience could be developed.

The project was shaped by co-design sessions with veterans and young people. In these we brought together the target audience, veterans, and the project team. The project team consisted of a core of three people with assistance from up to six others at various points. We used several co-design techniques to support

idea generation and facilitate self-reflection with the aim of developing a good understanding of what each group expected from an immersive experience and brought additional insights and opinions to the creative process (Sanders & Stappers 2008). The opinions that we gathered from these were fundamental in shaping the VR experience. We ran two co-design sessions, the first with 29 participants and the second with 17. Each session took 2-3 hours. The first session was run with prospective audience members in the 21-35 age bracket and from that emerged the initial concept that would become part of the final, built product. The second session focused more directly on the harder to reach audience of 14 to 16 year-olds and helped to shape the nuances of the user experience. In both sessions we invited veterans from across the Armed Services to discuss their experiences and the project with the audiences. Together these sessions demonstrated the value that co-design can have upon developing an experience but also the importance of allowing veterans a place to discuss their service. The stories they told were typically engaging and funny but often with just an underlying expression of luck. Take for example the veteran from the Fleet Air Arm who had travelled to the Falklands on a hastily recommissioned civilian ship. His abiding memories of that trip being the general lack of preparedness and the need to just get on with it, but also how he seemed to always be in the shower when the air raid siren went off. In recounting his story, his only concern was whether if we made that in VR we would agree only to show him from the waist up!

For the veterans, the VR technology was interesting but almost superfluous, it was far more about the stories. Always enthusiastic, they shaped the nature of the content by the way in which they interacted with young people and the project team. Some stories were regaled without issue, others with thoughtful questions and prompting. Some stories simply remained off-limits. It became clear during these sessions that for many veterans the focus was not to be purely on the harder aspects of service. After all, the experience of war and conflict was minimal in contrast to the time that they had served. They also regarded the more harrowing memories as deeply personal and not all could be shared. In contrast, the expectation amongst the project team was that younger people would want to hear more about those specific conflict-related memories but instead noted that they were more interested in addressing stories of why they signed up, where they served, what countries they visited, what friendships they had made, and the impact of service on relationships with friends, families, and partners. We were fortunate to have veterans who had served across the armed forces. The co-design sessions became integral in shaping the experience because they shifted the focus away from conflict and the more obvious stories and places.

Memory and Place

…the memory of places we experience is fundamental to a sense of self.
Trigg 2012: abstract

Lady Haig's Poppy Factory in Warriston, Edinburgh should not be a special place, but it is. The original Lady Haig's Poppy Factory was opened in March 1926, employing men who had been disabled during World War 1 to make poppies for Scotland. The factory moved to the Warriston site in 1965 and ultimately has served as the primary location for the Scottish Poppy for 54 years. The building has no particular architectural or historical significance and the decision to undertake a major renovation of the factory in December 2018 was purely for practical grounds. What makes Lady Haig's Poppy Factory special is that it has a work force of ex-service personnel, the large majority of whom are registered disabled, and has hosted countless school children and other visitors to explain the importance of the poppy and remembrance. The result is that the factory is both a functional workplace but also has many aspects that make it look and feel like a museum. In addition, as many of the workers are ex-armed forces and have been with Poppyscotland for many years, there is a palpable feeling of the military about the place that provides a comfortable and secure atmosphere, for both visitors and workers alike. The factory produces approximately five million handmade poppies each year and produces somewhere in the region of 12,000 wreaths to order. They also produce Remembrance Crosses, Long Stemmed Poppies, and Dress Poppies. They create and dispatch orders to Poppy Appeal area organizers all over Scotland and process over 25,000 collection tins. This is all achieved in a workspace that focuses on those that have served. The memorabilia on display throughout the factory are not only visually interesting but filled with history that has an emotional connection to the people working there. It was not just a place of work for them. For some of the veterans the factory saved their life, for others it provided them an environment in which they could talk about their experiences with people who would understand.

The initial concept had been to create a virtual space that brought players to a conflict zone. That concept was challenged in the first co-design session, but the idea to recreate Lady Haig's Poppy Factory as a virtual space did not actually occur until after visiting and taking the factory tour. It was during this process that the project team discovered that the factory was being refurbished and as a result it might be interesting to take a snapshot of how it was since it would potentially never look the same. This was further supported by visitors who, when visiting the factory, were asked what their favorite part of the tour was. Many would answer with creating their own poppy or speaking to the veterans who work there. Poppyscotland had managed to obtain funding for a touring exhibition that would allow them to take the Poppyscotland message across the whole of Scotland. They had already planned and developed an experience for visitors to build their own poppy. Taking veterans with them on tour was far more of a challenge and that constraint directly inspired the project. The prospect of building a virtual representation of the factory was daunting. The environment itself was large and

the factory had so much history and clutter within its confines that there were significant concerns about whether it could be achieved. This was confirmed in the first block out of the environment which, when created to the real-life scale, felt far too large in Virtual Reality. Although a 1:1 replica was considered, once tested the environment scale was reduced for both aesthetic and performance reasons. A smaller environment was perhaps the first creative license that was taken with the aim shifting from accuracy to authenticity.

One of the core problems that the project had to consider was that the experience was designed to be used in a museum setting with limited physical space, potentially exuberant audiences (schoolchildren age 14-16), across a potentially time limited (less than 2 minutes) experience. Yet at the same time it was required to convey real-life stories of veterans and carry forward an understanding of commemoration and memorialization. For those reasons, the VR experience was designed as a seated one where players would spawn in the Lady Haig's Poppy Factory at a veteran's desk. Players could then interact with objects on the desk or look up and move to another desk. Players could identify which desks they could move to via a Poppy icon that floated above any desk that the player could teleport to. Although teleportation jars with an immersive experience, this was the simplest method of allowing movement within the virtual space. Whilst creating a desk-based VR experience does not necessarily sound like the most innovative use of the technology, the idea worked well for a narrative-driven project and took inspiration from sources as diverse as *Job Simulator* (Owlchemy Labs 2016), *Stories Untold* (No Code 2017) and *Oculus First Contact* (Oculus 2016).

A desk is a place where people need to be productive, but also healthy and comfortable. People will spend many hours at a desk each day, day in day out during the working week, for months and years. It is therefore understandable that desks become a natural extension of ourselves. Whilst some people will prefer a sparse desk with minimalist clutter, others prefer ones crowded with mementoes and memorabilia. In an environment like Lady Haig's Poppy Factory which regularly hosts visits from schools a busy desk reflects both the nature of a working factory but also helps to create a more informal and less intimidating environment for younger visitors. Each item of memorabilia helps to generate conversation points to talk about challenging topics such as loss, conflict, remembrance, and commemoration. The player therefore came to embody the veterans that produce the poppies in the factory and each item of personal memorabilia when interacted with played an audio clip of dialogue. The veteran would, in their own voice, explain the memory associated with the object. Allowing the player to move to another desk would let them experience a different story. This modular approach allowed for further extensions to the prototype, adding more stories if the opportunity arose. The intricacies of the Warriston site can be viewed in Figure 3.1.

The replication of the factory can be seen in Figure 3.2 with one of the desk spaces visible on the right. Videos of the application can be viewed on YouTube (Houghton 2018a; Houghton 2018b).

Figure 3.1: Lady Haig's Poppy Factory, 2018 (photo by: Emma Houghton).

Figure 3.2: Screenshot: Their Memory *and the virtual Lady Haig's Poppy Factory.*

Memory and Objects

> The 'items' that veterans incorporate in their storytelling can be a privileged channel to their experiences and memories.
> *De Nardi 2014: 458*

The visits to Lady Haig's Poppy Factory affirmed that linking the veterans' memories to specific objects would provide a clear link within the virtual factory. The design for players to interact with any object was made overtly simple. When an object is picked up the corresponding dialogue clip would play. Objects that

could be picked up had a clear outline when looked at. That outline would disappear once picked up and reappear once the object was dropped. For picking up any object the motion controller had to overlap the object and when the trigger button was pressed the object would snap to the motion controller. The player had to keep pressing the trigger down to continue holding an object. There was debate about whether players should be allowed to throw objects, especially as they were representative of veterans' memories. Although we opted to allow this, we decided to force the object to re-spawn at the original location as soon as the player released the trigger (whether an object was dropped or thrown) to ensure that the audio clip still played. We also designed the interaction to only allow one audio clip to play at a time and to disable movement. This meant the player could still look around or pick up other objects but that the story had to complete before a new audio interaction could be introduced.

As each desk was a functional workstation we utilized common objects in the virtual environment to convey the purpose of Lady Haig's Factory and Poppyscotland. One key aspect was that on each desk we included a framed image of each veteran's name. In the real factory these were used so that visitors could easily identify who they were speaking to. The virtual factory mimicked this and picking up the picture frame would play an audio clip that relayed the name, regiment, and service number for the veteran to introduce themselves. The poppy was always placed in the center of the virtual desk and for each veteran was used to describe how they came to start working at Poppyscotland. This provided an important connection between the functional form of the desk and the journey of each veteran to seek out support. Although the reasons for joining Poppyscotland were individual, key themes emerged about a sense of belonging and camaraderie, but also a need to be doing something meaningful.

The personal objects that each veteran kept on their desk were unique to them and they reflected many different aspects of their time in service and throughout their life. These objects became central to the storytelling and were something that a wide range of people could relate to (Auslander & Zahra 2018; Miller 2008). One of the main reasons we all keep certain objects is the sentimental value they have and the personal link they hold to other people, specific events, or time periods. The association with a specific object is important to us but can also be hidden. For the veterans in Lady Haig's Poppy Factory these objects ranged from the unique to the innocuous, yet each provided a link to the past from the present. Each object also connected to memories, whether positive or negative, and thus they helped to remember specific times, people, and events. Photographs and writing were some of the most evocative items of all. *Their Memory* incorporated a range of personal objects from chrome-plated mortar shells, to NATO flags, coffee cups, and images that veterans had of themselves in uniform, along with written items that many had framed on their desk.

One difficult issue was the representation of licensed products in a virtual environment. Given the limited development time and budget (approximately 9 months and £60k), *Their Memory* was never going to be able to deal with lengthy legal processes or pay any potential licensing fees. Yet, by not engaging with licensed products we created historical and archival anomalies. Many of us have

licensed products on our desks and Poppyscotland's veterans were no different. From Airfix military vehicle models to the iconic animated Minion characters and even Cadbury's chocolate boxes, each had to be identified and considered with a view to the creation of virtual assets. Whilst ultimately we opted not to include these, it is an issue that is going to become increasingly common as we seek to record environments for reuse in virtual worlds. As developers and historians, we need to consider what the potential terms and conditions of use could look like.

Connecting common and personal objects to memories helped explore individual journeys. The memorabilia and minutiae associated with each memory demonstrated how these possessions connected to important moments in each veteran's life, connecting people, places, and events. In the real factory they provided prompts to help veterans remember specific times or events, in the virtual world they became the link between the storyteller and the player.

Memory and Voice

> War stories become just that – stories. Just as time distances the storyteller from the events themselves, so do the repeated tellings. Gradually the stories are embellished in places, honed down in others until they are perfect little tales, even if they bear little resemblance to what actually happened.
> *Hackworth & Sherman 1990: 9*

Their Memory played with place and objects to help tell the stories, but a key element to this going beyond a virtual space was the recorded oral histories of veterans and relating these to the objects that they saw as important. The audio aspect of the game was critical in making the experience authentic. Each audio clip is voiced by a veteran. Early in the project we had discussed the possibility of using voice actors. This was predominantly over concerns regarding identity and data protection. We also had to consider what stories could be told both in considering a younger audience and what topics the veterans themselves were comfortable talking about. In hindsight, letting the veterans tell their story in their own voice was one of the best decisions. After all, it was these stories told by veterans to visitors which had inspired the idea of *Their Memory*, and for Poppyscotland the veterans who work at the factory are more important than the physical building. The decision to use the veterans shifted the project from using archival sources to creating them. One of the key objectives at the outset of *Their Memory* was to make accessible the personal accounts of Scottish veterans so that future generations could hear from them directly and better understand the realities of service. The project had not anticipated that it would add to that archive. Yet there are clear benefits, from adding to the existing historical archive and being able to tailor experiences around the elements that veterans had in common and make more of the memories that were unique to them. In total, six veterans' stories were recorded, with three being included in the final game referring to eighteen objects.

One aspect that became obvious was that when people think of the service undertaken by members of the Armed Forces, they inevitably associate them with war and conflict. Whilst there are undoubtedly harrowing and potentially traumatic

experiences, one of the overwhelming sentiments that evolved from talking with the veterans was that serving was about significantly more than that. From the places that they were stationed at such as Belize, Cyprus, or Germany through to the places they visited for training or through duty, such as Kenya or Brussels, each veteran was able to recount stories which brought back positive memories. For many, travel was an important aspect with several stating that had it not been for the military they would never have had the opportunity to visit the places they had or to experience different cultures. Whilst there are multiple narratives of colonial hegemony rooted in serving in the British Armed Forces (from conflicts such as the Malayan Emergency, Aden, the Falklands etc.), we tend to forget that the military has historically provided an opportunity for people to escape limited options at home. That military personnel and families can prefer a life that comes with frequent deployments and redeployments contrasts with the challenges that may be faced economically if they had stayed.

Many veterans described their service as career forming or even career defining. There was the Black Watch veteran who joined up to play music as a cadet and then chose to sign up and serve with the regiment that he wanted to, rather than face the lottery of national service. Leaving to play in a band in the early 1960s, he credited his service as defining his future career. This was similar to those that had gained a trade or trained in specific fields whilst serving that they then moved into after leaving.

One other element that was frequently cited was the importance of the camaraderie. Some veterans cited multiple stints of service, as when they left they found themselves wanting to come back. There were others who found their careers followed each other, for example the two veterans who served together for twenty years in the Royal Highland Fusiliers, left and served in the Police for another twenty, and then found themselves working alongside each other again at Lady Haig's Poppy Factory.

The veterans were often pragmatic about their service. It was one of those veterans of the Royal Highland Fusiliers who, in discussing a picture of them serving, demonstrated pragmatism when asked to describe the scariest experience they had. What is remarkable is that what is remembered as scary is placed in the context of other arguably more traumatic events:

> In 1988 whilst serving in Redford Barracks in Edinburgh, terrorists blew up a Pan-Am jet over Lockerbie. My regiment was tasked with deploying to Lockerbie to recover the casualties of that terrorist incident. We were there 'til Christmas Eve and despite the things I seen [sic] during that five days and my seven tours in Belfast and South Armagh, the scariest thing I've ever done was deliver a baby in the back of an ambulance during one of the ambulance strikes.
> *Their Memory 2018*

Most veterans acknowledged that they had seen things that were hard to carry. One story was described by a veteran of the Intelligence Corps, who connected the

everyday object of a coffee cup to an incident experienced whilst serving in Bosnia and Kosovo:

> I think probably the worst experience I've had in my time in the Army was in Bosnia … we'd got news of a weapon cache in the mountains and just outside the camp there was a village there and they were very pro-forces. They liked us because we were there protecting them and as we were going out to the mountains in the morning, we went past them and were greeted by them all and they brought out coffee, and pastries, and gave us cigarettes and we had a nice little chat with them and what have you, seeing the kids off to school and things like that. We went up into the mountains, we found the cache, and about three or four hours later on … and we came down and … it was deathly quiet in the village there was nobody present at all. And then we came up to the village hall and we witnessed the devastation of Kosovo at full blast and it was awful, it was horrible to see.
> *Their Memory 2018*

What was striking about this memory was how the mundane details weaved with the underlying horror, without what was witnessed ever being detailed. That memory was one amongst several that demonstrated the importance of connecting events and empathizing with those that had witnessed them.

Connecting the Past, Present, and Future

> What sticks to memory, often, are those odd little fragments that have no beginning and no end.
> *O'Brien 1990: 34*

During the twentieth century, many nations witnessed not just the development of commemorative traditions, but the evolution of these. The horrendous losses of the First World War were followed up less than a generation later in the Second. It is understandable that the scale of those two wars resulted in significant commemoration, memorialization, and remembrance activities and these became embedded traditions. The scale also ensured that most families were impacted in same way. The numbers of those lost, though, were considerably smaller than those who survived. Whilst we need new generations to remember the losses in an attempt to not repeat them, we need to acknowledge that for many of them these great conflicts are now several generations removed. Whilst they are far more likely to be aware of these wars and more recent conflicts, they are far less likely to know anyone that has direct experience of war or conflict. Connecting present and future generations to the past and those that have served is increasingly challenging. 2019 was the 75th anniversary of the Normandy landings, which would place the youngest veterans of that campaign in their early nineties. Those that served in Korea are in their mid-eighties. One certainty is that veterans of even more recent conflicts are also getting older and, compared to the generations that faced conscription on national service, there are fewer of them to tell their stories.

We therefore need new and engaging ways to hear them. Virtual Reality and *Their Memory* provide one possible avenue.

It is worth noting that as an interactive past one of the hidden benefits of the project has been the unplanned generation of further archival material. The photographs and videos that we created as reference material have now become their own archive of how Lady Haig's Poppy Factory looked before refurbishment. Additionally, the project shifted from using existing archival material to generating new material that could potentially be used by future historians. We also discovered the importance of maintaining a wide range of sources. For example, the project supported the reference pictures with sources such as old Argos (a catalogue retailer) catalogues. These were excellent for supplying the approximate measurements for specific objects and furnishings, as well as providing snapshots of specific eras which could be found in the real factory and demonstrate the importance of undertaking wide archival research.

The immediate future for *Their Memory* is its inclusion in 'Bud,' an 18-tonne truck that transforms into an interactive learning space and will travel to schools and events across Scotland in the coming years whilst Lady Haig's Poppy Factory is refurbished. 'Bud' will not only interpret the heritage of the poppy but will host activities for groups to explore and share a contemporary understanding of remembrance, the nature of conflict, and the poppy's role in modern Scottish society as a symbol of unity and hope. It was always intended that *Their Memory* would complement the workshop activities undertaken by Poppyscotland's Learning & Outreach team rather than as a standalone download via Steam or the Oculus Store. Longer term making *Their Memory* available via a digital store or archive is important if it is to serve as a snapshot for understanding the changing face of commemoration. Though with the speed that technology and VR is moving, it is very possible that the stories of veterans as told through VR will sit neatly with the more traditional historical artifacts currently on show as a reflection of old technology!

Conclusion

It is striking when looking back at the final version of *Their Memory* how different it was from what was originally envisioned. The original idea was to place people in an environment that only a veteran could have seen. The inspirations were varied, combining the interviews in the *Band of Brothers* TV series (2001) with the visual imagery of games like *Verdun* (M2H & Blackmill Games 2015) or *Battlefield 1*. One of the potential ideas was to create a prototype that was like a virtual battlefield tourism application. These lofty ambitions seem so far removed. After all, an elevator pitch of a 1960s factory desk simulator does not have the same resonance. Yet, what we have made is so much more than a factory, it is a multi-layered experience. An archive of an archive that attempts to navigate the complex relationship that exists between history, memory, and the stories that people tell about their experiences. The project has notable design successes in that it can provide a short but powerful immersive experience. It allows people to play with the virtual artifacts but does not prevent the story from being heard or allow it to be cut short. Most importantly, it provides an opportunity for the veterans that we support in the present to tell their stories for future generations to understand the past.

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4. The Desolation of Vixens

John Aycock & Hayden Kroepfl

Introduction

Archaeological finds sometimes occur through serendipity. In this case, the work began quite by accident with a casual search for vintage computers on eBay, where an auction listing revealed an unfamiliar computer for sale, the Osborne Vixen. This in itself was not especially noteworthy; the microcomputer market of the 1970s and 1980s boasted an enormous number of machines produced by companies that have long since been extinct, with names that would be unknown to all but the most ardent retrocomputing aficionado. What was much more intriguing were the photos included in the listing.

Photos showing a computer operating are fairly common in retrocomputer auction listings, in our experience, acting as a proof of functionality for the item on offer. In this particular case, the photos showed primarily business software running on the Osborne Vixen, but one photo of the set captured a screenshot of a game: *Desolation*. Some cursory Internet searches turned up nothing about the game beyond Wikipedia's entry on the Vixen, which was helpful in the way only Wikipedia can be: "[the Vixen] was also bundled with […] Desolation, a game" (Wikipedia Contributors 2019).

The dearth of information presented an interesting challenge. What could we learn about this game, and how could we study *Desolation* as a digital artifact?

We begin with the platform the game ran on, the Osborne Vixen (see Figure 4.1), and we would be remiss not to first comment on the machine's name. The word 'vixen' has several definitions (Merriam-Webster n.d.), most of which are either denigrating to women or at the very least cast them in a certain light. However, we found no overt evidence of sex being used to sell the machine. Some Vixen promotional material does feature a picture of a business*man* (OCC n.d.), but other advertisements contained no people at all (OCC 1985), and in general Osborne seemed as likely to feature women in business attire as men, or just a disembodied hand (*e.g.* OCC 1982a; OCC 1982b). While the Vixen name

Figure 4.1: The Osborne Vixen (photo courtesy of: Autumn Tyler, Media Archaeology Lab).
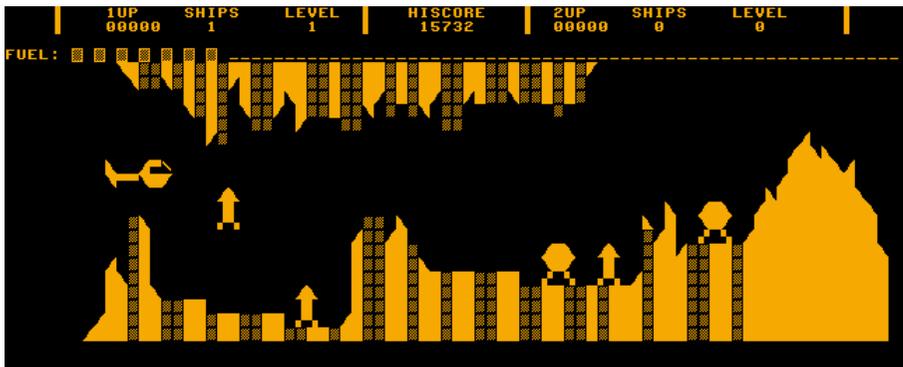

Figure 4.2: Screenshot: Desolation.

may have been ill-advised in retrospect, in context it does not seem to be part of a larger pattern.[1]

In technical terms, the Vixen had a Z80 CPU, 64 KiB of memory (RAM), two floppy disk drives, and a 7-inch amber monochrome display. It ran the CP/M operating system which, as a rough approximation, may be thought of as comparable to the now better-known MS-DOS. Its big feature was its physical portability, though. Or, as the Vixen's marketing material put it: "All in one neat little package that is smaller than an IBM Selectric typewriter – and about half the weight!" (OCC n.d.). An interesting choice of metric, given that the Selectric would seem neither small nor light; the Vixen weighed 10 kg or 22 pounds (Arrow 1985; Watt 1984). The Vixen was one entry in a line of portable computers from Osborne that started with the Osborne 1 in 1981 (Hogan 1981), although they

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1   While outside the scope of this work, the use of animal metaphors for women is examined elsewhere (López Rodríguez 2009; Tipler & Ruscher 2019), and it is interesting to consider this alongside the argument that women in computing were actually in a *better* situation in the 1980s than they once were (Vogel 2017).

were not the first portable computers by any means, with Canadian company MCM demonstrating one in 1973 (Stachniak 2003). These computers would now typically be referred to as 'luggable' rather than portable, a term that had already made its appearance in the 1980s (Oxford English Dictionary 1997).

With a clearly business-focused target market and a steep price tag of 1,298 USD (Watt 1984), it is understandable why the Vixen was not a platform of choice for game developers. *Desolation* was an exception. The side-scrolling shooter game had a distinctive look (see Figure 4.2), its craggy amber terrain standing out in stark contrast against the black background. The title screen shows a 1984 date and a byline crediting *Desolation* to a Barry Campbell of B.C. Software, which we wildly conjecture stood for 'Barry Campbell Software.'

We turn to contemporaneous reviews for judgments about the game. One proclaims *Desolation* as "a game which makes full use of the Vixen's graphic capabilities" (Arrow 1985: 36) but it is hard to tell if that is meant as high praise or biting sarcasm. Another review is more clear, calling *Desolation* a "neat graphics game" (Kisor 1985). These comments, especially juxtaposed with yet another review saying "Vixen's only weak point is a lack of good graphics software" (Summers 1985: 97), begin to raise a number of questions. Is *Desolation* indeed using some kind of graphics or perhaps a custom, game-specific character set – the latter was possible on some machines like the Commodore VIC-20 (Finkel *et al*. 1982). How is level data and other information stored by the game? Are there any clever programming tricks used?

Very little information was available to start answering these questions with. We were able to acquire binary images of the Vixen's bundled software disks, where *Desolation* could be found. Beyond that, the game was a complete unknown and the platform was little better. We were unable to locate any reference manuals, although curiously a set of hardware schematics exist for the Vixen (OCC 1983). It seems that someone might have had information, however, because the MAME/MESS emulator supports the Vixen, and consequently we were able to run *Desolation*. This additionally means that the emulator's code was itself a resource, and we did examine it to discover how some aspects of the machine were supposed to work.

Methodologically, we needed to manually reverse engineer *Desolation*'s data formats and parts of its binary code. We constructed some additional analysis tools to assist, some of which will be of use more generally in the analysis of other games. Having two people with binary reverse engineering expertise allowed us to take a two-pass approach, where one person did the initial code/data analysis, and the other could verify and extend the results. Ultimately, we wrote our own code that reconstructed all of the game's visual assets, screens, and levels directly from the game files, yielding an objective verification of our main findings.

Game Data

As supplied on an Osborne Vixen floppy disk, *Desolation* is comprised of one executable file and four data files. The executable file VIXNDESO.COM is in a standard format used by all CP/M programs and early MS-DOS programs, where the entire contents of the file are loaded into memory at a fixed location and program execution starts from the beginning of the file. In this form, program data
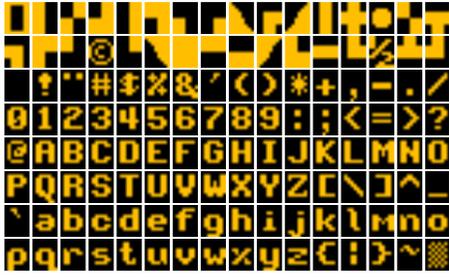
Figure 4.3: Vixen character set excerpt, as extracted from Vixen ROM data.

```
0000b9d0  37 38 39 3d 41 42 43 44  45 46 47 48 49 4a 4b 4c  |789=ABCDEFGHIJKL|
0000b9e0  4d 4e 4f 50 51 52 53 54  55 56 57 58 59 5a 5b 5c  |MNOPQRSTUVWXYZ[\|
0000b9f0  00 08 20 20 0a 17 5c 15  17 17 15 16 19 16 08 20  |..  ..\........ |
```


Figure 4.4: Standard binary analysis tool (above) vs. our tool (below).
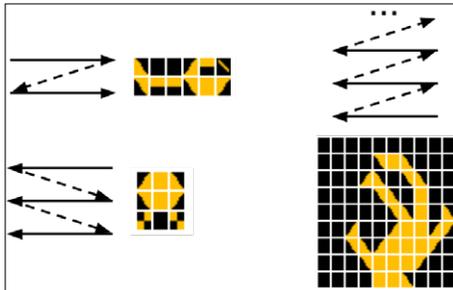
Figure 4.5: Data ordering examples.
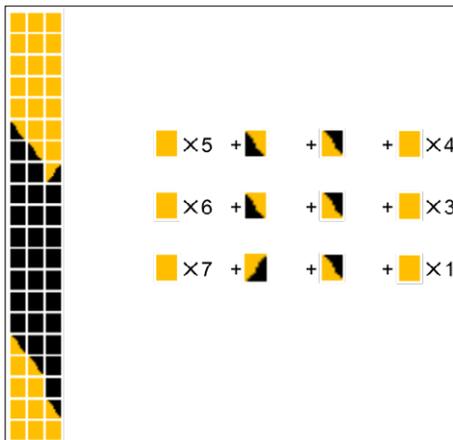
Figure 4.6: Level data column encoding.

and executable code can be mixed at the whim of the programmer, which provides for some difficulty in reverse engineering programs of this type.

Besides the executable file, we have four data files: DESO1.DES with data for the title screen, DESOLEV.DES containing the level layouts, DESOALL.DES holding the menu screens and win screen, and one for high scores.

The high scores for the game are stored in the file TOPSIX.DES which, as the name implies, contains the top five (!) scores recorded by the game. By examining the file contents we can clearly see the scores visible in the file, stored just as plain-text strings; the names associated with the scores are not initially visible. We do see, however, that between the scores are sequences of six unprintable characters. Comparing this with the game's high score display, we expect the name associated with the score to also be six characters. On further examination we determined that the characters in the names had been offset by sixty-four characters, leading to them appearing unprintable. This simple obfuscation of adding 64 to character values ended up being found in various other pieces of data associated with *Desolation*.

While letters and punctuation are given the same values as used by modern computers, the remaining locations in the character set of the Vixen are given their own meaning. The Osborne Vixen has no inherent graphical capabilities, providing only a text display. However, it allows for some limited pseudo-graphics through various block-drawing characters in its character set. As can be seen in Figure 4.3, the first thirty-two characters of the set are dedicated to these simple shapes.

This character set proved to be an issue for analysis, as the usual tools for examining binary data only recognize the standard ASCII character set, and represent these nonstandard graphical characters as simply a period. By extracting the glyphs from the character-set ROM for the Vixen we were able to develop our own tool which can examine the files and display them using the original character set. Figure 4.4 compares the output from different tools; in the last line of our tool's output the player ship data is now clearly visible.

Consistency does not seem to have been a primary focus during the game's design, as can be demonstrated in the multitude of different ways in which graphical data has been stored. We find the player ship data stored as horizontal strips left-to-right, top-to-bottom in the file. For the enemies and level obstacles we find these horizontal strips reversed and stored right-to-left, top-to-bottom. For the claw enemy the vertical ordering is swapped going right-to-left, bottom-to-top. Figure 4.5 shows some examples.

Finally, for large level objects like the fueling station, they are stored as vertical strips going bottom-to-top, left-to-right. For these large level objects there is good reason for this method of loading; since the level is scrolled onto the screen right to left, these objects too will be scrolled in one column at a time. By storing vertical strips this process is greatly simplified. The title screen and the various menu screens share the vertical strip ordering of large level objects, but they are stored in the obfuscated, offset-by-64 way.

If these different orderings were not enough, we also found a few graphics which made use of the Vixen's operating system, CP/M, to display the graphics as if they were text strings. The "Player 1 Make Ready" text was drawn using the block drawing characters as a crude font and was output to the screen using

this method. For our reconstructions we had to partially simulate the Vixen's text console handling to display these.

Perhaps the most interesting discovery was how the level data for the six levels was stored in a compact way. Given the limited storage space and slow speed of the CPU and disk, it would not have been practical to store the levels with every character on the screen represented. Instead, levels are stored with only six bytes per column: a top pillar character; the length of the top pillar; a "cap" character for the top pillar; a cap character for the bottom pillar; a bottom pillar character; and a bottom pillar length. This encoding can be seen in Figure 4.6 for three columns' worth of data. The combination of pillar character and length can be viewed as a limited form of compression via run-length encoding. Data for objects like missiles in the levels were interspersed between the six-byte chunks of column data.

Echoes of Development

Executable computer programs provide little in the way of documentation; when their source code is translated from human-readable form into computer-friendly machine code, most of the extraneous information is removed, such as variable names, assembler syntax, and comments. This leaves only raw machine code for us to analyze for information about the development environment and process. While we therefore lack the comments and design notes that would allow us greater insight into the design and development of the game, we are still able to uncover clues in the digital artifact.

One such insight we can observe simply through playing the game and analyzing the graphics. In Figure 4.7 we see the various forms that the enemy jets take within the game. Three different variants of the same enemy can be seen: the first as it appears during actual gameplay; the second as it appears on the element select screen; the third as it appears on the briefing screen showing all the enemy types in the game. While we cannot conclusively prove the intention here, we take this to indicate that development was done without revisiting earlier work. Each of the jets was likely hand "drawn" and done at different points in the development of the game without referencing the previous material, or perhaps there was difficulty on account of the development environment in modifying existing content as the design was refined.

It is common in programs to temporarily transfer control from one place in the code to another; such a "call" transferring control is eventually paired with a "return" that resumes program execution at the location immediately following the call. A notable coding practice seen in *Desolation* when analyzing the disassembled program was the placement of two calls, before and after almost every call the program made to the operating system. We would refer to these as "hooks" in modern programming parlance. These calls in the released game simply return to where they were called from, with no other effects. However, their placement and

Figure 4.7: Different jet manifestations.

the one-byte space left for the hooks' code[2] suggests that these may have been used to call a debugging tool during development, allowing the author to confirm that the correct data was being sent to the operating system call and that the expected data was being returned.

As mentioned, the Osborne Vixen contained a Z80 processor, which provided near 100% binary code compatibility with Intel's earlier 8080 processor (Zilog 1977). However, the Z80 introduced a number of additional instructions to improve on some of the deficiencies of the 8080. Through our disassembly and analysis of *Desolation* we found *none* of these additional Z80 instructions present. In fact, we found instances of instruction sequences performing operations that in the Z80 could be replaced by a single instruction. This highly suggests that the game was written in 8080 assembly language. We have two theories about this. It could mean that *Desolation* was developed on a different CP/M-based system which only had an 8080 processor. Or it could mean that *Desolation* was developed using common CP/M assemblers – code translation tools – that only supported 8080 opcodes, such as ASM which is supplied with CP/M (Digital Research 1976a); this would not necessarily preclude development occurring on the Vixen.

In addition to what we found with the opcodes used, we also found evidence that the game may have been designed to be ported to other machines. Could the filename *VIXN*DESO.COM, the only filename on the Vixen disks so prefixed, mean that there existed other *Desolation* versions for different platforms? In the code we found numerous instances of variables being used to store constant values, rather than them being directly encoded into the assembly as would be typical. These constants included pointers identifying various key on-screen locations; they could be used to facilitate transferring the assembled game to different systems by simply modifying these centralized variable values. This could also imply that the game was completed before the Vixen was finalized, and was supplied to Osborne in binary form only, with instructions on how to patch the binary to adjust to different screen locations if necessary.

As a final development consideration, there are a lot of text-based graphics in *Desolation*, from menu screens to the level data. It is not *im*possible that these were designed on graph paper and their data painstakingly, laboriously entered into the computer into the necessary format. However, it seems like a repetitive task ripe for automation, using extant software tools or bespoke ones; toolsmithing by retrogame programmers is well known (Aycock 2016). For example, it would be easy to write a BASIC program that would prompt the programmer for the six parameters of each column of level data, and output an appropriately encoded level data file. But, barring incredible good luck, we would not expect any traces of such a tool to remain in the digital artifact. A Vixen review does intriguingly assert that *Desolation* is an example of what can be created with the bundled OSBOARD graphics program (Arrow 1985),[3] which would by extension imply that game

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2   This would be sufficient for an 8080/Z80 RST instruction, which could be used to transfer control to a debugger (Digital Research 1976b).

3   The review claims *Desolation* to be "part of the Rembrandt Business Graphics Toolkit" (Arrow 1985: 37), but we suspect that they meant OSBOARD specifically, given advertising for Rembrandt (DG/Systems 1985).

development was done on Osborne machines. Use of OSBOARD for *Desolation* cannot be ruled out, although experimentally we were unable to load its data files into the program. While this avenue of inquiry proved inconclusive, it suggests that we need not confine our research to the five files of the game.

Beyond the Digital Artifact

There is additional evidence available to help us piece together *Desolation*'s story. A disk featuring a lengthy Vixen demo with animated text-based graphics is available. It was clearly intended for computer dealers, with another program on the disk allowing the demo to be customized with the dealer name. The demo lauds *Desolation* as a "Super Graphics action game," but more importantly contains a brief segment showing what is probably an early development version of the game. The player's ship is shown flying over a landscape bristling with missiles, and neither the player nor the missiles are firing; the latter is something never seen in the released game, even in attract/demo mode.

We also know something about the game's existence on other, non-Vixen platforms. The July 1984 issue of *The Portable Companion* magazine has an advertisement from B.C. Software (B.C. Software 1984). With no mention of the Vixen, the ad touts *Desolation* for the Osborne 1 and Osborne Executive machines, and describes its "pure assembly language excitement," confirming in passing our notion that the game was hand-written in assembly code as opposed to some higher level language. The address for orders is simply a post-office box in Manteca, California.

By the end of 1985, B.C. Software had relocated about 35 miles to the west, to a residential address in Livermore, California. A Kaypro magazine advertisement for B.C. Software (B.C. Software 1985) suggests a more sophisticated company, one accepting credit cards, having a 24-hour toll-free phone number, and shipping overseas. *Desolation* had grown up too. The ad shows that the game was made available for the Kaypro computer as well, as well as the fact that there were multiple versions, as the ad promotes "the Newest version" of 1.2. Furthermore, there were three additional sets of levels, 18 in total, that were sold separately. We have unfortunately been unable to find any other versions of *Desolation*, nor the extra levels – 'Claw Alley,' 'Rocket Haven,' and 'Death Row' may be lost to time.

This 1985 ad also illustrates how B.C. Software was expanding its product line. *Desolation* was joined by 'Trifle Persuit,' a computer-based trivia game recommended for adults only that was undoubtedly a *Trivial Pursuit* knockoff. The last four digits of the toll-free number were spelled out as 'PdbM' and hinted at a non-game product, the PdbM database. A later, not entirely flattering PdbM product review (Cohen 1986) confirms that this software was by *Desolation*'s author.

The big question remaining: who is Barry Campbell? We found a probable candidate, but were unable to contact him to confirm or deny our suspicion. There is likely a backstory to *Desolation* that will never be known, along with open questions about its development and later incarnations.

Context and Conclusion

After this deep dive into *Desolation*, a single digital artifact amongst a sea of other ones, it is helpful to take a step back and contextualize our work. It will come as no surprise to readers of this volume that our work falls into the area of archaeogaming, which Reinhard (2018: 2) defined as "the archaeology both in and of digital games." More broadly still, it fits comfortably within the purview of contemporary archaeology, as video games are indisputably artifacts with cultural relevance.

If the topic is within archaeological scope, what of the methodology? Moshenska (2016) argued that there is a deep connection between archaeology and reverse engineering generally, but the practical fact remains that binary reverse engineering such as we do here is a specialized skill set within computer science. Reverse engineering code – or even understanding computer code – can be an archaeological hurdle, at a time when the number of digital artifacts is exploding. Perry and Morgan (2015: 95) observe with relation to media that research inclusive of code "is virtually non-existent in archaeology," and they themselves place code analysis firmly into the Land of Future Work. Huggett, in writing about tools for digital archaeology, notes that "examining the source code […] implies a degree of digital literacy that is rare among archaeologists" and also that "close reading of the program code is unrealistic for the majority" (2017). But what may be a problem for archaeologists is an opportunity for interdisciplinary work. In discussing digital data and the challenges to understand it, Moshenska (2014) suggests the need to make use of expertise from a number of non-archaeology fields, including computer science; we argue that this sentiment should extend to code as well. Indeed, archaeogaming is in the vanguard, with a growing body of work that examines aspects of game code across the disciplinary boundary of archaeology and computer science (Aycock & Biittner 2019; Aycock & Copplestone 2019; Aycock & Reinhard 2017).

In the case of *Desolation*, we add to this work. Taking the game as a digital artifact, we have shown that reverse engineering of code and data is possible even when minimal information is available about the game or the platform it runs on. It is noteworthy, in examining our findings alongside the above-mentioned work and more computer science-focused analyses of retrogame implementation (Aycock 2016), that these digital artifacts reveal many diverse implementation choices. We stress that *Desolation* was not selected for this study based on any foreknowledge of how 'interesting' its code and data would be. The fact that these digital game artifacts continue to yield such results speaks to the amount of human ingenuity involved in their creation, as well as the richness of this line of archaeological inquiry.

We also see residual evidence in the digital artifact pointing to programming practices employed by *Desolation*'s developer. Importantly, we were able to find this evidence without recourse to the programmer. An inability to interview the creator(s) of an artifact is of course nothing new for archaeology of the distant past, but there is often a misconception that finding out information about a contemporary artifact is simply a matter of asking. This is not true. Some people are indeed generous in sharing their recollections, but others can be unwilling, unavailable, or unfindable; the latter was the case here. Were it not, there are inherent limitations with human memory of events long past, especially of technical details from decades ago.

Finally, our work highlights the number of questions that can arise about a digital artifact after only 35 years, a time period comfortably within the span of a human lifetime, but an eternity in computer time.

Acknowledgements

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5. The Final Word? How Fans of *The Elder Scrolls* Record, Archive, and Interpret the Battle of Red Mountain

Dennis Jansen

Introduction: Archival Ambiguities in a Fictional History

One of the most persistent and widely discussed mysteries of the *Elder Scrolls* universe is the sudden disappearance from the world of an entire Elven clan known as the Dwemer, seemingly without any clear reason. The disappearance, first told of in *The Elder Scrolls III: Morrowind* (Bethesda Game Studios 2002), occurred during the Battle of Red Mountain, an event itself shrouded in ambiguity that took place thousands of years before the actual events in the game. Another clan, the Chimer, had gone to war with the Dwemer over a shocking discovery: the Dwemer had found an artifact of an ancient deity, the Heart of Lorkhan, and their high priest Kagrenac was using it to build a god of their own. The frail alliance between the clans, which had been carefully crafted by the Chimer general Nerevar and the Dwemer king Dumac, did not last. One in-game account of what happened next can be found in the apocryphal book *Nerevar at Red Mountain*:

> And so the Chimer and Dwemer went to war. The Dwemer were well-defended by their fortress at Red Mountain, but […] Nerevar and Dagoth-Ur could make their way into the Heart Chamber by secret means. There, Nerevar met Dumac the Dwarf King and they both fell from grievous wounds. Dagoth-Ur slew Kagrenac and took the tools the Dwemer used to tap the power of the Heart. He went to his dying lord Nerevar and asked him what to do with these tools. And Nerevar summoned Azura again, and she showed them how to use the tools to separate the power of the Heart from the Dwemer people. And on the fields, the Tribunal and their armies watched as the Dwemer turned into dust all around them as their stolen immortality was taken away.
> *Tribunal Temple,* quoted in *B 2010a*

This account is probably false. A sacred text holds that the Tribunal, a trio of demigods who serve as protectors of the land, were responsible for heroically bringing about the Dwemer's demise (Anonymous, *quoted in* B 2010c). Another telling, written by dissident priests who disagree with the dominant religious authority in the region, claims that neither the Tribunal nor Nerevar had anything to do with the Dwemer's disappearance and that it was entirely of their own doing (Dissident Priests, *quoted in* B 2010b). The stories differ widely on this and other points, and it is difficult to know who is speaking truthfully as the player is only provided with a limited and biased archive of mostly second-hand accounts. At the same time, being familiar with these accounts is quite crucial to understanding the events in the main storyline of *Morrowind*, which deals with the ramifications of that fateful battle centuries later. The player is even encouraged by characters in the game to figure out for themselves who they believe and who they think is lying, and why. *Morrowind* teaches its players that the archive cannot be trusted, and that political interests and power relations lie at the heart of what is considered historical fact and what is fiction.

It is no wonder that the questions raised by these accounts – what happened to the Dwemer, and who is telling the truth? – are probably some of the most persistent topics for discussion among *Elder Scrolls* fans, with both old and new issues popping up on lore forums even now, more than a decade-and-a-half after the game's original release at the time of writing. Even beyond forum discussions, some fans have written long-form scholarly essays on the matter, one of which features prominently in my argument below, in which they appeal to a wide range of in-game and out-of-game sources to argue their own theories on the events. These endeavors, effectively a kind of scholarly fan fiction writing, do not only draw on the archive of texts and character dialogues found in the video game but also on other fan creations and later works published online by ex-developers such as Ted Peterson and Michael Kirkbride, all of which can usually be found on fan websites like *The Imperial Library* and *The Unofficial Elder Scrolls Pages*. Moreover, by way of this archival engagement, fans and their texts become part of the archive itself, from which other fans may conduct their own investigations in turn. This cyclical process of recording, archiving, and interpreting a narrative universe is what I have elsewhere called 'archontic fandom' (see Jansen 2018), which can be understood as the fan-scholarly effort of gathering, archiving, and studying information from the *Elder Scrolls* or any other narrative universe in order to gain a better understanding of said universe.

There is, however, more to this seemingly innocent fan-driven practice than this definition initially reveals. My intention is to apply the lessons that *Morrowind* teaches us about archives being fraught with power struggles and political implications to this practice of archontic fandom and the resulting production and maintenance of fan-made archives. How do the tensions inherent to archives and archiving affect video game fan communities like the *Elder Scrolls* fandom? More specifically, how do the ambiguous history of the Battle of Red Mountain and the archontic fandom surrounding it function together as a case study of the establishment and reinforcement of power dynamics between the fans, the archive, and the narrative universe of *The Elder Scrolls* as a whole? This chapter tackles

these questions mainly through a critique of archives given by the French post-structuralist philosopher Jacques Derrida (1995), supplemented with insights from fan studies and new media studies on digital archives and online communities. After establishing this theoretical framework, it introduces *The Imperial Library* as a 'fan-made paratextual archive,' and subsequently demonstrates how that archive has helped the theory presented in one fan-scholarly text, *Final Report to Trebonius* (Luagar 2010), to acquire an authoritative and prestigious status within that archive and thereby in discussions concerning the Battle of Red Mountain. Lastly, it argues that this case study shows that fan archives do not consist of flat hierarchies and that we must take care not to overestimate exactly how counter-cultural such fan-scholarly communities can truly be.

The Trouble with Archives

In the first pages of *Archive Fever* (1995: 9), Derrida offers a succinct etymological investigation into the word 'archive,' tracing it from the Greek *arkhē* ("beginning," "origin") and *arkheion* ("dwelling of the magistrates"). He characterizes the archive as a place where documents are brought, filed, and interpreted by the archive's guardians, whom the ancient Greeks called *archons*. The archive is not merely this physical procedure, however. At the core of the archive is the "archontic principle," which, according to Derrida,

> Also gathers the functions of unification, of identification, of classification, [and] must be paired with what we will call the power of *consignation*. By consignation, we do not only mean, in the ordinary sense of the word, the act of assigning residence or of entrusting so as to put into reserve, […] but here the act of *con*signing through *gathering together signs*. […] *Consignation* aims to coordinate a single corpus, in a system or a synchrony in which all the elements articulate the unity of an ideal configuration. In an archive, there should not be any absolute dissociation, any heterogeneity or *secret* which could separate (*secernere*), or partition, in an absolute manner.
> *Derrida 1995: 10, original emphases*

We can already see some crucial tensions being hinted at here, most prominent being the fact that, in subjecting a corpus to *consignation* – that is, to encyclopedic configuration and legitimate categorization – the archive and its guardians will want to purge parts of that corpus which do not tell the story they believe it should tell. In so doing, the archive curates and determines which histories can be written from it, and which cannot: "there is no political power without control of the archive" (Derrida 1995: 11). From this perspective, as Ann Stoler notes, archives become "both transparencies on which power relations [are] inscribed and intricate technologies of rule in themselves" (2002: 87). She proceeds to argue for a shift from viewing archives as sources to analyzing them as subjects of study in themselves, which she calls reading "along the archival grain" (Ibid.: 99). This methodology allows us to understand not only how power works upon and within the archive, but also how the *structure* of the archive serves to reinforce and uphold that power.

While my focus here is mostly on this structural aspect of the archive and on questions of the archive's materiality, which I discuss further below, it is worth reflecting somewhat on the double-sided way in which the archive has been theorized by thinkers such as Derrida and Michel Foucault (1972). According to the latter, for instance, the archive is not "the sum of all the texts a culture has kept upon its person as documents attesting to its own past," but is instead "the law of what can be said" and also "that which determines that all these things said do not accumulate endlessly in an amorphous mass" (Foucault 1972: 128-129). Foucault's view that the archive sets the range of possible discursive statements within a community is certainly useful and aligns well with the arguments forwarded by Derrida and Stoler, but it also takes the concept of the archive further into the metaphorical than they have done. Thought of this way, it is no longer a specific, demarcated place where archiving takes place and the archontic principle reigns supreme, but a system that is distributed across institutions, texts, and systems of thought. The danger with such a conceptualization is that we stretch the notion of the archive beyond its reach, or conflate archive with concepts like memory or, in the case of digital media, with storage (see also Ernst 2013). It is easy to lose sight of the dry *ordinariness* of the archive, as Carolyn Steedman puts it: "there is a kind of surprise […] at encountering something far less portentous, difficult, and meaningful than Derrida's use of the concept of 'archive' would seem to promise" (2001: 1162). Even as we are shifting to "archive-as-subject" (Stoler 2002: 93), we must remember that the "archive-as-source" framework remains at the center of many historians' experience, be they professional academics or fan-scholars. With these cautions in mind, I choose to see the more abstract aspects exclusively in the context of physical or material spaces that one can accurately designate as archives. That said, it is essential to grasp this dual, ambiguous nature of the archive – at once physical and metaphorical – a place that reproduces continuously and in the same moment destroys itself, an institution that writes history as much as history is written from it.

Paratextual Archives and *The Elder Scrolls* Fandom

Archontic fandom, named for the principle that Derrida identified, takes place in 'fan-made paratextual archives.'[1] These web-based archives, such as *The Imperial Library* and *The Unofficial Elder Scrolls Pages,* are the resulting output of that archontic mode of fan engagement, continuously updating and retroactive encyclopedic databases of knowledge about the narrative universe of *The Elder Scrolls*. They are the spaces in which the information gathered by fans from the video games and their paratexts is recorded, (often simultaneously) subjected to consignation, and made available for interpretation. The notion of fan-made paratextual archives aligns closely with Abigail De Kosnik's concept of "rogue archives" (2016: 2), and they share many characteristics: their corpuses are available

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1 The term 'archontic' was first brought into the field of fan studies, and by extension into new media studies, through Abigail De Kosnik's theorization of the archontic properties of fan fiction (De Kosnik 2016; Derecho 2006). I should also note that "archontic or archivist fandom" was first mentioned by Matt Hills (2015: 370), but a deeper theory that takes into account the Derridean namesake and implications is absent in his discussion.

freely, they stand outside of traditional archival institutions, they aim at long-term preservation of the texts they house, and they are maintained by volunteers (Ibid.: 76-77) – in my case, mostly by fans of *The Elder Scrolls* series. Rather crucially for my current purpose, my own addition to this understanding of archives is that the fan-made paratextual variants are spaces where, despite the often-assumed open access and anti-hierarchical mentality, the Derridean archontic principle does its work of establishing and reinforcing power dynamics between fans, the corpus, and the archive itself. This highlights the fact that in these spaces, as in any archival structure, there must always be *someone* (guardian) or *something* (archive) that decides what is worthy of being preserved and what is not, who gets to add texts or images to the corpus and who does not, which kinds of discussions are valid and which are not. It is also key to state here that the archives I discuss predominantly feature texts that are directly lifted from the video games or other media objects in the *Elder Scrolls* franchise, as well as fan-written pieces such as narrative fan fiction, fan-scholarly essays, and factual write-ups such as the articles one finds on wiki-websites.[2]

Following the work of Paul Booth on digital media fandom, I see fan-made paratextual archives as websites that position themselves as "narrative databases:"

> A reflection of a changed media environment, which reconceptualizes narrative from a 'chrono-logic' mode to an archival one. Instead of representing 'plot' through causality, fans represent it spatially, using the inherent hypertextuality of the web to create connections between narrative elements.
> *Booth 2016: 85*

What is key here is that Booth points to the fact that the fans use the material affordances of modern websites to create their archives. They combine the Derridean archive, which exists "simultaneously on literal and abstract planes as both a place of storage […] and a system that creates the need for, and meaning of, that space and all it contains" (Henton 2012: 71), with the capacity of digital media to create a hypertextual database, "a structured collection of data […] organized for fast search and retrieval by a computer" (Manovich 2001: 218). This *materiality* of the archive, which N. Katherine Hayles has defined to be "the interplay between [the archive's] physical characteristics and its signifying strategies" (2004: 72), is crucial to understanding what is mentioned above as the structural aspects of the archive. If it is the structure of the website that allows the administrators of *The Imperial Library* or *The Unofficial Elder Scrolls Pages* to set up and maintain their archives, it is that same structure which is used to create and maintain implicit or explicit hierarchies within

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2   De Kosnik explicitly states that she does not consider "encyclopedic projects such as Wikis to be archives, since they mostly offer factual information and commentary about cultural texts, and not the texts themselves" (2016: 76). I include wikis like *The Unofficial Elder Scrolls Pages* (https://en.uesp.net/wiki/Main_Page) into the scope of fan-made paratextual archives precisely because, as is often the case with wikis about fictional media (especially video game) franchises, they *do* offer the cultural texts themselves just as the more 'archive-like' *Library* does. More importantly, I would consider the factual write-ups and commentary about those cultural texts part of the narrative universe that is being archived, which qualifies fan-made wikis as archives regardless of the aforementioned.

those archives. Derrida's insight resonates throughout this argument, specifically his claim that "the technical structure of the *archiving* archive also determines the structure of the *archivable* content even in its very coming into existence and in its relationship to the future" (1995: 17, original emphases). The archive by itself already sets limits on what can be recorded within it, and if a particular contribution does not fit the format, the archive will claim it does not exist because it simply does not know how to deal with a corpus that it was not designed to host. As an example, the *Library*'s book pages on important characters within the narrative universe will not accept any 'ludic' information like health points or abilities, if those characters are featured in-game as non-player characters (NPCs), which is a clear consequence of the explicitly text-based focus of that archive (see below). As far as the *Library*'s infrastructure is concerned, health points and other such game rules are irrelevant, consigned into archival non-existence.

Before I turn to the case study of this chapter, some comments about the paratextuality of fan-made archives are required. What exactly makes them *paratextual*? The arbitrary distinction between a text and its paratextual elements – that is, elements that surround a text and provide gateways into the text, which includes author and title, but also interviews and commentaries – of course primarily serves to facilitate clear analysis. After all, paratexts "are separated from the text by at least a minimum distance, […] but at the same time they are characterized by a certain proximity to the text" (Stanitzek 2005: 31). On this matter, Gérard Genette states, "the paratext is itself a text: if it is still not *the* text it is already *some* text" (1997: 7). Much of the writing on paratexts in video games primarily discusses "peritexts" and "epitexts" (Ibid.: 5), which are respectively found inside and outside the physical boundaries of the texts they are linked with and can "guide the reader's attention [and] influence how a text is read" (Stanitzek 2005: 34-35). This paratextual power to influence a user's reading of texts in certain ways is not so different from what is happening in fan-made archives, although the sheer existence and operation of these archives, as well as the ambiguous nature of video games, complicates the distinction between paratexts 'within' and 'without' the text in ways that I cannot address at much length here (Carter 2015; Jansen 2018). For now, it suffices to say that a fan-made archive is paratextual in the sense that it simultaneously collects paratexts to the narrative universe that they focus on (see below), and in doing so becomes a paratext to that universe in itself – it exists decidedly outside of the text, but is inevitably *about* and inextricably *linked to* it, and is therefore capable of intervening in their visitors' experience of the text.

With all of the above in mind, then, it becomes important to ask questions about the archival structure and wonder *who* gets to decide what that structure looks like and how it functions. Previous efforts to analyze fan-made archives have mostly been inattentive to the power dynamics that arise within such knowledge communities (*e.g.* Booth 2016; Mittell 2009), or have been focused on the ways in which these communities resist power dynamics from the outside (*e.g.* De Kosnik 2016). I find myself in agreement with Matt Hills when he argues that "such descriptions of digital fandom fail to significantly engage with fandom as itself (re)performing expertise" (2015: 361). Hills asserts that to suggest that fan-made archives have eradicated the distinction between so-called amateurs

and professional would be "overly celebratory" (Ibid.: 372), which can be clearly understood through the platform that hosts the case study for this chapter: *The Imperial Library*.

The Imperial Library as a Fan-made Paratextual Archive

For the present purpose, I focus on how one particular archive for *The Elder Scrolls* deals with the Battle of Red Mountain. *The Imperial Library* (https://www.imperial-library.info/; see Figure 5.1) is a website that contains almost every single in-game and out-of-game book from the *Elder Scrolls* franchise, as well as (among other things) elaborate descriptions of the games' main storylines, archived forum posts by both fans and the series' developers, and encyclopedic entries on subjects such as the races, languages, and mythology of the *Elder Scrolls* universe. The 'History' section of the *Library* states that the website began in 1998 as a fan website for storing lore for the *Elder Scrolls* and *Dragonlance* universes, and that it did not become *The Imperial Library* as we know it nowadays until 2002, when it dropped all of its *Dragonlance* content shortly after the release of *Morrowind*. The website also features a 'Storyboard' section which hosts active forums for the discussion of lore and the games themselves, as well as forums solely intended for online role-playing and fan fiction posts. In addition, the *Library* refers to other *Elder Scrolls*-related resources, and many of these sites in turn refer back to the *Library* as the 'place to be' for anyone who wants to engage directly with the series' lore. This prestigious position is solidified even more by its strong ties with the producers of *The Elder Scrolls*, who strongly encourage and facilitate the, presumably unpaid, fan-driven labor performed by communities such as this one.[3] To illustrate, the author who was hired by Bethesda to write two novel adaptations regularly consulted the *Library* to ensure his own books aligned with the established lore and he mentions the website in his acknowledgements (Keyes 2011). Another example would be the fan fiction contest that was held in honor of the *Library*'s 20th anniversary, for which Bethesda and Zenimax Online provided jurors and various prizes for fan-created writings and art. *The Imperial Library*, interestingly named after one of the paradigmatic forms of archive, is thus a prime example of what any fan-made archive is generally expected to be: accessible and comprehensive, regularly updated, and deeply engaged with its subject matter and the broader community.

The *Library* runs on the Drupal content management system, which means that there is no direct interactivity, no opportunity for users to edit articles freely as they would on a wiki such as *The Unofficial Elder Scrolls Pages* – there can be no 'edit wars' where fans have hot debates in the edit notes of a given page. This is because the hierarchical differentiation between regular visitors and the ones who maintain the

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3   This trend seems to be part of a larger strategy by Bethesda Game Studios to closely involve fans in the production and development of its franchises, and a discussion of this topic is beyond the principal scope of this chapter. The narratives of authorship, creativity, and professionalism that pervade these complex relationships have been researched in the context of game modding for *The Elder Scrolls* by Rob Gallagher, Carolyn Jong & Kalervo A. Sinervo (2017). For a critique of such business practices as the exploitation of "playbour" for the "increase in value of industry-controlled locked IP and […] the circulation of content," see the work of Paweł Frelik (2016).
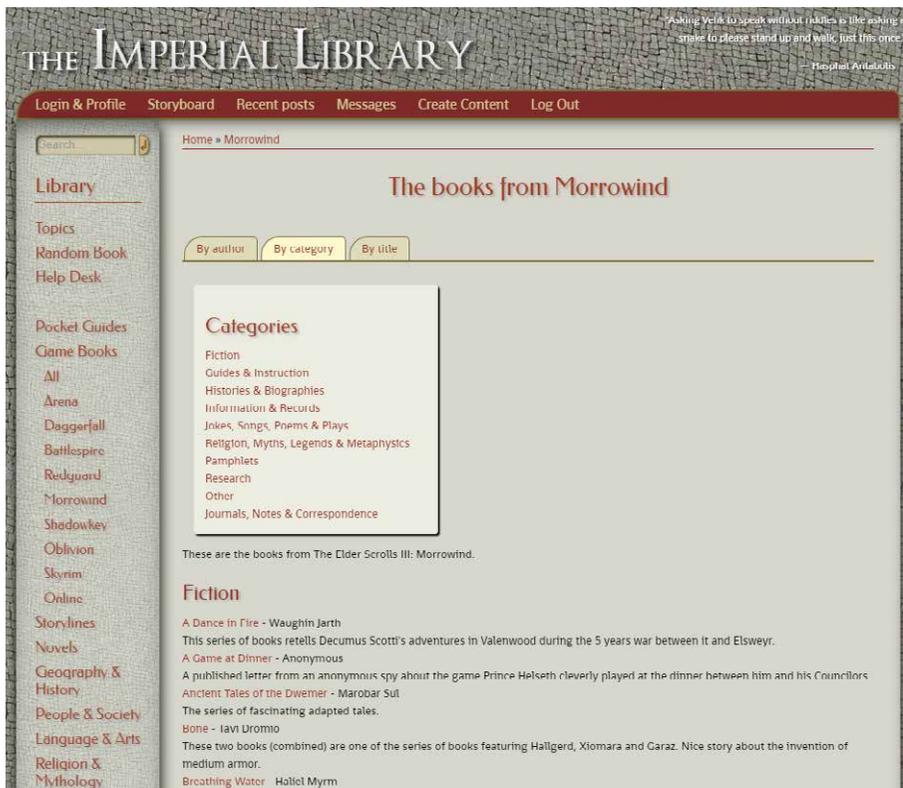
Figure 5.1: Screenshot: one of the 'bookshelves' in The Imperial Library, *featuring all of the texts found in books within* The Elder Scrolls III: Morrowind *(entry by Anonymous n.d.).*

website is far more pronounced and strict than elsewhere. The 'Librarians' enjoy a high level of fan authority here, since they are the administrators and moderators of the archive and the forums.[4] Together with their 'Assistant Librarians,' they represent the *Library* outside of the archive, answer questions within the forums, and, most significantly, they are the only ones who have editing rights across the entire website. There is very little information to be found on how to become an administrator of *The Imperial Library*, but it appears to be a matter of being active on the forums and proving one's knowledgeability regarding *The Elder Scrolls* lore; that is, it may well be a matter of possessing a significant amount of "gaming capital" (Consalvo 2007: 3-5) in the eyes of the already present Librarians, although the type of knowledge required is not necessarily of a ludic nature.

As a consequence, the *Library* is not an entirely open archive, which makes it more like a 'real-life' archive than some of its peers: just as a public library would not allow its visitors to unprompted add books to its collection, or just as a

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4   The extent to which this authority is accepted depends on the personal inclinations of each individual fan, of course: discussions around what is the canon of *The Elder Scrolls*, for instance, demonstrate that there are myriad positions to take about various types of texts and even about individual pieces of lore found either in-game or out-of-game (see Jansen 2018).

national archive would not accept any amateur historian to make an unchecked contribution, so too does the *Library* not facilitate unmoderated input from its uninitiated users. The only way in which non-Librarians can currently contribute to the corpus is by commenting on the forum about errors they have spotted or additions they would like to see. Furthermore, the only publicly available editing records come in the form of reports issued by Librarians on the main page and in the 'Recent Posts' tab, in addition to whatever they are inclined to disclose on the forums about making (minor) corrections to articles on the website. Since April 2017, updates are monthly and provide far more details about what the Librarians add to the *Library* than before, as well as indications about what is still missing. Thus, even when all the in-game literature from the most recent edition in the *Elder Scrolls* franchise has been recorded, the archive remains perpetually aware of its potential incompleteness. As Derrida said, "the archivist produces more archive, and that is why the archive is never closed. It opens out of the future" (1995: 45).

Finally, *The Imperial Library* is not only a (collection of) paratext(s) to the *Elder Scrolls* games like the term 'paratextual archive' suggests, it also functions as paratext *to its own corpus*. Its spatial organization and use of tags, notes, and hyperlinks quite significantly influence whether and how any given text within that archive is going to be read and if it can even be found in the first place (see also Lindgren Leavenworth 2015). This paratextuality is in fact how the power of the archive expresses itself most overtly: the archive and its guardians decide which texts are easily tracked down and which are obscured, which texts are provided with extra comments and which are presented bare, which texts are to be taken seriously as part of the *Elder Scrolls* universe and which are not. I argue that, in this way, it not only creates hierarchies within its own corpus, but also facilitates such hierarchization in the interpretations of that corpus and in the discussions surrounding those interpretations, which becomes clear in the next section.

The Battle in the *Library*

Hypotheses on what exactly happened during the Battle of Red Mountain are numerous – every write-up about the Battle features at least a few different possible explanations, questions and discussions still abound on *The Imperial Library*'s lore forums (*e.g.* ColovianHighlander 2015; Nerevkiin 2015), and even many in-game NPCs who were present at that time have no solid theories on the Dwemer's disappearance. Everyone involved seems to prioritize different sources, with the main commonality between them that no one entirely believes the 'official' story. In the midst of this frenzy, about half a decade after *Morrowind*'s release, an article appeared on the 'Forum Scholars Guild' (FSG), a subsection of the *Library*'s main site where user-submitted writings from the eponymous forum section that have been approved by the Librarians are published.[5] This article,

5   Currently, the article's page indicates that it was posted in 2010, but this date is incorrect. In that year, *The Imperial Library* was moved to the Drupal system, causing the site itself to lose track of the original publication dates. A quick look in the *Wayback Machine* (https://archive.org/web/) shows that the *Final Report* was likely posted to the FSG for the first time around 2006-2007. This also goes for the in-game books cited in the introduction, which are all taken from *Morrowind* and must therefore be much older than 2010.

Figure 5.2: Screenshot: the beginning of the Final Report to Trebonius *as it is presented in* The Imperial Library*; note especially the three highlighted tags, each of which makes the text easier to find in the* Library's *catalogue (entry by Luagar 2010).*

Final Report to Trebonius, is an exceptionally extensive investigation into "the issue of the Disappearance of the Dwarves [another name for the Dwemer]" by a fan operating under the pseudonym Luagar (2010). This *Final Report* is written from the perspective of a fictional travelling scholar who is reporting his findings to his employer Trebonius Artorius, the Archmage of the Mages Guild (see Figure 5.2). The 5000-word essay significantly draws on sources found both in the game-world of *Morrowind* and in the archived corpus of *The Imperial Library*, and argues that the Dwemer's disappearance during the Battle at Red Mountain was not the doing of Nerevar or the Tribunal, but came about solely at the hands of the Dwemer themselves. Their sudden disappearance was part of the Dwemer project to build their own mechanical god called Anumidum, which they would use to achieve immortality for their people without 'divine intervention.' According to Luagar, the plan was that upon activation of Anumidum the souls of the Dwemer would become one with its enchanted skin, which would give it the necessary power to become a kind of secular god and would grant the Dwemer eternal life. Whether the plan fully succeeded remains unclear – it is still uncertain, for example, who activated Anumidum by striking the Heart of Lorkhan – but that the disappearance was planned by the Dwemer themselves is, for Luagar, beyond question. That it should happen during the Battle at Red Mountain might then be considered a mere product of circumstance. The *Final Report* is nowadays considered to be the best account of the event, and it is often referred to as such in forum discussions on the topic (Proweler 2013a; The Librarian 2016). As one fan put it: "it's pretty much the final word: there might be some details left to sort out, but I don't think anybody is still seriously contesting it" (Infragris 2014).

Several paratextual elements within the archive conspire to give this article its apparently considerable prestige in the *Library*'s fan community. First of all, the thesis of the *Final Report*, by some referred to as the "divine skin theory" (Gnomey 2013), is implicitly granted authority through its approval by the Librarians and subsequent publication on the *Library*'s main site, as the widely accepted authority

and fan-expertise of the *Library* and its guardians seems to rub off on the text itself. This approval of what is effectively archival *consignation*, according to the FSG introductory page, is based on a set of "simple guidelines," which mention appropriate language use and proper source citation, and urge the writer to:

> [A]void creating new knowledge. Explain and synthesize only what the sources say or try to say. Do not interpret little evidence in a way to support a large personal theory.

In other words, an article should be academic in tone and of an encyclopedic nature; it should add to the community's narrative knowledge. Those who aspire to acceptance into the Forum Scholars Guild – and into the corpus of the *Library* – should not only engage with their source material beyond the superficial, but also engage with it in the correct way as determined by the *Library* to be considered 'substantial' and as more than just personal theory. After acceptance, the text's author is granted editing rights so that they can revise and add to their original work directly. They are elevated to 'Scribe' status within the *Library*'s discourse, thus further formalizing the authority of their contribution. In the case of the *Final Report*, the article has even been tagged and catalogued in the archive alongside 'official' literature, a paratextual privilege not necessarily given to all FSG texts which lends it even more credibility. In this way, the divine skin theory comes across as more valid than its most prominent alternative, described in another FSG article called *Dragon Break at Red Mountain* (Astion 2010), which is a text that is *not* accompanied by website tags and is cited far less frequently in forums – in fact, I could not find any direct reference to it on the *Library*'s forums during my research in early 2018. The divine skin theory enjoys high prestige in the community, to the point that at least one fan saw fit to refer to a competing theory as being "heterodoxy" (dinmenel 2013). Although the front page of the FSG states that "everything presented here is not an official document and shouldn't be viewed as such," its texts (and their authors) hold some sway over the community's general opinion anyway.

This is not to say that there is no resistance to the hegemony of the divine skin theory, nor that archontic authority is entirely beyond question. In fact, across multiple threads, the status of the *Final Report* as the 'final word' is indeed seriously contested. In one of them, several fans act in defense of the 'Dragon Break theory,' and clash with the *Library*'s authority in the process, especially when one Librarian states: "You're horribly misunderstanding what a Dragonbreak [*sic*] is and the general idea [explained] in the Final Report to Trebonius has been stamped with approval" (Proweler 2013b).[6] Not only is his use of the word 'horribly' taken to be dismissive, but also the idea that any one fan theory should be conclusive or absolutely authoritative in the debate is contested:

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6   The Librarians themselves would likely not frame their position as one of 'authority.' The same Librarian cited here expresses a dislike towards the term elsewhere, in a conversation about what should be considered canon lore (Proweler 2014b).

> Anything and everything read in game is not guaranteed to be true unless it correlates directly with something that the player has witnessed. […] I've tried looking for the official stamp of approval on this, but all I can find are forum posts, nothing reliable, and everything I do find in these forum posts are references back to the *Imperial Library*[!]
> *dbbs 2013*

Still, skepticism towards the *Final Report* remains rather mild, with one fan noting that it is "probably not the best – [read:] most detailed and up-to-date – account, and [that] it may not be a good approach to always cite it" (Gnomey 2013) and another claiming that it "isn't as full an explanation as most represent it to be" (dinmenel 2013). Even on such a thread as *Possible Inconsistency in Final Report to Trebonius*, where a very legitimate criticism is levelled against Luagar's reading of a particular source, the author of the initial post remains surprisingly reverent towards the text and even calls it "a precious guide" (Xalos Promythos 2014a). Then, a Librarian, who is "a bit tired" of the discussion that has now been going on for more than a decade, responds to their criticisms by explaining that the theory outlined in the *Final Report* is "just about the only one that makes sense given the context" and has been "more or less confirmed by [Michael Kirkbride]" (Proweler 2014a). This "performance of fan expertise," as Hills would call it (2015: 361), settles the debate: the fan recognizes their criticism as "a little precipitated" and defers to the Librarian's "superior knowledge" (Xalos Promythos 2014b). Later, *Final Report* author Luagar would acknowledge the criticisms as valid and change the original text accordingly with a minor revision (Luagar 2014). Even while it is openly confronted with an error in its corpus and openly admits the error, the *Library* is allowed to retain its prestige as the place wherein the 'best' lore theory is housed, and its guardians can maintain authority based on their mastery of the universe.

Conclusion: Archival Hierarchy in Video Game Fan Communities

From the way the *Final Report* and the discussion around it have been treated within *The Imperial Library*, it is not out of step to claim that this fan-made paratextual archive is indeed "at once *institutive* and *conservative*" (Derrida 1995: 12, original emphases). In purposefully deleting or revising elements of its corpus and thereby effectively revising history – even if that is a *fictional* history – it renews and reproduces itself. In this process, the archontic principle and the hierarchy it produces become easy to discern: the authority of the Librarians, the 'simple guidelines,' even the very structure of the *Library* and the content management system it runs on function as gatekeepers, hurdles to overcome before any individual fan or their theory can acquire any sort of fan-scholarly authority. But once those hurdles are passed and their text has been consigned into the archive, that authority appears near unquestionable. I would argue that this rigidity is an unsurprising consequence of the closed environment that the *Library* provides: the power relations between fans are established immediately and immovably by the archive itself, and then reinforced in interactions between users and Librarians. The realization that fans are not free from hierarchy formation is not necessarily a novel one, but an exceptionally important one to stress since mainstream – and

occasionally, academic – thinking about fandom does tend to operate with the utopian view that Hills so strongly objects to (2015). The perspective taken by scholars such as De Kosnik (2016), who places fans and fan-made archives in a position of going 'rogue' and resisting mainstream media consumption practices, is of course still incredibly valuable for the field of media studies in general. That said, I do wish to contribute to the further spread of the admission that *not all fans are valued equally in fan-spaces*. Archives, by their very nature, require hierarchy, and neglecting to address how these hierarchies are formed when the archives are fan-made contributes to the unjust idealization of fan communities in general.

Acknowledgements

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Part Two

Representations and Intersectionality in Video Games

6. Personal and Social Recent History in *Fragments of Him*: Defining and Exploring 'Immersion' in Video Games

Mata Haggis-Burridge

Introduction

In 2013, I participated in a game jam with Sassybot, a small team of developers based in Breda, the Netherlands. In a weekend, we created a 15-minute narrative game called *Fragments of Him* which brought international praise from the games industry and players for the way in which it handled love, grief, and the everyday representation of a gay relationship. A few months later, Sassybot and I embarked on a 4-year journey to create a movie-length experience based on this prototype and to bring that world to life for players on computers and consoles. It was made with Unity and released on PC and Xbox One in 2016, then on PS4 in 2017. I knew at the time of the first game jam that I was putting parts of my real life into the game, but it is only now, looking back, that I can truly understand how much personal history and social perspective went into the final game. This chapter describes some of the ways in which we pulled players into this recognizable slice of recent history and how it reflects both society and my personal window on the world.

Video games continue to have an uncomfortable relationship with broader social discourse. They are often dismissed as trivial and lacking in substantial social value, but this view holds a mirror up to the priorities of Western society. From the time of the industrial revolution onwards, society has increasing defined itself by productivity, leading to our present situation where the 'gig economy' is a manifestation of a drive to monetize all of our time in a continual push towards 100% efficiency of production. While there have always been subcultural challenges against this creep towards work defining our value, overall the dominant post-industrial social construction is one in which time that is not spent in service

of the economy is seen as time wasted. In this social context, (video) games and playfulness have been relegated to a lower order of human behaviors, suitable only for children and the childish, or for adults to relax but strictly on the understanding that the relaxation will make them more productive when they resume working (either playing personally or as part of team-building exercises). We can justify their worthiness for academic and social status through their financial heft but, like other forms of art, video games are nonetheless an uncomfortable fit with the productivity focus of modern society, and as such they sometimes offer a perspective that looks inwards from the border of society, giving us moments to reflect on our priorities. This function of games is present both for creators and for players and suggests that they may have benefits to offer from a world view that is not wholly about profit and production.

Part of the struggle to place video games alongside pre-existing forms of art/media is the complexity of categorizing them. We classify experiences to help us understand them and the same is true of games, but their interactivity and non-linearity, along with their still-rapid evolution, make it hard to draw clear boundaries. When we describe a game, we will often prioritize the dominant mode of interaction over its other qualities: *Destiny* (Bungie 2014) is a first-person shooter in a science-fiction multiplayer universe; *Grand Theft Auto V* (Rockstar North 2013) is a third-person action game with comically exaggerated violence that is set in a satirical version of modern-day Los Angeles; *Candy Crush Saga* (King 2012) is a match-3 puzzler set in a confectionary themed world, and so on. The genre of interaction is viewed as more important to a player's understanding of the game than the fictional settings. When *Dear Esther* (The Chinese Room 2012) and *Gone Home* (The Fullbright Company 2013) were released, a new (and somewhat pejorative) genre name was invented: 'walking simulator.' These games have such low complexity in their interactions that the drive to define them through their mechanics reached a point of absurdity and it no longer functioned as a useful classification. If we pre-judge a game's value based on the interactions (or lack thereof) then these boundaries of classification risk us missing experiences where profound emotional content is of greater focus than the gameplay mechanics (*i.e.* the ways, forms, and variety of interactions available to the player to influence the game's state). *Dear Esther* (released originally as a mod in 2008) was an influence on me when I was conceptualizing *Fragments of Him*. *Gone Home* was released slightly after we had begun work on *Fragments of Him* and addressed some similar themes to our game, so much so that I deliberately avoided playing it during the writing process to avoid accidental plagiarism, but the discussion after its release cemented a tension we felt when working on *Fragments of Him*: what type of game are we making here? Is this a 'game,' or is there a better name we could use for it?

Fragments of Him is a game that tells the story of Will, a young man who dies in an accident, and how his friends and family come to terms with the loss. It is about love between friends, family, and partners, but it is also about loss, grief, and finding meaning in the sometimes-too-brief time we have with those we care about. It is a drama with four central characters, each of whom has a complete story arc, and these all combine to create a larger story. It is set in time periods through Will's life, showing the final morning of his life, his interactions with his

grandmother Mary as he grew up, and his relationship with his girlfriend Sarah at university, and snapshots of Will's life with his boyfriend Harry are intermingled with the story of Harry moving through the stages of grief. These fragments of Will's life are spread geographically through real locations in the south of England, and over time from 1985 to 2006, with each scene painstakingly recreated to evoke the time and emotions of the story. Given this focus on the story, it felt wrong to the team to define the game by its gameplay mechanics (walking through 3D rooms and clicking on highlighted objects). We do not define books or films primarily by the act of reading or watching, but by their thematic content, and on *Fragments of Him* we also used this approach. Rather than saying "it's a walking simulator with a second-person perspective set in modern England," we would say that it is "a story of love, memories, and hope." In the shortest version, I would simply call it a drama, or sometimes a recent-history period drama. It is still a game, and that classification will be discussed more during this chapter, but the narrative was given priority in guiding the player's experience.

What Motivates Game Creators?

For game developers, it is an unusual choice to focus primarily on storytelling, but it is by no means unique. The first version of *Dear Esther* prompted many discussions in development studios about the balance between story and gameplay. This conversation of gameplay versus story, often called 'ludology versus narratology' is now considered a false dichotomy, with many examples where the two are impossible (or at least highly unwise) to separate, but the debate remains popular with some academics while others have moved forwards to constructing new models of "ludonarrative" understanding (Koenitz 2018). Among developers, where practical application is the priority, *Dear Esther*'s release began a conversation about storytelling that *Gone Home* pushed further forwards in 2013. This was not only a conversation about the value of a game's story, but also about what outcomes a game developer intends to create for players: what value do our experiences bring to players and how do story and theme fit into the experience of each game?

If we were to only look at the biggest selling video games on consoles, then we might find a relatively homogenous idea of what experiences games offer: *Grand Theft Auto V*, *Red Dead Redemption II* (Rockstar Studios 2018), and *Call of Duty: Black Ops* (Treyarch 2010) all have complex and demanding mechanics set against a backdrop of high-adrenaline and violent narratives; however, the games industry has a broad range of outputs beyond these blockbuster titles. Video games on mobile phones, desktop computers, and home consoles have become a completely integrated part of a modern family's media landscape. Serious and applied games (games for teaching and training) exist, but entertainment-oriented games dominate the cultural presence of video games for most people, and they can be broadly described as aiming to be 'fun' (see Figure 6.1). That word in itself is complex to unpack, but nonetheless it covers a general goal of developers to create exciting, challenging, scary, or otherwise highly stimulating gameplay. However, this is not the only goal of game developers, and many focus on concepts such as 'immersion' or didactic outcomes.

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Pure simulation
Playful simulation
Branded entertainment
???
Pure Art

SERIOUS GAMES **APPLIED GAMES** **ENTERTAINMENT GAMES** **'ART' GAMES (altgames, PINE, etc.)**

High interest

Interest in entertainment

Low interest

'LEARNING'

New skills/ knowledge

(Training, Education)

Existing skills/ knowledge

(Healthy behaviour)

'FUN'
Play

(Exploration, autonomy, challenge, mastery, social, etc.)

'EXPERIENCE'

Contemplation

(Visual delight, emotions, awe, empathy, etc.)

Very interested → Interest in accuracy or applicability to real life → Very unpredictable interest

Government & Corporate

Direct to consumer

+ Government & Patronage

Figure 6.1: A representation of the games industry from a developer's perspective, including the main funding models (image by: Mata Haggis-Burridge).

During the creation of *Fragments of Him*, we specifically chose to prioritize the player's emotional engagement and to lower all gameplay barriers that might be created by mechanical challenges. This means that it is not aligned with the blockbuster model of entertainment and its concept of 'fun,' but the idea of fun can be highly personal and we still hoped that *Fragments of Him* would bring cathartic pleasure to audiences. Much of this relied on us being able to help players feel immersed in the world of the game, but this term, like 'fun,' is also often used widely and with multiple meanings.

Immersion and Entertainment

Making video games 'immersive' is a high priority for video games developers, especially in the entertainment sector. When we create, we seek to make games that pull people into the experience; however, the term 'immersion' is not useful by itself (Haggis-Burridge 2020). When seeking to understand a creation it is more useful to split immersion into four categories: systems, spatial, empathic/social, and narrative/sequential immersion (see Table 6.1). Most games will have a dynamic mix of each of these, but they can typically be categorized as prioritizing one or two modes of immersion over the others.

Systems immersion is triggered when a player is highly involved in the balance of the rules of the game and is probably most closely analogous to the idea of 'fun.' It is highly related to Mihaly Csikszentmihalyi's concept of 'flow' (1998), where the player's developing level of skill is matched by the escalating challenge,

Systems Immersion	Spatial Immersion	Empathic/Social Immersion	Narrative/Sequential Immersion
A high level of engagement with the systems and decision-making processes in the game, related to 'flow.'	A sense of 'presence' in a location. The feeling of being in that place, or of having travelled there.	An emotional connection with the characters or social context in a game.	A deep and compelling investment in the progression of events, locations, and/or abilities. The focus here will typically be 'what happens next?'
All types are likely to be non-discreet, with close relationships and overlaps of game-elements that contribute to (or subtract from) multiple forms of immersion.			

Table 6.1: Speculative taxonomy for types of immersion.

creating a satisfying feeling of progression and balance. For example, a *Pac-Man* (Namco 1980) player will be engaged with the movement of the enemies and the layout of the maze compared to the dots they need to collect, and increasing skill provides access to further levels that require strenuous concentration. In *Pac-Man*'s flow state, the player will not typically be imagining themselves as being chased by ghosts, but the game engages them wholly in its decision-making processes.

Spatial immersion could be compared to ideas of 'presence,' specifically focused on whether players feel like they are in (or have travelled to) a location. When a player feels like they have explored a temple in *Tomb Raider* (Core Design 1996) or walked through a Tibetan village in *Uncharted 2: Among Thieves* (Naughty Dog 2009), they have been immersed in that space. Visual fidelity or 3D rendering may not be essential, but they are likely contributing factors in transporting a player into that place.

Empathic/social immersion is stimulated by a powerful link to the characters in a story and/or their social context. The teenage protagonists of *Life Is Strange* (Dontnod Entertainment 2015) were interesting, compelling, and playful in a way that built a strong emotional bond with many players: players felt a real connection with those characters. Whatever the narrative events and the believability of other factors in the game, or the strengths and weaknesses of the interactions, the time spent with the characters felt believable and emotionally immersive because of the empathic connection.

Finally, narrative/sequential immersion is most commonly present when a player is highly engaged with what happens next in a game: it is about feeling connected and invested in the sequence of events. In the *Half-Life* (Valve 1998) games, the protagonist is a blank slate, but the progressing situation in the world and seeing how events change (in the mechanics of the game, the locations of the world, and the social situation) is a large part of the engagement factor for audiences. Likewise, Desmond in the early *Assassin's Creed* (Ubisoft Montréal 2007) games was arguably not a dynamic character, but the events that unfolded around him were interesting and compelling.

There may be more useful categories to be developed later to analyze immersion in entertainment video games, but this is a serviceable taxonomy for beginning to discuss the balance of many video game experiences, and a step beyond only saying 'immersion' without any additional qualifying factors. For example, in *Life Is Strange*, the systems immersion is low outside of the key choices in the story, the spatial immersion is quite strong (the world feels coherently built), the empathic bond with the characters and the social context of the school is powerful for many players, and the narrative immersion ebbs and flows between the different chapters.

In *Pac-Man*, systems immersion dominates the experience, but is so powerful that it does not need the player to believe they are in a haunted maze for the game to be enjoyable. If we examine serious games, we can argue that learning outcomes emerge from the specific types of immersion that are stimulated in players; for example, a city-planning simulation game may be effective through prioritizing systems immersion to produce players' reflection on balancing stakeholder needs, whereas an anti-bullying game may require high empathic immersion to be effective.

Using the lens of the categories of immersion, we can see that entertainment can take wildly different forms depending on the game and the audience. We can also see that the same game will have radically different levels of appeal to different players, potentially including aspects of gender, geographical and historical context, age, religion, physical ability, and many more factors. For these reasons, we can see that defining 'entertainment' (or 'fun') becomes an elusive target, where each player will come to a different answer.

In the case of *Fragments of Him*, we decided to focus most heavily on keeping the interaction systems very simple, but the rooms and outdoor spaces in the game would be filled with realistic details, the characters should be written with realism in mind, and the developing story of the relationships should drive the player through to the end of the experience. Due to these choices, the systems immersion of *Fragments of Him* was likely to be low (there would be no escalating challenge, only rhythmic repetition), spatial immersion should be high, and the empathic and narrative experiences should be highly compelling. We wanted to make an everyday drama and tell a story that was not often told in games – a story of love, loss, and the small things that make up the journeys we share with others. These details of our lives are embedded both in the connections that we have with others and in the times that we live through. The empathic bond we formed with players would be our form of entertainment and the recent social history of the real world was our palette.

Fragments of Him as a Recent-History Period Drama

Our game is tied closely to the late twentieth and early twenty-first century, but also geographically to southern England. Through the characters, it is tied to a predominantly middle-class, white experience of these circumstances. It shows the perspectives of a range of ages and sexual orientations, and of men and women. These factors are represented through multiple methods in the game, with the goal of creating a realistic representation of both the people and the society that they live in. The tools we used can be categorized broadly into the categories of objects, locations, and the people.

Every object in the game was researched and taken from period-accurate reference, matching both the time and the people that are living in the space. For example, Will and Harry share an apartment in Knightsbridge, London, in 2006 (see Figure 6.2). In that space they have a variety of furniture that is appropriate to two young men starting a home together in their twenties: they have some blocky Ikea furniture, but other pieces are more unique. In the unique pieces there is an aspect of old-fashioned style and comfort, like a couple who are trying to find more characterful pieces to make their home feel more personal because they are

Figure 6.2: Screenshot: Will and Harry's apartment in 2006.

exploring their identity as a couple. In the kitchen, there is a slightly retro and rustic feel to the cupboards and the handles, reflecting the homely feel that the couple are seeking in their lives. On the walls there are photographs from all over the world, reflecting that their jobs are related to the travel industry. In one of the many personal touches in the game, the photographs were taken by myself, my partner, and the friends and family of our team. There are also paintings, some of which were painted by our grandparents. The images collectively represent over 50 years of our family lives.

We took enormous care in selecting the objects that surround the characters and the books are a good example of this. The bookcases in each location only contain books that were published in the period of the scene or earlier. Typically, these directly reflect the character of the person that lives there, such as Sarah having books on English literature in her university dorm room, but Mary's house is slightly different: on Mary's bookshelves there are period-drama romances, gardening, and cookery books, but there are also classic science-fiction novels and books about writing. The latter books are all titles from around the 1970s or earlier, and we hear in the dialogue that Mary's husband was a journalist that died in the early 1980s. The bookshelves reflect both Mary's personality in the present and the life that she has lived in the past. These small details are hard to spot, but we hoped they would bring a powerful sense of reality into the world.

Like set-dressing in a film, video game developers create a scene with the choice of props that they place in the world. Unlike films, where many sets and locations may already be full of detail, video game developers can control every nuance of what appears on the screen: literally nothing appears without the team facilitating it being there, which raises the importance of the creators needing a consistent vision. In a game that shows the real-world in recent times, the need for accuracy is raised, because incorrect elements may appear more noticeable and break both the spatial and narrative immersion, with repercussions for the empathic connection.

In the earliest scenes of the game, set in the mid-1980s, the objects have both appropriate shapes and patterns for the time. Due to the small size of our development team, we needed to keep the detail in textures quite minimal, but effective choices of designs can powerfully evoke the tastes of an era. Creating period detail is not only about showing the latest fashions of the 1980s, because the reality of middle-class life in the 1980s was not necessarily about keeping up-to-date with the latest trends, and so some items will be notably older; for example, in Will's childhood living-room, the floor rug has a pattern that is more typical of the 1970s. To assist with researching these details, I went through the early-1980s catalogues of Argos (a British shopping chain) to choose items that matched my vision of Will's parents and their tastes. This provided visual reference that the team could use to make the 3D objects for *Fragments of Him*.

Alongside the props, the locations of the game were also carefully chosen. The indoor spaces were typically taken from blueprints of houses or apartments in the region where the people would live but, in some cases, references were taken from life and recreated by the team's lead artist. This was reasonably straightforward for locations such as Hyde Park, where there are 360 degree views of the park along the walkways that are accessible on Google maps, but the University of Winchester campus was more difficult because there has been substantial building work and changes of purpose since the 1990s. A blend of current and personal photographic references and drawings, based on my memories from the time, were used to recreate these spaces.

The reliance on my memory, and the selection of these places, highlights how personal this game was. We always create based on our knowledge or imagination, and within the perspectives that are available to us, and these are naturally limited. For *Fragments of Him*, every effort was made to achieve accuracy between the real physical environments from the time periods and their digital versions, but many elements will be shaded by my own recollections and perceptions of those spaces. The spaces were selected for inclusion in the story based on my own experiences in those locations, sharing time with loved ones. In future games, I will endeavor to bring in wider references, and I deeply believe that engaging with the diversity of life and lifestyles brings value and potential considerations to our work that we would not previously have known about, but for this game I wanted to draw specifically on my own experiences of young adulthood.

Alongside the objects and the locations, the people in the game closely reflect the period. Fictional characters are always built from pieces of the author and their experiences: from H.P. Lovecraft's cosmic horrors to Togepi in *Pokémon* (Game Freak 1999), our acts of creation always reflect the creators' personal and social contexts and *Fragments of Him* is no exception. Will, Harry, and Sarah (the central figure, his boyfriend, and his ex-girlfriend respectively) particularly mirror parts of my personality and life story, while the conversations and views of Mary (Will's grandmother) are based on many real encounters and conversations I had when I came out as bisexual in the 1990s. However, fictional mirrors are not wholly accurate: there are views from Will that I would strive to express with more nuance today but were appropriate for 2006, and the same is true for other characters. While striving for accuracy and reflecting personal experience, creativity and characterization also need

to be given room to breathe and develop on their own. Tying ourselves too closely to reality, or trying to create flawless characters, ironically can also reduce the reality or connection we feel with the world. Flaws, and even attitudinal inconsistencies, are what make a character individual and believable.

Each character in the game was given several pages of back-story before writing began. The details of their early life and social situation were developed, but these were often not directly referenced in the game. Even though they are not shown or described, these stories helped me ground the writing whenever I felt uncertain about how a character would speak or react. Reading through Mary's experiences in post-World War II Britain, or the ups and downs of Harry's life before meeting Will, helped me connect with them as individuals. Even when I disagreed or personally deviated from the opinion of a character, I worked to be sure that they were consistent both with their own history and the social context.

When choosing which characters to create, I imagined which people would give the most interesting perspectives on Will's life. I considered including a colleague, or Will's parents, but felt that their views would either be too distant or too close. Part of my goal for *Fragments of Him* was to show how our lives touch others in ways that we do not necessarily see ourselves, and the stories that we leave behind after we are gone. Each character supported this in different ways: Will's character was chosen to show a bisexual man in a manner that I recognized – not promiscuous, and also not perfect, sometimes a bit goofy, but with a good heart and trying his best be kind to himself and others; Harry was the more serious balance to Will, and needed to be this to be able to convey the weight of his experiences after Will's death; and Sarah's purpose in the story was to show that even relationships that end can still have created cherished memories once the pain has faded. With these three characters we have love between romantic partners, and love between friends, and Mary added familial love.

Mary's relationship with Will was more complex to create than the others – she was of a conservative mindset and she was moderately prejudiced against gay relationships, but nonetheless she had an underlying love for her grandson. Portraying the conflict between Mary's social views and her familial love was a challenge, but it was also an essential part of truly representing the queer experience of the 1990s and beyond: Will's experiences with Mary mirror many interactions that friends and I had at the time. In the 1990s there had been very little visibility for queer communities in the media that went beyond heavily stereotypical representations and those representations drove widespread intolerance, fear, or hatred. The media landscape has significantly diversified since then (although it could still progress much further), and so Mary's character may have different views today, over twenty years since her central scenes in *Fragments of Him*, but it would have been unnaturally idealistic to assume that Mary would suddenly become convinced of the wholesomeness of Will's bisexuality during the game's story. As with many experiences in queer communities at the time, sometimes the best that seemed achievable was tolerance, and acceptance or integration would have to come later. Writing in this period dictated that Mary would remain somewhat problematic and conflicted in her love, even at the end of her journey.

Class, Gender, Ethnicity, Age, Political Alignment, and More

Even with this attention to period accuracy, all creative works represent both the time of their setting and the time of creation. There will always be a tension in how a period of time is shown in fiction: a person writing at the time may not see how their daily events fit into wider social movements, but a person writing about a historical period can miss the sensation of what it was truly like and instead imagine a past colored by their understanding from the present. Both modes of writing have risks of idealization and problematization, for example through ignorance or willful reconfiguration of events to fit an ideological narrative. In the end, all worthwhile writing is an act of communicating a perspective as fully as possible and hoping that the results are positive for both readers and wider society.

Fragments of Him was created during a turbulent period in video game culture, when right-wing attacks on women and minority groups in the video game community were at a peak before similar approaches to online discourse transferred across into mainstream social consciousness to cement the electoral success of Donald Trump in the U.S., the Brexit vote in the U.K., and similar events across the world. One of the first choices we made in the prototype in 2013, to have a gay relationship as a central part of the story, was taken purely because this was uncommon at the time and I wished to see a bisexual character represented in a positive light, but with hindsight this could be viewed as a manifestation of a gradual shift towards left-wing culture in the video game sector. The right-wing backlash against this gradual shift could be retrospectively viewed as inevitable, because social progress towards equality has rarely happened smoothly without some strong opposition fighting back at some point. For me, choices such as the 50:50 male/female gender balance in the lead characters was a natural representation of the world where these of the genders make up the majority of the population (although not the whole population) and in approximately these ratios, but such a balance has not been historically common in video games and so in this aspect it also became framed as a game that was highly politically engaged.

All games are political due to their content, creation, or context. Regarding content (the most visible element of a game), many games appear to not contain a political message because they reflect the dominant social narratives of the cultures that create and consume them, and so appear culturally-neutral. For example, games with monetary trading systems in alien galaxies imply that capitalism is a natural form of social organization for highly-evolved species in our universe, which may not appear to be a political statement because it aligns with the widely held social views. If the alien world were entirely aligned with higher-stage communism then this would be no more of a political message than arguing that capitalism is universal, but it would be perceived to be a stronger statement because it contradicts the common experience of many players. The reality of bisexual identity, particularly male-presenting bisexual identity, is that it is still perceived to be outside of the mainstream experience and so will always appear to be a political statement until acceptance and inclusion is the norm. This means that my reality is political and, even without the game having radical messages within the events of the narrative, it was provocative to some.

If we had been creating the game ten years before, it is hard to say whether we would have been so comfortable creating a game with two non-heterosexual lead characters, and twenty years before it would have been even less likely. The prominence of intersectionality in the fourth-wave feminist movement has strengthened the possibilities for diverse representation of all genders in the media. It is hard to imagine that *Fragments of Him* could have been made without intersectional feminism's influence on the media landscape. Alongside the social change towards common and positive representation of queer communities, the technological innovations that enabled home computers and consoles to have access to downloadable software enabled us to release our game without the need for approval from a major publisher. Both socially and technologically, the creation of *Fragments of Him* was unlikely to happen in the context of any previous time in history.

We must be cautious of seeing one story as too representative. Despite the gender balance, various sexualities, the wide age-range of the characters, and a brief polyamorous relationship, the game still has some quite narrow limits on its social scope: it is predominantly middle-class, English, white, all of the characters are cisgender (although the growing visibility of transgender communities in the late 1990s is briefly mentioned in the script), suburban, and non-religious. This creates a picture of English life that will be familiar to some and utterly foreign to others. It is not necessarily bad to create a game with a narrow window on society, but it needs to be recognized that the push for accuracy in the creation of *Fragments of Him* means that these people can only be partially emblematic of wider discourses – these are pieces of reality, but not the whole picture. The story of *Fragments of Him* contains many incidents inspired by my life, to the point that it is somewhat autobiographical, but it is only my story. Given the same game development capacity, others would create an entirely different representation of that time: a different vision of England, class, sexuality, gender, age, race, and more.

If we wish to see the evolution of the video game medium, we need to find ways to empower more potential creators. My access to the knowledge, co-creators, software, hardware, and time necessary to create the game are certainly not universal, and inequality excludes the voices of many communities. Their stories will be as valid as mine, and they also deserve to be heard. We must seek to share knowledge and support others. Collectively, our games may evoke a sense of coherence between our partiality, and patterns may emerge that we are currently too close to see. Between us, a mosaic of the world will appear.

Conclusion?

It is hard to measure where such almost-real games will go in the future. There has been a distinct trend towards the growing importance of storytelling in games, particularly since the landmark releases of *Dear Esther* in 2008/2012 and *Gone Home* in 2013. *Fragments of Him*'s first prototype was created in that first wave, in 2013, and in the following years many other games have experimented with ways of creating compelling real-world-inspired stories for players. *That Dragon, Cancer* (Numinous Games 2016) notably took inspiration directly from the lives of the creators, but other games have also used real-life or real social contexts for inspiration and gameplay, sometimes very literally and other times mixed

with fantastical elements, for example: *Her Story* (Sam Barlow 2015), *Firewatch* (Campo Santo 2016), *Everybody's Gone to the Rapture* (The Chinese Room & SCE Santa Monica Studio 2015), or *This War of Mine* (11 bit studios 2014). With the continuing growth and transformation of the medium, it feels too early to draw conclusions about where this may lead, but as artifacts of social discourse they will undoubtably prove interesting material for future study.

Interactivity creates a strange tension against storytelling: linear stories require a single path of action, but giving players choices means that writers need to find new ways to shape the experience of story. Regardless of the number of choices, the player's experience is always linear: they play through the game in their own way, and from their own perspective (literally and socially) they will always have *a* story. How well that aligns with the intended experience of the storytellers, and whether that matters, are debates that will continue to stimulate creators, players, and academics, just as Barthes' *Death of the Author* (1967) stimulated literary circles in the late twentieth century. When many playthroughs are valid, what is a game's real story? Does it matter? These questions gain greater weight when developers try to represent, or comment on, events in the physical world, and particularly if they have a perspective on that world that they wish to convey.

Part of the difficulty of studying video games is that there is no authoritative path for the player's experience, particularly when games can be cracked, modded, glitched, or speedrun. However, when developers choose to use real-world settings, people, or historical periods then they add a new challenge for themselves: they willingly choose to embrace that there is a physical reality and history outside of the game that defines its accuracy and so, arguably, some of its value. This is not only a problem though, because many game developers wish to make 'immersive' games, and an accurate historical game benefits from a coherent setting and so this is likely to heighten social immersion, but the mechanics of the game may prove frustrating; for example, an accurate First World War gun would feel strange to players that are accustomed to simulations of modern weaponry and this accuracy could lower the systems immersion. In ways such as this, using a historical setting has benefits and challenges that go beyond only the story: it changes every aspect of the player's experience.

Past settings within living memory, particularly non-confrontational ones, are still relatively unexplored as inspiration for video game developers in comparison to the number of games with violent settings and themes. Making a video game is already a complex task, and adding the weight of historical accuracy is an additional burden, but it comes with benefits too. The dramatic possibilities of everyday life continue to inspire film, theatre, dance, books, and music, so it is probable that game developers will continue to explore this rich seam of stories and settings to inspire new gameplay experiences. Making *Fragments of Him* was enormously challenging and creatively satisfying. There is ample evidence to show us that games can be about stylized depictions of war but *Fragments of Him*, and the increasing number of games like it, show that games have enormous capacity to express love and our personal experiences of the world: games can be, and already are, methods of social documentation. We hope *Fragments of Him* will help inspire more creators to explore their own past and preserve their perspectives for future generations of players.

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7. 'Transcending History and the World': Ancient Greece and Rome in Versus Fighting Video Games

Dunstan Lowe

Introduction

Even gaming experiences that focus intently on the present moment can be enriched by legacies of the distant past. This chapter is a critical survey of allusions to ancient Greece and Rome in an unlikely choice of video game genre: versus fighting games, also called one-on-one or binary combat games, whose popularity was first established in arcades and on consoles in the 1980s and 1990s and remains strong today.[1] It is ostensibly one of the least historically oriented video game genres; for example, none are included among the many titles cited in Metzger & Paxton (2016). Yet a surprising number of these games contain some reference to the classical past, including six of the most influential franchises that will form the case studies for this chapter: Capcom's *Street Fighter* (1987-2018), Midway's *Mortal Kombat* (1992-2019), Rare *et al.*'s *Killer Instinct* (1994-2017), SNK *et al.*'s *The King of Fighters* (1994-2016), and Namco's *Tekken* (1994-2017) and *Soulcalibur* (1996-2018) series.[2] In this chapter I uncover those references, comparing them for the first time, to show that their roles in the gameplay experience vary considerably. I then go on to identify more such references among the large number of derivative games, whose very existence helps to define their models as seminal and influential: even the most unoriginal and negatively received examples can offer surprising insights. The driving force behind all such references, I shall argue, is that the genre is inherently geared towards multiculturalism – albeit in a fundamentally casual and usually decentered or tangential way. Accordingly, its

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1   On the evolution of the versus fighting game genre, see Harper 2014; Ware 2015.
2   For case studies in how classical antiquity is shaped by the relationship between play mechanics and narrative in a range of video game genres, see Mcmenomy 2015.

designers and players find merit in the malleability of history, rather than just its authenticity. Understanding how this type of video game turns ancient Greece and Rome into ingredients for a cultural mishmash can therefore help us to understand how any cultural property is transformed, for immediate and casual consumption, in a new imaginative context.

According to Chapman (2016: 17-18), studying historical games requires a 'formalist' approach, in that both the general and the specific structures of the game form have implications for their meaning. This is equally true for historical content in the games discussed in this chapter, whose settings – whether present, future, or fantasy – are primarily non-historical. It will be easier to understand the game designers' choices in representing the classical past if I reconstruct some unwritten rules for 1980s and 1990s versus fighting games, which were popularized above all by *Street Fighter 2: World Warrior*, but were already evolving in the years before it. There is typically a roster of colorful characters who fight one-on-one in rounds of a tournament, and whose design mainly consists of their appearance, their moveset (fighting style), and a few lines of speech. Each has a home stage that forms a backdrop for the main action, which usually scrolls as the characters move, and is often partly animated. These backdrops vary in palette and atmosphere, and the variety of locations effectively adds a form of tourism to the game experience. As in other game genres, progress is sometimes tracked on a simple in-game map, indicating progression with icons that successively appear or disappear. These maps are impressionistic, designed more to show contrasting episodes than a unified world (on the implications of maps and mapping in video games, see Florence Smith Nicholls, Chapter 9). The gameplay experience is cumulative, in that sequential and increasingly challenging opponents give the player a sense of progress: advancing through victories reveals more game-world content, both visual and thematic. The 'end boss' is usually isolated, with a science-fiction or supernatural setting and design that distances them from the geography through which the player has passed. The overall effect is that every place and culture in the game is 'beatable,' a potential feather in the player's cap, or alternatively just a stepping-stone towards the endpoint of the final adversary.

Versus fighting games are heavy on visual and kinetic experience and correspondingly light on narrative and character development. There has been no previous study of how they engage with classical antiquity, partly because doing so means reading against the grain and between the lines. It can give rewarding insights into how historical content is remediated for audiences who are not primarily interested in historical authenticity. This chapter shows what happens to ancient Greece and Rome when they become the property of players and designers – game consumers and creators – whose general lack of a scholarly background in classical studies liberates them from seeing this material in preconceived ways. This chapter also reveals a surprisingly close relationship between spatial and temporal movement, as the imagined past becomes embedded in world geographies.

There is much more classical material in fighting games that lies beyond the scope of this chapter. Scrolling beat 'em ups, for example, give us a Roman centurion resurrected by a Greek god in *Altered Beast* (Sega 1988) and Cleopatra as the final boss of *Double Dragon 3: The Rosetta Stone* (Technos Japan 1990); other

relevant examples include Konami's *Metamorphic Force* (1993) and Animation Magic's *Mutant Rampage: Bodyslam* (1994). I have also excluded several games directly set in classical antiquity, of which there are both original concepts and (increasingly obligatory) tie-ins with film and television franchises, though these would reward more extended attention. Instead, I intend to show that a historical element is most revealing under two conditions: first, when it appears among a miscellany of stereotypes or stock themes, and second, when it is presented to the player in the periphery of the gaming experience. In an important sense, this is the most culturally relevant way that the classical past could possibly appear.

> If, as critics argue, the rapid-response binary combat game lacks story and community, and if it is indeed based on "sketchy and stereotypical characters," then I would argue that these very characteristics make it a significant and interesting cultural product worthy of critical attention.
> *Hutchinson 2007: 285*

Versus fighting games reflect the most generalized and casual expectations for what that past is, and how it might be defined against other pasts and places. It is appropriate that ancient Greece and Rome can literally appear in the background, creating a relationship with players whose attention is focused on the foreground.

Special Moves: Famous Names in Versus Fighting Games

We can now turn to specific examples of how ancient Greece and Rome have crept into versus fighting games without forming the main theme. This takes place through individual characters, stages, and other separate elements, though certain recurrent patterns emerge. The major series have generally included classical culture in two separate ways: either by endowing characters with Greek mythological features, like the *Soulcalibur* series, or using heritage sites as backdrops, as in *Tekken*. I will discuss six leading franchises in the order in which they first appeared, concluding with *Soulcalibur* as not only the most recent, but also the most prominent example.

The *Street Fighter* series (beginning in 1987) has a modern-world setting with fantasy elements: in the 1995 reboot *Street Fighter Alpha: Warrior's Dreams*, the home stage of Rose the Italian fortune-teller is based on a digitized photograph of the ruined Colosseum. Online commentators have noted that this location is a direct copy of a climactic scene in the martial arts movie *Way of the Dragon* (dir. Lee 1972), down to the inclusion of animated cats moving back and forth. Yet, in a later *Street Fighter* game, classical culture appears again through a character in the foreground, and the implications are very different. In the *Street Fighter III* trilogy, the final boss 'Gill' is a superhuman clad only in a white loincloth who fights in the Greek pankration style, and is based on a combination of elements from Greek myth and the Old Testament. He controls the elements of fire and ice, and his genetically-enhanced muscular body is colored a striking combination of red and blue, which together with his arrogant demeanor and flowing blonde hair seems inspired by Frantisek Kupka's 1910 painting *Prometheus*, itself inspired by Greek myth. Gill is the leader of the elite Secret Society, a shadowy organization influencing world events, and his home stage in *Street Fighter III: Third Strike*

contains Illuminati and Masonic symbols. More importantly for the present study, this background contains several allusions to the ancient world: temples with marble pillars and triangular pediments, a row of fires burning, a domed ceiling, and an ancient Greek or Egyptian bireme in dock, adorned with a painted eye. In Gill's ending sequence, before he parts a sea to lead his people to a promised land, he ambiguously declares "2000 years was too long." Classical and messianic elements are intimately linked in the character of Gill, who seems to embody the distant past even though he inhabits a more modern setting.

As in many other respects,[3] *Street Fighter* contrasts sharply with the *Mortal Kombat* series (beginning in 1992) in its uses of classical antiquity. *Mortal Kombat* has a horror-fantasy setting primarily based on Chinese mythology, in which Earth is only one of many realms. Yet even here a minimal classical influence appears in a character named Motaro. Introduced as a sub-boss in *Mortal Kombat 3*, Motaro is portrayed as a type of centaur, with a horse-like lower body, ram-like horns, and a long metallic tail. It is explained that he belongs to a fierce race called the Centaurians, though there is no direct allusion to Greek mythology. That occurred later when Kratos from *God of War* (SIE Santa Monica Studio 2005) appeared as a guest character in the PS3 and PS Vita editions of *Mortal Kombat*, though he is simply summoned through space and time by Shao Kahn instead of harmonized with the plot. (On Kratos' subsequent appearance in *Soulcalibur V*, see below). Most recently, in *Mortal Kombat 11*, a more definite allusion to Greek myth was introduced in the character of Kronika, the Keeper of Time. She is called a 'Titan' and is superior to the Elder Gods, who include her own children. Indeed, the name 'Kronika' seems to echo both Kronos, father of Zeus, and Chronos, the embodiment of Time. The allusion to the Titans of Greek myth is confirmed by the name of Kronika's servant who embodies the sands of time, Geras, which is "old age" in Greek. Not even the highly distinctive setting and aesthetic of the *Mortal Kombat* franchise excludes references to classical antiquity.

The *Tekken*, *King of Fighters*, and *Killer Instinct* franchises all began in 1994, all combine modern-day settings with fantasy elements, and all have at some point included classical ruins as stage backgrounds.[4] Namco's *Tekken* series has some science-fiction elements, but its graphical style is comparatively realistic and the classical past is limited to heritage sites. The home stage of Nina Williams in the first and second games contains digitized photo landscapes of the Athenian Acropolis. The stage is named 'Acropolis' in the first game and 'Athens, Greece' in *Tekken 2* – it is not explained why this Irish character is located in Greece. The Parthenon had already appeared in the backgrounds of several games, including the early versus fighting game *International Karate* (Archer Maclean 1985). Graphically enhanced Parthenon backgrounds reappeared in *International Karate 2000* (Studio 3 2000) for the Game Boy Color and *International Karate Advanced* (Studio 3 2001) for the Game Boy Advance. It was one of eight real-world backgrounds in that game,

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3   A list of contrasts between the first-generation (2D) *Street Fighter* and *Mortal Kombat* games might include the following: Japanese/American developers, family/mature audiences, emphasis on fluid combat/finishing moves, hand-drawn/digitized sprites, bright/dark palettes.

4   On the role of archaeology in video games, see Gardner 2007 and especially Reinhard 2018; on classical ruins as video game environments, see Lowe 2012.

as were the Pyramids of Giza, indicating the global scale of the tournament being depicted. A direct connection between *Tekken* and *International Karate* is unlikely, but both games probably had the same motives for including the Parthenon. It is one of Europe's most iconic buildings, easily recognizable as a location in Greece, and made all the more atmospheric by its ruined state.

By contrast with *Tekken*, SNK's *The King of Fighters* series did not include ancient heritage sites until its fifth game: in *The King of Fighters '98*, the 'Desert' stage is an indeterminate Egyptian location, with ancient temple ruins and a pyramid visible in the background. A more specific site appears in *The King of Fighters XI*: although the backgrounds are hand-drawn, a stage named 'Aqueduct' shows tiled rooftops in front of a near-photographic image of the famous Roman aqueduct at Segovia in Spain. The use of archaeological sites in this franchise bears little relevance to its multiple story-arcs, which is evident from the vague names of stages; for example, Angkor Wat is 'Ancient Ruins.' Thus a stage introduced in *The King of Fighters 2002: Unlimited Match* is simply called 'Battle Arena,' even though it appears to be a version of the Roman Colosseum reconceived in homage to the character Athena Asamiya, canonically a descendant of the goddess Athena. A large illuminated statue of Athena looms in the background, and there are inscriptions in Greek saying "The King of Fighters." This merging of Roman and Greek architecture may reflect a homogenizing East Asian view of Mediterranean antiquity, which could also explain why *Street Fighter*'s Gill combines aspects of both a Greek god and an Old Testament prophet.

Finally, the *Killer Instinct* series, which has a contemporary science-fiction setting, engaged with classical antiquity for the first time in its 2013 reboot by Double Helix Games. At this point a new character, Aganos, is supplied with a detailed historical narrative that deserves some description here. According to his official backstory, posted online under the title 'Peacemaker' in 2016, Aganos was originally one of many bronze war-golems built by the Mycenaeans. The game's 'Rivals' mode states instead that Aganos was created in Babylon in 1500 BCE and defended the Babylonian king from usurpation in 556 BCE: historically, this was the date when King Neriglissar left the throne to his young son Labasi-Marduk. Aganos outlasted all others, replacing his broken parts with rocks and vines, eventually becoming bodyguard to an unnamed King of Babylon who gave him his Greek name (ἀγανός, "gentle"). Aganos' stage is 'Forgotten Grotto,' a coastal cavern with ruined Greek architecture and statues in the foreground, and in the distance a ruined island city (see Figure 7.1).[5]

The stage soundtrack composed by Panos Kolias mirrors the foreground action, emphasizing the historical grandeur of the site and alluding to past violence: its title is 'Polemos' (war), and a choir chants in modern Greek "battle, war, victory, pain; justice, war, terror everywhere." Likewise, performing an Ultra Combo causes a metal golem resembling a pristine Aganos to assemble in the background and during a Stage Ultra it turns the loser to stone, who then crumbles into the wind as if lost in the past. Aganos' nemesis is the corpse-like Babylonian vizier Kan-Ra;

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5   On how classical landscapes are reimagined in video games, see André & Lécole-Solnychkine 2013; André 2016.

Figure 7.1: Concept art for the Forgotten Grotto stage in Killer Instinct, *2013 (Durock 2015).*

both have magically survived to the present day in ravaged forms. According to Kan-Ra's own official backstory 'Death is No Obstacle,' he originally stole his two Egyptian daggers from the temple of Melqart in Tyre, after provoking Alexander the Great into besieging the city. This implicates Kan-Ra in the real historical events of 332 BCE, just as Aganos is associated with the Mycenaean civilization. *Killer Instinct* is therefore exceptional among the games discussed in this chapter in that two characters are actually old enough to be part of the ancient history they contribute to their games. In effect, the stage becomes the character, since the imaginary scenery of the Forgotten Grotto is made of almost the same materials as Aganos' own antiquated and overgrown (yet still powerful) body.

Turning at last to the *Soulcalibur* series, we are confronted with the most prominent element of classical antiquity in any versus fighting series: the Athenian warrior Sophitia Alexandra. As Hutchinson argues, the characters in *Soulcalibur* reflect Japanese cultural stereotypes, with Sophitia as "the ideal figure of the Western woman" (2016: 162). The brave but innocent Sophitia has been a playable character in every *Soulcalibur* game to date, from the original *Soul Edge* through all six *Soulcalibur* sequels and four spinoffs. During this time the roster has expanded to include her sister Cassandra, daughter Pyrrha, and son Patroklos, and even the final boss of *Soulcalibur V*, a Sophitia-like embodiment of the Soul Calibur sword named Elysium. Although the games are set in the late sixteenth century, Sophitia was summoned to the Eurydice Shrine, her home stage, where the god Hephaestus endowed her with the Omega Sword and Elk Shield that resemble the equipment of an ancient Greek hoplite.[6] Sophitia also wears a sexualized version of an ancient Greek *peplum*, sometimes combined with leather sandals or a laurel wreath; her hair has become gradually blonder and her apparel bluer, coordinating with those of her fellow European, Siegfried the German knight. Sophitia represents the Greece of classical myth, which is far more familiar to players than the Ottoman-occupied Greece of the sixteenth century, both globally and in Namco's home country of

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6   In *Soulcalibur IV* and *Soulcalibur: Broken Destiny* the Eurydice Shrine is replaced by the 'Garden of Thesmophoros,' which is similar but without a Hephaestus statue and surrounded by jungle. Together these names imply some research into Greek religion, since, although best known as the name of Orpheus' wife, 'Eurydice' was also a title of Persephone and 'Thesmophoros' was a title of her mother Demeter.

Japan. Even Lizardman, who was originally designed as Sophitia's shadow character with an identical moveset, acquires ancient Greek characteristics: he is revealed to be a Spartan who went astray and was transformed into a monster by Fygol Cestemus, an evil cult who worship Ares.[7] Lizardman appears under his true name 'Aeon Calcos' (which is Greek for "Bronze Age") in *Soulcalibur V*, and his new double-axe fighting style is shared with Kratos from *God of War*, a fellow Spartan who has been resurrected from ancient Greece as a guest character in that game.[8] Sophitia and related characters bring ancient Greek mythology into the *Soulcalibur* series, even though they inhabit a much later setting. In this they resemble Gill in *Street Fighter III*, but in a more extended fashion that even accommodates the Olympian gods into a sixteenth century story-world. As a result, the *Soulcalibur* games are, in the words of their unseen Announcer (quoted in the title of this chapter): "Transcending history and the world, a tale of souls and swords, eternally retold."

These six commercially prominent franchises show that points of contact with ancient Greece or Rome can take various forms, but also that they can appear suddenly in one of several sequels.[9] The main exception is classical heritage sites as backgrounds, above all the Parthenon, which becomes almost a trope of versus fighting games, and will appear again in the next part of this chapter.

Button Mashing: Minor Franchises

Most of the fighting games of the 1990s, and some beyond, can fairly be called imitations of one of the six franchises discussed above, and this influences their inclusion of various incidental Greek or Roman elements. One notable imitator is Data East's *Fighter's History* (1993), which was so similar to *Street Fighter 2* that Capcom unsuccessfully sued for copyright infringement. The character representing Italy is a wrestler named Marstorius, whose appearance was clearly modelled on the American professional wrestler Bruiser Brody. He wears a leather cuirass and toga-like white skirt, with fringed leather boots and leather cuffs. His stage backdrop in the first game is a pixel-art rendition of the Trevi Fountain and in the Neo Geo sequel *Fighter's History Dynamite* (Data East 1994) it is a digitized photo of the ruined interior of the Colosseum. This present-day scenery contrasts with the character's name and costume, which appear to be ancient Roman. Similar nuances arise in Namco's less direct imitation of *SF2*, *Knuckle Heads* (1992). The Greek character, born in Athens and competing for money according to his in-game character details, is a caped hunchback named Blat Vaike who wields a giant metal hammer. Yet, his home stage follows the conventions of the genre far more closely: a large building in the background is unmistakably the Parthenon, surrounded by a crowd of what appear to be ancient Greeks (see Figure 7.2).

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7   In fact, Fygol Cestemus created the golem Astaroth in order to help Ares overthrow his father, Zeus.
8   In an additional reference to classical literature, Aeon's moves are dubbed 'Mezentius Style,' 'Camilla Style,' or 'Turnus Style.' Mezentius, Camilla, and Turnus are the chief enemies of the hero Aeneas in Virgil's *Aeneid*, a Roman epic set in the world of Greek myth.
9   This arrival in sequels happens in other game genres too: as just one example, the platformer *Megaman 6* (Capcom 1993) features a horse-man robot named Centaurusman, who was built to work in an archaeological museum and occupies a stage filled with ancient ruins.

Figure 7.2: Screenshot: Blat Vaike's home stage from Knuckle Heads.

There is a similar phenomenon in ADK *et al.*'s own *SF2* competitor, *World Heroes 2* (1993), in which both final bosses – the shapeshifting androids Neo Geegus and Dio – are fought in Italy. Their stage is clearly the Colosseum, but in pristine condition and containing a huge stone statue of Neo Geegus. As SNK Playmore co-developed and co-published *World Heroes 2*, this stage probably inspired the adapted Colosseum with Athena statue in the 2009 *The King of Fighters* game, discussed above. In the first match, the stadium is filled with spectators. An energy weapon then strikes the building, and the second match takes place in its empty ruins. The (initially) non-ruined condition of the arena, together with the presence of cheering crowds, implies that the site itself has been transported from the past – whereas in the storyline, it is the heroes who have been gathered from history to the present day.[10] The Parthenon of *Knuckle Heads* presents a slightly different paradox, since it appears in its modern, ruined state. Its spectating Greeks might conceivably be historical re-enactors, although Vaike himself is not. More likely they are simply living accessories to the classical authenticity of the ancient building, just as Sophitia is an accessory to a semi-mythical ancient Greece, and Marstorius (and the Roman crowd in *World Heroes 2*) are accessories to the ancient city of Rome. The cultural eclecticism of the versus fighting genre can embrace characters and backgrounds from ancient pasts, even when they confuse or contradict the overall chronological setting of the game.

A range of other versus fighting games include on their rosters either Greek deities, or historical ancient Greek or Roman fighters, or a combination of both.[11] It is notable that many of these were arcade games, released either primarily or only in Japan, though there is also a series of 1990s PC games from various countries. *Mutant Fighter*, called *Death Brade* in Japan (Data East 1991), features Amazoness, Hercules, and Minotaur characters alongside postclassical monsters including Werewolf and Dragon.[12] In more recent years, *Tournament of Legends* (High Voltage Software 2010) and *Gods of Rome* (Gameloft 2015) have revived

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10   The ordering of stages does in fact become chronological two sequels later in *World Heroes Perfect* (ADK 1995), although its only ancient stage is 'The Megalithic Age,' set in Egypt. The ease of this change, which passed without comment in reviews, underlines the fluidity of the boundary between temporal and spatial tourism in versus fighting games.

11   On the differences between Greece and Rome in the popular imagination, see Nisbet 2009a.

12   On the history of Hercules as a video game character, see Chmielewska 2016.

the formula of combining classical characters with figures from other world mythologies. *Blandia* (Allumer 1992) features a Greek warrior named Diokles, and its final boss watches the bouts in a large bowl of water, an obvious imitation of the Olympian gods in the 1981 movie *Clash of the Titans*. *Red Earth*, called *Warzard* in Japan (Capcom 1996), has a high-fantasy setting, but in the Japanese version one of the stages is called 'Greedia,' clearly hinting at Greece; it contains ruined (and breakable) marble columns, and is represented on the world map with a classical temple, which collapses into ruins when it is completed. Versus fighting games for the PC in the 1990s frequently feature Greek or Roman warriors. The shareware game *Battle Wrath* (Cerebral Gaming Systems 1995) includes a gladiator called Flavius Scipio among warriors from different eras; likewise, *Savage Warriors* (Atreid Concept SA 1995) has a gladiator called Carceres ("starting-gates" in Latin), *War Gods* (Eurocom Entertainment Software 1996) a gladiator called Maximus, and *Time Warriors* (Silmarils 1997) a Spartan named Apokles. There is no single game inspiring all of these various examples. Instead, they all reflect the same motive of introducing cultural variety, which lies at the heart of both the 'warriors throughout time' scenario and 'supernatural pantheon' scenarios, since both are effectively sub-variants of the worldwide tournament scenario.

Dumpster Diving: Unsuccessful Imitations

The only way to understand fully how a culture looks to a non-classically-trained audience is to examine the full range of its representations, from the best-known to the most obscure. The final subtopic for discussion is what I call 'dumpster diving:' this means going beyond the best-known examples of a genre, and even their moderately successful imitators, into the remnants and the trivia. This is how to get the real dirt on any field of mass-audience reception studies, since it reveals what has truly soaked through from the background cultural fabric.[13]

In this final category, I shall discuss one direct imitation of *Street Fighter 2* and four of *Mortal Kombat*. Most feature softcore pornography as a simple selling-point; the exception is *Thea Realm Fighters* (High Voltage Software), which was in development for the Jaguar in 1995 but never saw the light of day. Surviving images show a typical blend of relatively low resolution sprites and high resolution backdrops, one of which includes a Roman-style wall mosaic depicting a charioteer.[14] The remaining games for discussion all contain female nudity and constitute a small and undistinguished subgenre of versus fighting games, which nevertheless offers some insights into how classical influences work. The first example is *Strip Fighter II* (Games Express 1993), a bootleg game for the TurboGraphx-16 that appeared around 1993 after *Street Fighter 2*, and reflects the taste for adult-themed games in the Japanese video game market of the time. The roster includes a character called Medusa, whose fighting style is

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13   Cf. Nisbet (2009b: 154) on pornography as "a global economy and language whose representations of the ancient world are in some ways the best index we have of what 'Rome' means to an international mass market."

14   I thank one of the participants at the *Interactive Pasts Conference 2* in October 2018 for plausibly identifying the charioteer's face as Daniel Pesina, better known as Johnny Cage in *Mortal Kombat* (1992), who was involved in this production.

similar to that of Blanka in *Street Fighter 2*. She fights using her waving red hair and wears a snake-like green bikini, and her home stage is littered with ruined classical columns and broken statues. Surprisingly, classical allusions recur in two later softcore franchises of versus fighting games, which imitate *Mortal Kombat* in its use of digitized images of real actors. *Catfight* (Phantom Card 1996), an all-female pastiche featuring gore, was published by 'Atlantean Interactive,' a temporary brand for the pornography company Vivid Entertainment. It is almost unplayable and sometimes called the worst game ever, but three of the digitized photos that constitute the stages are archaeological: the Parthenon (once again), some stone steps in a Greek archaeological site, and Stonehenge. In 2002, Creative Edge Studios released another all-female imitation of *Mortal Kombat* called *Bikini Karate Babes*, which was better executed but still negatively received by critics. This time most of the nineteen character names are Greek or Roman (Aphrodite, Venus, Athena, Kakia, Thalia, Gemini, Lucina, Nemesis, Voluptas, Persephone, and Isis), and one of the stages features an imaginary statue of Venus in the background. In 2011 a sequel with somewhat improved graphics appeared, entitled *Warriors of Elysia* (Creative Edge Studios 2011), with some additional characters along similar lines including Vesta and Cassiopeia. The inclusion of ancient Greek content, both in *Bikini Karate Babes* and its sequel, and more obliquely in *Strip Fighter II* and *Catfight*, might be intended to offset, or indeed heighten, the absurdity of the premise using traditionally highbrow connotations. The three imitations of *Mortal Kombat* could have at least two more motives. Firstly, ancient Greece is a convenient alternative to the Chinese-based mythological fantasy of the model. Secondly, there may have been a sexual frisson around female warriors from ancient Greece in the 1990s, following the popularity of *Xena: Warrior Princess* on syndicated television (1995-2001), with its attractive lead actress and implied lesbian subtext. This seems particularly likely in the case of *Catfight*, given the choice of 'Atlantean' as the name of its publisher, together with a title logo featuring a Hellenic-looking city of Atlantis. Yet, Greek myth may have been nothing more than a convenient source of names for supernatural and sexualized female characters.

Conclusions

In this chapter I have presented a critical survey of classical references in versus fighting games, most of them originating in the 1980s and 1990s, but in some cases living on through sequels and reboots up to the present day. I have included six major franchises, a host of minor ones, and finally a few notorious failures: the good, the bad, and the ugly, so to speak. This is intended in part as a model for assessing the impact of any defined area of cultural content – in particular, a historical period – across a whole genre of video games. The body of evidence is discontinuous in several ways: the games were produced in a commercially competitive and fast-moving industry, in geographically and culturally diverse conditions, often for specialist audiences, and until recent years with very little documentation. Yet, with diligent work it is possible to reveal both the distinctiveness of each treatment, and some overall patterns or trends that emerge as characteristic of the genre.

The results show that all these franchises, despite having modern-era fantasy settings, mix cultures freely enough to incorporate ancient Greek and Roman elements in some form; this often occurs in sequels, and is more frequent in generic imitations. The imaginary game-worlds of versus fighting games turn classical antiquity into entertainment, and that means refractions of the past rather than straight lines from it. Ancient Greece and Rome enrich the lively mixture of people and places that has always defined the genre, especially after the breakthrough moment of 1992 when *Street Fighter 2: The World Warrior* offered multiple playable characters in a global context. The most surprising result of this survey has been to show how often history and geography are merged into one another. Whether or not supernatural factors are invoked, characters such as Marstorius, Gill, and Sophitia import ancient Greece and Rome into latter-day settings in a mishmash manner that might be called illogical or, better, impressionistic. Like a temporal version of the icons on an in-game map, these characters are emblems and mascots of past cultures rather than actual historical samples. The same is true of the real or imaginary archaeological sites we have seen in the backgrounds of stages, from Egypt and Athens to Rome and Segovia. It has become clear that classical allusions play out very differently through the roster than they do through the stages (and often in different games). However, be it through characters or through places, players of versus fighting games become casual cultural tourists, encountering ancient history and myth in various combinations of past, present, and future.

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8. Synthetic Spaces and Indigenous Identity: Decolonizing Video Games and Reclaiming Representation

Ashlee Bird

Introduction

The representational reality of games is an all too apparent lack of diversity within the types of characters and narratives that get created and, more troublingly, an overt racism and erasure of Native peoples in digital spaces through a variety of means. This chapter analyzes a selection of games and figures from the vast array of these representations in order to outline and critique the problematic narratives and images that have become cemented within the game development industry. From this foundation, this essay will demonstrate that Indigenous identity can not only be successfully represented through games, but entire worlds and teachings surrounding community, collective knowledge and oral tradition, and Indigenous epistemologies can be created within this digital medium, and thus embodied by the player.

Epiphylogenesis and Digital Evolution

In French philosopher Bernard Stiegler's essay *Who? What? The Invention of the Human* (1998), Stiegler goes to great lengths to discuss the process by which human and machine, or in the beginning stages of evolution, human and tool, have co-evolved, co-created each other. Stiegler titles this concept, *epiphylogenesis*. He elaborates:

> The ambiguity of the invention of the human, that which holds together the *who* and the *what*, binding them while keeping them apart, is différance undermining the authentic/inauthentic divide […] Différance is neither the *who* nor the *what*, but their co-possibility, the movement of their mutual coming-to-be, of their coming into convention. The *who* is nothing without the *what*, and conversely.
> *Stiegler 1998: 141, original emphases*

In the development of this concept, Stiegler uses the example of flint, in that not only are humans formed to and defined by the tool, wherein humans become predators through the utilization of flint and the spear, but the tool is also formed to and defined by humans; flint is evolved to fit into the form of the human hand (Ibid.). Epiphylogenesis, however, in its application to the modern machine of the video game, only fits in its relationship to very specific populations. Namely, that of the white, hetero male producer and consumer, a point that Anna Anthropy decries in her maker's manifesto *Rise of the Videogame Zinesters: How Freaks, Normals, Amateurs, Artists, Dreamers, Dropouts, Queers, Housewives, and People Like You Are Taking Back an Art Form* (2012).

> Now we have a dangerous cycle: publishers permit only games that follow a previously established model to be marketed to previously established audiences and only to those audiences. The audiences in question are mostly young adults, and mostly male. And it's these dudes, already entrenched in the existing culture of games, who are eventually driven to enter the videogame industry and to take part in the creation of games. The population who creates games becomes more and more insular and homogenous: it's the same small group of people who are creating the same games for themselves.
> *Anthropy 2012*

As Anthropy indicates, video games have historically replicated the constituents of their consumer market (who then become their production base) in the digital avatars that they host. While humans have evolved video games in their technical complexity, the epiphylogenic co-evolution of humans through the creation of digital humanity and digital spaces has historically been, and largely remains, reserved for a select few,[1] as will now be demonstrated through an analysis of four video games that demonstrate the problematic trend of Native American representation within the digital realm.

Custer's Revenge

In September of 1982, Mystique's game *Custer's Revenge* was released for the Atari 2600 under their line of 'Swedish Erotica' games. This series, previously featuring titles such as *Beat 'Em & Eat 'Em* and *Bachelor Party* (both Mystique 1982), were pornographic in nature, featuring nudity and strong sexual content. While *Custer's Revenge* was certainly not an exception to this pattern, it turned the previously established content in a dark new direction. The game features a nude (except for a Cowboy hat, boots, and a bandana) General Custer with an erection as its protagonist. The simultaneous antagonist and object of desire of the game is the completely nude Native American woman, Revenge, who is tied to a cactus on the opposite side of the screen. The game is a side-scroller, and the player's objective

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1   This is in reference to the fact that mainstream exposure, financial success, and widespread recognition has been obtained by and reserved for a select group of individuals and the companies that they make up. That is not to say that individuals the world over are not utilizing game development and creating works outside the AAA realm. See Wolf's collection *Video Games Around the World* (2015) for examples.

is to move Custer from the left-hand side of the screen to the right, dodging an onslaught of arrows, to rape Revenge.

This loop of trauma repeats; the only mechanic that is leveled is the rate at which the arrows are fired. The 'win' state is always the same. Fortunately, as John Wills states in his 2008 article *Pixel Cowboys and Silicone Gold Mines: Videogames of the American West* documenting the rise of the Western video game, the game was met with shock and disgust, and many retailers refused to carry the game in their stores. However, more tellingly of the discourse regarding Native American characters in games that this title would establish: "the ensuing controversy, however, boosted sales figures to some 80,000 units, roughly double that of other Mystique adult-targeted titles" (Ibid.: 289). While the American public at the time may not have been accepting of an explicit rape narrative in their video games, *Custer's Revenge*, much like its idealized, mythologized protagonist, would not be laid to rest, and neither would the dynamic that it established between Native American non-player characters (NPCs) and game protagonists.

After the North American video game crash of 1983, Mystique went bankrupt. Due to the defunct nature of the company, they sold their licenses to the company Playaround, who took many of their games and released them as 'double-enders' (AtariAge 2019). These 'double-enders' were larger cartridges that had a game on each of their ends. For a time, *Custer's Revenge* was re-released in this manner in two forms: under the title *Westward Ho* in its original incarnation, and as *General Retreat*, wherein the roles of Custer and Revenge are reversed within the game (Ibid.). Fast forward to the modern age of the internet, and the code of *Custer's Revenge* resurfaces outside of the confines of the Atari. In 2014, while researching for an article about Indigenous representation in video games, Daniel Starkey, a video games journalist from the Chickashsha Nation, found YouTube videos that featured gameplay of a completely rebooted *Custer's Revenge* (Wheeler 2014). The updated game was released in 2008 and features modernized graphics along with the introduction of new game mechanics and characters. A repeated wave of scantily clad white women wielding scissors now appear in the game, attempting to make their way towards Custer and relieve him of his weapon. However, it should be noted that at no point do these white, female NPCs make any attempt to utilize their scissors in order to free Revenge. Additionally, Custer now has the ability to shoot ejaculate at the descending arrows to knock them aside, as well as at the white women attempting to castrate him. After witnessing this atrocity, Starkey reached out to prominent Anishinaabe and Métis game designer and academic, Elizabeth LaPensée (Ibid.). LaPensée took to Twitter and within 24 hours many of the gameplay videos had been taken down and many hosting sites removed the game from their titles available for download, as they had been unaware of its content. Not only does this game reinforce violence and gender discrimination that is already deeply established in the video game industry, LaPensée noted, but it also reinforces a narrative that is responsible for the staggering number of missing and murdered Indigenous women and girls, and co-opts that real-life trauma for the purpose of entertainment (Ibid.). However, not only did the game *Custer's Revenge* itself continue to persist, but by examining modern games that feature Native American characters, it is apparent that the narrative established by this game and the roles that it developed for Native characters, persisted as well.

Codifying Race in *Assassin's Creed III*

Since the release of *Custer's Revenge*, there has been no shortage of video games released that prominently feature heavily stereotyped Native American characters. The first big-budget or, for the industry folk, AAA video game featuring a Native American protagonist was released on 30 October 2012 in the form of Ubisoft Montréal's *Assassin's Creed III*, the third installment of the popular third-person action-adventure series. The story arc of the first three games follows the life of a young man named Desmond Miles, the descendant of a line of famous Assassins throughout history, all of whom work to topple their rival secret society, the Knights Templar. The third game follows Desmond's exploration of the life of Ratonhnhaké:ton or, as he is more commonly referred to in the game, Connor Kenway, a half-Mohawk, half-British Assassin in colonial North America during the American Revolution. All of the Assassin's Creed games, in their opening sequences, famously boast the following disclaimer: "inspired by historical events and characters. This work of fiction was designed, developed, and produced by a multicultural team of various religious faiths and beliefs." Tellingly, these games, before the player even begins them, immediately work to assure their user that they have stemmed from a well-rounded, culturally complex group of creators. However, this game still failed to move past the realm of stereotype and give a nuanced and accurate portrayal of a Mohawk man and his community.

Connor's mother Kaniehtí:io, more commonly referred to as Ziio, is a glorified 'Indian Princess,' one of S. Elizabeth Bird's outlined tropes for Native peoples in popular culture (Bird 2001). The trope is identifiable by her noble air, her selflessness, and her willingness to sacrifice herself and her culture for her white love, as well as her typically white-washed physical features; the Indian Princess is also, consequently, a typically doomed character (Ibid.). Ziio can be slotted perfectly into this role within *Assassin's Creed III*. Not only does Ziio go out of her way to help Haytham (Connor's British Templar father) and his fellow Templars, and is betrayed for it after the conception of their son, she is ultimately denied the position of Clan Mother after doing so, thus sacrificing an important position in her community to aid Haytham in his pursuit. Ultimately, Ziio meets her end when her village is attacked by soldiers under the command of George Washington, and her burning hut collapses on her as her crying son is pulled away by a village elder. However, while Ziio is a prime example of the types of stereotypical representation that Ubisoft took part in, there is something much more problematic occurring in terms of digital enactment of race within the game, and it happens at the level of code.

In *Assassin's Creed III*, race is coded into the game. At the game's opening, when the player is in control of Haytham, the avatar nimbly scales a church with just his hands and feet. However, upon Haytham and Ziio's first introduction, Ziio flees from Haytham and takes to the trees and begins jumping branch to branch to escape. *Haytham cannot follow*. Haytham is unable to climb trees. The game reinforces the only explanation it provides, which is that only 'primitive,' non-white peoples can climb trees, through the fact that when the player takes over the form of Connor, he is able to climb trees *and* churches. Race functions, within this game, at a mechanical, coded level. No matter how a player might try, Haytham will never be able to climb a tree. This digitally codified racial disparity hints at

the types of narratives that have become established within games since *Custer's Revenge*. Those narratives indicate that Indigenous characters are inherently different, not only in their physical representation, but in the ways in which they exist within the larger structural space of the game. While it may seem that Connor has a distinct advantage over Haytham in that he has an extra ability, he has instead been coded into time, trapped in the space of the 'unevolved' digital Native. These types of coded roles and relationships that indicate a settler-colonial understanding of race and the relationships established between players and Native avatars becomes abundantly clear in two of the most influential Western video games to date: Rockstar Studios' *Red Dead Redemption* (2010) and *Red Dead Redemption II* (2018).

Red Dead Redemption and Coding Against the 'Vanishing Race'

Released in May of 2010, *Red Dead Redemption* is set in the American West in 1910 and stars protagonist John Marston, a former gang member who has turned vigilante bounty hunter. John's status as a man with a shady past is an element often utilized in the Revisionist Western genre. For example, the protagonist of the iconic Revisionist Western film *Shane* (1953) is a man with a mysterious past who comes to the aid of others whilst battling his inner demons, much like Marston does in *Red Dead Redemption*. The gameplay design of *Red Dead Redemption* also reflects the sentiments of the Revisionist Western, specifically through the inclusion of an honor system within the game. Players quickly learn that certain acts will earn you honor points, which often come with the benefit of money (with which to buy better guns, horses, etc.) or achievements for the good deed you have done. In fact, many missions throughout the game reward players for accomplishing goals without excessive violence or killing. Furthermore, 'dishonorable' acts, such as robbing someone or murdering someone in cold blood, not only take away from your honor meter, but also result in having a bounty placed on your head and lawmen chasing you until you surrender and go to jail, losing money and items, or until they kill you. These creative choices that frown on violence also support John Marston's Revisionist character in that he is portrayed to be possessed of an ideology that would, in many circumstances, incline him to be less violent.

The central Native American character in the game is a man named Nastas. Nastas meets John when John saves his life and consequently agrees to be John's guide to a gang hideout in the mountains. Before the two make their way into the mountains, they run into Professor MacDougal, an anthropologist from Yale who is studying Native Americans and is absolutely thrilled to meet Nastas. It becomes quickly apparent that MacDougal knows surprisingly little about any Native peoples or cultures. When MacDougal meets Nastas he speaks to him in very slow, enunciated, drawn out, Pidgin English. After staring at the professor for a minute and playing into it as if he does not understand, Nastas quips that he speaks English fluently. Marston laughs and the professor is thrown off guard. The professor ends up joining John and Nastas at the prospect of meeting more Native Americans. However, the group is ambushed. Nastas is killed in the fight and the professor cowers, too afraid to do anything, leaving Marston to try and find their way out. It is also quickly revealed to the player through MacDougal's frantic

and erratic behavior, that he is a cocaine addict, which thus diminishes his credit even further. This interesting comparison between the calm, knowledgeable Nastas and the crazed, cocaine-addicted, racist MacDougal not only gives a nuanced and accurate rendering of Native Americans, but serves to discredit a white male, as Mary Katherine Hall discusses in her article, *Now You Are a Killer of White Men: Jim Jarmusch's "Dead Man" and Traditions of Revisionism in the Western* (2001). "That these two points are united is no accident, for the revisionist Western has often linked the critique of white society to the claim of a newly realistic Indian" (Ibid.: 5). In this specific regard, *Red Dead Redemption*'s representation of racial minorities serves the agenda of the Revisionist Western, as well as attempting to encourage the player to look more critically at white society and the devious and crooked men they have chosen to lift to the top. However, most of this work gets undone when one interrogates the underlying mechanical structure in which these two characters exist and the code that predicates their interactions.

Due to the dubious nature of previous Westerns and the relationships that they have dictated players *should* have with Native characters, the code of *Red Dead Redemption* is specifically constructed to deter racialized violence. This preventative measure has been coded with a hair-trigger level of sensitivity. If the player so much as accidentally bumps into Nastas with their horse, thereby knocking him to the ground, the message appears: "you assaulted Nastas. Critical mission failure." However, if one attempts to brutalize another white character, for example Nigel West Dickens, the digital stand in for Frederick Jackson Turner whose message upon meeting John is "this is America! Where a lying, cheating, degenerate can prosper!" the outcome is quite different. West Dickens can be shot infinitely and not only does no harm come to him, the game does not block the player from doing this or mete out any punishment for it, because this is not an established response that the average player within a Western has been conditioned to have. This design discrepancy signals the relationship established between Native NPCs and player protagonists within Western video games: the Native NPC is the default enemy type and should be engaged with violently. This relationship is so deeply embedded that Rockstar Studios needed to defend against this behavior in order to ensure that Nastas would live long enough to fulfill the mission. This type of enforced morality features even more prominently in Rockstar Studios' prequel to *Red Dead Redemption*, illustrating that, eight years later, these violent player vs. Native NPC relationships are still the dominant narrative and that they still must be safeguarded against within the game.

Just as its predecessor did, *Red Dead Redemption II* (*RDR2*) – which is narratively a prequel to the older game – exists in a moral grey area. *RDR2* gatekeeps against player-imposed violence or profanity that it feels somehow crosses an indiscernible line, yet is rife with all the 'correct' racial erasure, gendered violence, profanity, and racial slurs. *RDR2*, at first glance, would appear to have checked many of the boxes for diversity and inclusion within a game. However, scratching anywhere below the surface quickly reveals the game to be wanting and illuminates that its performance of diversity is an act in breadth, not depth. The representation of women is one note, binary, and minimal. The representation of the African American populous, specifically Creole peoples, lacks any meaningful development or engagement with

the game's plot and protagonist and subsequently feels like a disingenuous attempt for 'flavor.' The lack of nuanced representation of Native American characters persists in the prequel as well, although the developers and writers endeavored to include not only more prominently featured Native characters as well as a lengthy plotline following the relationship between a Native community and the U.S. military.

The story between the Wapiti and the U.S. military is an earnest attempt at historical accuracy but, regardless, ends in violence and the death of Eagle Flies, the Wapiti Chief's son, as well as the complete disappearance of the Wapiti peoples from the game's Epilogue. Furthermore, while the designers of the game feel fully within their rights to eradicate the Wapiti peoples by the game's epilogue, the player is strictly prevented from doing so. Similar to the "you assaulted Nastas" problem of the first game, the player is completely unable to draw their weapon within the bounds of the Wapiti reservation. This same mechanic takes place within the town of Rhodes, but the circumstances for these two measures of prevention are vastly different. The inability for Arthur, the protagonist, to draw his weapon within Rhodes is an established part of a narrative arc. Dutch, the gang's leader, specifically asks Arthur and the other members of the gang not to cause trouble in Rhodes. Additionally, once the gang is done with their dealings in Rhodes, the game no longer prevents Arthur from drawing his weapon there. However, at the outset of the game, from which you are able to enter the Wapiti reservation, there is not yet an established narrative purpose as to why Arthur cannot unholster his weapon (this only comes much later in the game). The measure in *RDR2* remains the same as in its predecessor: the Wapiti community has no law enforcement and no potential witnesses, and subsequently, there would be no ramifications whatsoever if a player decided to massacre them all, and therefore, Rockstar Studios would be unable to execute their desired narrative later in the game.

The threat of this massacre, and its subsequent disruption to the game's narrative, is a very real one, according to a GameSpot.com forum post *So You Can't Killed* [sic] *Indians or Kids … Censorship* (happychappy654 2018). The original poster bemoans:

> Went onto the Wapiti reservation and discovered you can't use weapons!! You can't shoot kids either. So are Indians a protected class in games? Bet rockstar was terrified that SJWs would say they support genocide or something […] It breaks immersion when you basically get a message saying: "sorry this part is censored, we wussed out". Give it time and they'll do the same to the feminist in St Denis. What a joke.
> *happychappy654 2018*

This post and many like it, such as the thread *Why Can't You Kill Indians?* on Reddit's *r/reddeadredemption* ([Deleted user] 2018), which features further complaints about catering to 'social justice warriors' (SJWs) and includes multiple responses that describe how to get around the game's prohibitive measures in order to murder the Wapiti, are clear indicators that the violent history and relationships between Native avatars and players are still prevalent in gaming culture. Once again, this mechanical choice by Rockstar indicates that developers are conscientious of

the established narrative within video game spaces that players are to engage with Native avatars violently and are actively working to deter players from pursuing it. The game sanctions violence, sexism, racism, profanity etc. from the developers, but limits it from users in very specific, curated ways, which are predominantly through monitored race relations.

Digital Gatekeeping and the De-evolution of the Native

Through the analysis of these games, it is evident that the epiphylogenic benefit of futurity and a posthuman reality is being gatekept and reserved for a specific majority. For Native Americans, Stiegler's epiphylogensis not only does not apply, but rather, the representation of Indigenous peoples within video games has gone so far as to create a devolution and an explicit shift towards the past. In order to resolve this problematic history of digital representations of Indigenous peoples, it is important first to identify and dismantle the way in which this epiphylogenic co-evolution between machine and posthuman avatars disproportionately excludes Native Americans. For Native peoples and their digital counterparts, there is no posthuman creation of a bettered version of themselves or their reality or the manifestations of a projected futurity. Instead, there is a very apparent erasure and stagnation of Native peoples and not only a lack of futurity, but a distinct move backwards in time. The not uncommon stereotype of Native peoples as the 'people trapped in time,' pervades many forms of popular media and Philip J. Deloria speaks to this common trope in his work *Indians in Unexpected Places* (2004). When referencing the photograph *Red Cloud Woman in Beauty Shop* (see Figure 8.1) taken in Denver in 1941, Deloria states:

> Indians are primitive, unaccustomed to the modern technology of the 1940s hair dryer. Indians live in the hinterlands, strangers to the urbanity of the manicure. They practice barter or gift economies and are, thus, unprepared for the cash exchange of the beauty parlor.
> *Deloria 2004*

All of these stereotypes that Deloria identifies and addresses with *Red Cloud Woman*, work to stall Native peoples within a particular period of time. This common trope of the digitized Native avatar as a buckskin wearing, tomahawk toting, cowboy hunting savage ultimately performs the exact opposite move that the video game performs for the majority who are represented in video games; not only do Indigenous peoples not get the positive input of evolving technology through their, and many other minority groups', exclusion from the video game industry, but Indigenous people are also devolved in their digital representations which are relegated to stereotyped images from the past. What is more troubling, is that the narrative of the people trapped in time persists on a dual level within these virtual spaces. Not only are Native avatars relegated to spaces of history, but even if culture evolves out of this stereotype, these digitized bodies will remain in perpetuity. This eternal representation of heavily stereotyped and historicized Native bodies is harmful.

Figure 8.1: Red Cloud Woman In Beauty Shop, *Denver, 1941 (Deloria 2004: 3).*

Decolonizing Video Games and Reclaiming Representation

So, the question must be asked: if Indigenous avatars are not safe within the space of the video game, how can Indigenous creators work to reform the underlying narrative that predicates these violent interactions within game spaces and develop meaningful, accurate Indigenous representation? Through an analysis of my own work, I will demonstrate that Indigenous creators can turn these digital spaces and digital representations into not only accurate, grounded, poignant portrayals of lived bodies and experiences, but can push against the epiphylogenic divide and create decolonial, sovereign virtual spaces of futurity and survivance by and for Indigenous peoples (Dillon 2012).

Seeing themselves represented in media is incredibly important for Native youth, as Native people in the U.S. are one of the most invisible minority groups in popular culture. While there is something to be said for creating Native representation within a video game from the ground up with a brand new project (*e.g.* the game *Never Alone (Kisima Inŋitchuŋa)*, Upper One Games 2014), there can also be an importance in taking a cultural icon such as Nintendo EAD's *Super Mario Bros.* (1985) and reworking it into something that Native youth can see themselves in. ROM hacking – the alteration and/or modification of the Read-Only Memory of a video game in order to change the graphics, gameplay, level construction, or text and dialogue of the game – can be a new outlet for Native youth, and can be a way to re-program the imbalanced epiphylogenic history of games. It can be a way to take an established institution and contribute to it in an intellectual and artistic way in order to make Native culture and positive representation available

Figure 8.2: Screenshot: altered Goombas and language in ROM hacked Super Mario Bros.

to Native youth and the world at large, as well as to retroactively reform a piece of technology to suit and include a broader audience.

In my ROM hack of *Super Mario Bros.* for the NES, the overall goal is to replace Mario with the figure of Gluskabe, an Abenaki hero, and replace Bowser with Moulsem, the wolf. Some of the cosmetic changes that I have made to the ROM so far are ones such as the Goombas, the basic enemies within the original game, having been replaced with wolf prints so that in his adventures through the game Gluskabe is tracking Moulsem, not mindlessly killing animated minions. I used a free tile editor (a program that allows you to access and edit the individual art tiles for the game) downloaded off of the internet to turn the Goombas into wolf prints, as well as to transform the 1-up mushrooms into acorns, an item commonly collected by Abenaki as an ingredient high in protein, fats, and starch.

Additionally, I altered the code to change the majority of the text within the game. All of the title text has been translated into Abenaki, and 'Mario' is now 'Sipsi,' my last name translated. Unfortunately, there are not enough text spaces for 'Gluskabe,' as *Super Mario Bros.* is programmed to only have five character spaces for the character name and this cannot be changed, demonstrating a problem that many Native languages will run into when altering retro pieces of software. Whether it be insufficient character spaces, limited amounts of symbols or punctuation, or the fact that some languages will not have a word for all of the words within the game, only so much can be done. However, what can be done within the confines of the largely pre-determined digital space of *Super Mario Bros.* remains incredibly powerful.

In the spring of 2017, I co-taught a workshop about ROM hacking *Super Mario Bros.* alongside Professor Patrick LeMieux to Native American youth at the UC Davis Native American Youth Empowerment conference (Bird 2016). It was shocking to realize, during this workshop, that the Indigenous languages and representations that these students were creating within their ROM hacks of *Super*

Mario Bros. may have actually been the first inclusion of their heritage languages or the first accurate and meaningful Indigenous representation that they had seen in a video game, and it was of their own making.

Furthermore, while inherently more difficult, developing a game from the ground up, a process I have also experimented with, provides Indigenous creators with even more space to develop language, sound, avatars, etc., as well as affords the ability to fit an Indigenous lens onto the game itself. For example, *One Small Step* (ABird 2018), my first feature length game, developed in Unity, is an outer space walking simulator that tackles the issue of open-world exploration and colonization within games. While the game at first presents itself as any open-world game would, it quickly becomes apparent to the player that something else entirely is taking place. The game takes away all the traditional aspects of an open-world game: there are no resources to collect, no enemies to kill and loot, no territories to claim. Players are simply asked to look and listen. The game tracks your exploration and your simply being in an environment creates irreversible footprints. The further you progress, the more the world starts to become closed off to you and the more your ability to explore becomes inhibited.

These two examples, as well as many other Indigenous created games, work to balance the epiphylogenic scales of the video game. Indigenous authors of digital games push back against the narrative of the people trapped in time, of the faceless enemy type, refusing to be shunted into an imagined past within digital spaces and futures.

Conclusion

This new understanding, expression, and re-creation of digital spaces as places for accurate and meaningful Indigenous representation, creation, and interaction ultimately transform the digital space of video games into realms of Indigenous survivance (Vizenor 2008). The notion of survivance is based off of the work of Anishinaabe scholar, Gerald Vizenor. Vizenor states that survivance:

> Creates a sense of native presence over absence, nihility, and victimry. Native survivance is an active sense of presence over absence, deracination, and oblivion; survivance is the continuance of stories, not a mere reaction, however pertinent […] Survivance stories are renunciations of dominance, detractions, obtrusions, the unbearable sentiments of tragedy, and the legacy of victimry.
> *Vizenor 2008: 1*

Smith furthers Vizenor's theory of survivance, not only survival but active resistance, within her projects, articulating, "events and accounts which focus on active resistance are important not just because they speak to our survival, but because they celebrate our being at an ordinary human level and affirm our identities as indigenous women and men" (Smith 2012 [1999]: 146). This conception of survivance, at its most base level, as a mode for achieving and asserting basic humanity, which as aforementioned is a necessary struggle in the face of stereotypes that seek to devolve, historicize, and actively erase Indigenous lives, is one that can be aptly and effectively translated into digital spaces. Indigenous creators can

push back against the epiphylogenic discrepancy that has heretofore existed within virtual realms that seeks to de-evolve the Native figure and to relegate them to a space of fictional, perpetual, historicized victimry.

Instead, within these spaces, Indigenous peoples can perpetuate digital survivance. We will no longer be set as the enemy type, endlessly recreating a very real and very violent history of colonization within a virtual realm. We will not only survive in these digital spaces, but we will thrive in them and change them into spaces of Indigenous futurity (Dillon 2012). Ultimately, I believe pursuing accurate, meaningful, Indigenous-made representation and games will emphasize not only the possibilities created through video games, but it will stress the importance of there being Native community involvement in the production of these digital identities and worlds. Because when we embody these identities and worlds, we as individuals learn, grow, feel, and remember. Through play, we connect with the sounds, knowledge, and memories of the *people* who created them. There is a resonance at work in these digital Indigenous identities and traditions, a pushback against a Western worldview, and a reverberation of culture (Erlmann 2015). We can use these games to know spaces and to create and understand soundscapes and languages, embodied modes of play, and learning that reflect our lived cultural and spiritual spaces (Eisenberg 2015). We embody tradition, as well as a dual Indigenous identity: one that is our own new one that we can then learn and move forward from, and one that is the identity of the person who created it. We, through these created digital Indigenous identities, traditions, and spaces have the opportunity to rely on each other, learn through and with each other, and have a collective memory that builds us and creates a foundation firmly in the past of our ancestors, in our individual present, and propels us forward as a community.

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9. Fork in the Road: Consuming and Producing Video Game Cartographies

Florence Smith Nicholls

Introduction

Archaeogaming, the study of the intersection between video games and archaeology, stands at a fork in the road. Should archaeogaming seek to define itself through the application of traditional archaeological methodologies or look to other disciplines and player communities? In order to answer this question, I will chart a path through several case studies to illustrate how archaeogamers have utilized different mapping techniques to record video games. By collecting together these cartographic examples, I hope to gain a better perspective on the status quo of archaeogaming. The limitations and biases of traditional mapping techniques in archaeology, video games, and indeed archaeogaming will be one of the key strands of this piece.

   Though this chapter is limited in its subject matter, it calls for a dynamic and hybridized approach to archaeological mapping of video games. I tentatively put forward my own definition of archaeogaming as the archaeological study of video games through the crafting of narrative space. This narrative space can be maps, diagrams, or other forms of visualization, each being a translation or 'skeuomorph' (Morgan & Wright 2018: 137) of video game data. My study of archaeogaming's narrative space leads me to hypothesize that some of its best potential lies in more collaborative work, especially with other communities of practice.

What Are Maps?

In a very general sense, a map can be defined as "a non-human object that provides testimonial via visual representation" (Scullin 2018: 242), with the testimonial specifically being spatial in nature. As Witmore elaborates, map-making is an act of translation (2013). A traditional map is expected to translate aspects of the 3D material world into two dimensions, though with the advent of digital mapping

and illustration this is not necessarily the case. As an archaeologist, I use various historic maps to track how a site developed over time. I might also create my own maps, whether they be hand-drawn or geo-referenced digital maps made with Geographical Information Systems (GIS) software. These are examples of specialist map-making, but maps are omnipresent in everyday life. As I have been employed as a commercial archaeologist in the United Kingdom, I will refer to British documents as examples, but these are certainly not to be taken as the definitive authority on archaeological practice. In the Chartered Institute for Archaeologists' *Standard and Guidance: For Archaeological Excavation* it states that:

> [The recording system] should entail relating the site and excavation areas to the National Grid and the Ordnance Survey datum; relating all plan and section drawings to the site grid.
> *CIfA 2014: 12*

It is standard practice in conducting archaeological fieldwork to draw excavation plans which can be referenced against national grid coordinates. Furthermore, when conducting the initial research assessment of a site, archaeologists are expected to use a range of historic cartographic sources to inform archaeological mitigation (Ibid.). In this way, maps are authoritative texts which inform each other in archaeological discourse.

The ubiquity of maps, digital or otherwise, could render them and what they represent appear neutral. However, the objectivity of maps is a subject which has been called into question, notably within the field of archaeology which relies upon them so heavily as a form of knowledge production. Various archaeologists have interrogated the idea that maps are objective, neutral, and immutable. In her piece *Feminist Mapping for Archaeologists*, Silvia Tomášková (2018) points out how, in the United Kingdom, the earliest Ordnance Survey maps of the eighteenth century marked antiquities on them, though their primary use was for military purposes. If we consider these early maps as an expression of land ownership by the upper classes, then the recording of antiquities is also an account of the cultural wealth of landowners. The inclusion of Ireland in the first Ordnance Survey was, by extension, both a display and a means of facilitating colonial power.

The distrust of maps as an archaeological source is articulated by Christopher Tilley, who considers all representational forms to be problematic, as he comments: "studying landscapes through such representations can provide only a relatively superficial and abstract knowledge" (2016: 6). Countering this, Gillings and colleagues (2018) point out that even critics of maps must still rely on them. Dismissing maps as being essentially colonial, sexist, or partial is exactly the kind of essentialist approach that their critics would seek to avoid (Ibid). This is not to minimize the colonial appropriation of cartographical practice, but to acknowledge that maps are made as much in the context of their interpretation and use, as they are in their physical production. Maps have agency, as both artifacts and assemblages. As assemblages, maps are a "portable kind of knowledge system" (Aldred & Lucas 2018: 24) which is very contingent on context. Indeed, given that maps can be considered as assemblages, archaeologists are well suited to studying them.

Petrie and colleagues have published a paper on their utilization of nineteenth to twentieth century maps of India as a source for identifying potential archaeological sites that may have subsequently been destroyed or obscured by modern development (Petrie *et al.* 2019). The authors acknowledge that the Survey of India 1"-to-1-mile maps were created by and for the British Empire and that, while local populations were unsurprisingly aware of the sites, the surveyors likely recorded many of them incidentally (Ibid.: 21). The paper is co-authored by Ravindra N. Singh, at Banaras Hindu University, but the other four authors are admittedly based in European universities and the paper relies heavily on British colonial sources. This research is an interesting example of the contingency of maps and the enduring authority of colonial cartography, even in an apparently post-colonial context.

Any discussion of map-making and colonialism must cite Indigenous map-makers if it is to seriously engage with the task of de-centering white, Northern European scholars as the default cartographic authority. In their graduate thesis, White states:

> I deemphasize empirical data such as length, width, and height in favour of the view that these stone fish trap are the product of my ancestors' labour.
> *White 2006: iii*

White used a combination of oral history, ethnography, videography, as well as cartography, to record Heiltsuk Nation stone fish traps in British Columbia. White used the same ethnographic methods that had previously been used to misrepresent the Heiltsuk Nation to help them do research within their own community (White 2006: 5). This example raises the potential for historically colonialist tools, such as mapping, to be appropriated by Indigenous communities on their own terms.

Video Game Maps

I suggest we make a brief detour at this point to consider maps as colonial tools within video games. In *Playing Subaltern: Video Games and Postcolonialism*, Mukherjee makes the point that whilst many game scholars come at the subject from the perspective of the historical colonizer, there are "millions of players from the Indian subcontinent, Africa and the Middle-East for whom these empire-building games actually provide a more direct experience of engaging with their colonial history" (2018: 508). Going further, Mukherjee notes how players may be alienated from the colonial cartographies in video games which inaccurately and anachronistically depict their local regions (Ibid.). Video game maps as digital colonialism is a key aspect of this piece which we will keep returning to.

Now that maps have been established as unreliable narrators of material culture, we can turn to their role in video game play. There are vastly different ways that cartography can manifest itself in this context. Alex Gekker (2016) has produced a taxonomy of different maps in video games based on the extent to which they take up screen space (mini-map, full size, and super-imposed) and how interactive they are (mutable versus inert). These two axes of analysis are useful as a starting point. Gekker's work takes into account that game maps can be navigational devices that

are key to understanding and orienteering through the game space and might be viewable through an 'in-game' window or an 'out-of-game' window that is only accessible when the game is paused. In this way, the nature of the map dictates the rhythm of play.

Given concerns with the colonial application of maps raised earlier, it is important to point out how the top-down cartographic gaze is a common feature of strategy games such as *Age of Empires* (Ensemble Studios 1997), which involve the player exploiting material resources and taking control over areas of the game map. Not all games which have a map as the game space are so obviously colonial in nature. *Pac-Man* (Namco 1980), for example, is a game with a single map that was specifically designed that way as an arcade game. Gazzard (2013) argues that although the map stays the same, the moving ghost enemies essentially constitute dead ends so the nature of the map constantly changes. Under Gekker's typology, *Age of Empires* would be a super-imposed mutable map, while *Pac-Man* would be super-imposed but inert in the sense that the map cannot be directly manipulated.

While a map typology such as this does set up points of comparison, it has some obvious limitations. The first and perhaps most significant is one that Gekker admits himself:

> It does so within a predominately spatial framework, while the temporality of the game experience (and the map) is also of high importance for understanding the interplay between the two.
> *Gekker 2016: 143*

Gekker's taxonomy does not allow for the temporal context of game maps, which is why the *Pac-Man* paradox mentioned above cannot be pigeon-holed into it. Neat typologies like this cannot accommodate player experience. Gekker's work also does not include video game maps which appear as objects or decoration within game worlds, or indeed their analogue equivalents. There are a vast array of documents and interfaces which can be broadly considered as 'video game maps,' both within video games and exterior to their digital environments. Maps are created by game developers when designing levels or areas of a game. Players themselves may sketch their own to keep track of progress or to supplement the in-game map. Analogue game maps are also available, as additional play aids or as fan memorabilia, demonstrating that game maps can become synonymous and emblematic of the gameplay experience. *Virtual Cities* is a good example of this. It is an atlas of video game cities as interpreted by an urbanist and visual artist who aimed to "critically reimagine them in ways that would look familiar in the eyes of a fictional local surveyor" (Dimopoulos 2020: 7). Circling back round to the theme of colonialism, game maps and guides could be considered as tools for mastery of the game. However, the premise of *Virtual Cities* is a reminder that players themselves become digital surveyors through their familiarity with a game world, and this can be attributed just as much to a sense of belonging as it could be to a need for control.

Rather than trying to chart the unchartable (the entire cosmology of what can be considered video game maps and mapping practices), this chapter specifically focuses on the maps that one community of practitioners have created to record their experience and understanding of video games from an archaeological perspective.

Maps as Narrative Space

While Gekker employs a rigid typology, Rowland (2014) considers parallels between both medieval and video game maps which do not represent scaled measured space so much as they represent the scale of those places in relation to a particular cosmology. Medieval maps, such as the Psalter World Map created in the thirteenth century with the holy city of Jerusalem at its center, served to illustrate the world as God's creation. Key locations are also often at the center of game maps such as Hyrule Castle in *The Legend of Zelda: Ocarina of Time* (Nintendo EAD 1998). Rowland argues that both are artifacts designed for slow consumption:

> Video game maps and 'mappaemundi' contain space and places in which moving through each place requires a considerable effort, but which space does not suggest difficulty, but is instead there to require pause and deliberation.
> *Rowland 2014: 197*

By facilitating the construction of narratives through their design, medieval and game maps can be considered as narrative space that requires more than just a glance for comprehension. This concept is one that Sybille Lammes has also explored in her work on video game cartography. In her piece *Playing the World: Computer Games, Cartography and Spatial Stories,* Lammes comments on how the interactivity of game maps allows players to "create their own (post) colonial stories by translating world histories into personal stories" (2008: 94). Rather than adhering to the traditional and indeed colonial idea of an authoritative and static map, Lammes puts forward the idea that through interactivity players can create their own personal stories which can undermine colonial rhetoric, a point which echoes my earlier observation about *Virtual Cities*. Lammes & de Smale (2018) have also worked together on a collaborative autoethnography of their experience playing the strategy game *Sid Meier's Civilization VI* (Firaxis Games 2016). They found that the way online turn-based play was structured between them allowed for reflection on their interactions with the game and "the (re)production of post-colonial narratives" (2018: 23). The map as an interactive space which facilitates personal narratives is also discussed by Mukherjee, who states that:

> The player, whether from the erstwhile colonized countries or elsewhere, nevertheless, both writes and writes back in games that engage with the questions relating to colonialism whether he or she chooses to or not.
> *Mukherjee 2016: 518*

This 'writing' of the player through their interactions, whether delible or not, forms part of the palimpsest of the digital map. This notion of the video game

map as digital palimpsest takes us back to Gekker's writing about medieval maps, layered with notes that are hard to decipher but adding to the narrative space. Archaeogaming requires ludic mapping that incorporates the personal journey of the researcher as well as cartesian measurements.

There are further contingencies that should be considered in terms of the narrative space of video game maps and how archaeogamers might utilize them as part of their practice. One of them is the context of knowledge production in the academy. Though this chapter has stressed the importance of acknowledging the colonial application of maps and archaeological method, we should keep in mind that the academy and indeed other research institutions are not necessarily invested in this self-reflexivity. As Soraya Murray puts it in her piece *The Work of Postcolonial Game Studies in the Play of Culture*, academic institutions can be performative in their diversity work, whilst being unreceptive to supporting research into topics which are deemed esoteric and not relevant to the job market (2018). The uneasy place of archaeogaming within the cosmology of the academy might render any critique of existing recording practices, or indeed a pursuit of more self-reflexive recording, difficult to justify.

Another aspect of archaeogaming cartographic research which must not be overlooked is the labor conditions of video game development. There has been controversy surrounding the production of the large open world AAA game *Red Dead Redemption 2* (Rockstar Studios 2018), with reports of staff working under 'crunch' conditions of 100 hours per week (Good 2018). The sprawling, complex map of *RDR2* was delivered through these unhealthy working practices, which are endemic in the wider game development community. When we consider that crunch conditions were in part used to make significant alterations to the game map and camp system (Ibid.), we need to be wary of praising ambitious video game worlds on face value. Just as the medieval Psalter map "both provides contextualisation but also requires it" (Rowland 2014: 191), video game maps must be studied as crafted artifacts which are not produced in a vacuum.

Archaeogaming

One way to study video games maps is through the lens of archaeogaming. Archaeogaming can be very broadly defined as the archaeological study of video games as artifacts, immaterial spaces, and their programming. It is possible to distil the field down into various sub-fields in terms of representation, creation, and praxis, with examples of work done in each area. For example, Meghan Dennis (2016) has conducted works on the ethics of how archaeology and archaeological practice are represented in video games, while Tara Copplestone (2017) has developed games with an archaeological perspective through experimentation with non-linear narrative. In terms of applying archaeological methodology to video games, Andrew Reinhard (2018a) has recorded games as archaeological sites. Of course, these various research strands are not mutually exclusive, nor exhaustive.

In comparison to traditional archaeological fieldwork and map-making, the study of video games may seem incongruous. However, in their map manifesto Gillings and colleagues state that "there should be no limits on what is deemed mappable" (Gillings *et al.* 2018: 11). The practice of recording space, place, and other qualities

in video game contexts is an answer to this call. As archaeogaming is an emerging and admittedly nebulous field which draws upon archaeological methodologies, I wanted to explore how archaeogamers have used mapping techniques in their scholarship. As elaborated in the above discussion, maps are assemblages that are contingent on historical context, thus my hypothesis was that they could be used as a source to understand the contemporary affordances of archaeogaming.

Archaeogaming is a relatively new field. As of yet there has been limited analysis of how archaeogamers produce and consume knowledge – a thorough epistemology of archaeogaming has yet to be written. Drawing from archaeological methodology and applying it to digital space, cartography has been one of the key recording techniques employed in the field. It is for this reason that I have examined the below examples of archaeogaming maps to attempt to map the discipline itself. Aldred & Lucas use the simile of maps being like a microscope: "they make the close appear distant" (2018: 27). By studying the maps that archaeogamers create to record games, is it possible to gain a wider perspective on the field itself?

I chose three maps made by archaeogamers as case studies. In order to gain a deeper insight into the tools, aims, and intended audiences for these maps I conducted unstructured interviews with two of the practitioners over email. These interviews were performed with informed consent (The Open University 2019), with the two participants taking part with the knowledge that their answers could be included in this chapter. The third archaeogaming practitioner is myself, so I employed an autoethnographic analysis of my own map-making experience. Given the small sample size and the complication of reflecting on my own work, these case studies are not put forward as a representative qualitative survey of archaeogaming. Rather, they serve as a primer for further research into archaeogaming as a community of practice.

Mapping Archaeogaming

No Man's Sky Archaeological Survey
The first archaeogaming practitioner I want to discuss is Andrew Reinhard. Reinhard is the one of the most renowned archaeogamers, having originally coined the term (2013) and released the first book entirely dedicated to the field and its methods (2018a). For these reasons, and the fact that he has conducted an archaeological survey of the game *No Man's Sky* (Hello Games 2016; hereafter NMS) for his PhD thesis, I was particularly interested to see how he incorporates mapping techniques into his digital fieldwork.

As part of this survey work, Reinhard has mapped and recorded planets which are procedurally generated in the game using various methods, including analogue and digital mapping; creating digital maps and sections like the one you can see in Figure 9.1, plus screenshots and video captures. The records he made of a planet called Pepper Dusk (Reinhard 2018d) were particularly significant because it is the player base of the Galactic Hub founder (the Hub being a community of citizen scientists within the game). An aspect of Reinhard's methodology that I find interesting is his initial creation of a pen and paper map to gain a 'feel' for an area, contributing to the sense that different mapping media have different textures.
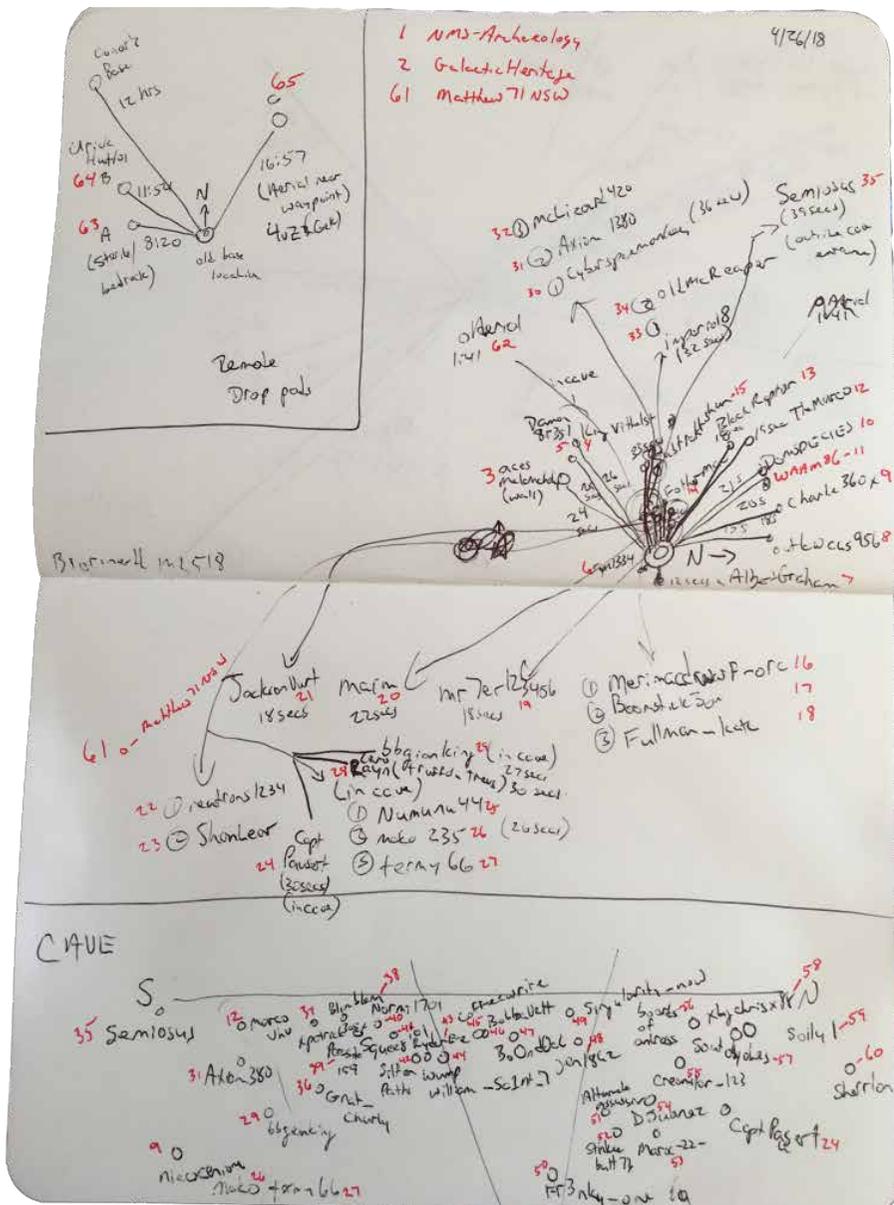
Figure 9.1: Notebook containing rudimentary communication station placements on the planet Pepper Dusk, No Man's Sky *(Reinhard 2018d).*

Reinhard's mapping techniques were informed by the constraints of NMS. When it first released in 2016, there were no cardinal directions. By late 2016 to early 2017, they did appear on the player's head-up display which allowed him to "find a fixed point (a portal for example) and then lay everything out on a string for direction and walking time (instead of distance) to features on a landscape, not unlike laying a grid prior to excavation" (pers. comm. Andrew Reinhard, 5 September 2019; Reinhard 2018b). The maps that Reinhard has created of

Drogradur NO425
Communication Stations and Features
(outside the immediate vicinity of the portal)
Planet Coordinates: 0469:0081:0D6D:0211
Map Current as of 10 April 2018

1 (11:41 mins.)	**9** (29:38 mins.)
2 (21:58mins.)	**10** (46:55 mins.)
3a–b (44:46 mins.)	**11** (1 hr.)
4 (8 hrs.)	**12** (1:23 mins.)
5 (8:06 mins.)	**13** (1 hr.)
6a–c (15:58 mins.)	**14** (2:45 mins.)
7a–c (16:19 mins.)	**15a–d*** (43:21 mins.)
8 (13 hrs.)	**16** (2 hrs.)
	* Occupied. Base-sharing active.

15c
15b 15d
15a

13

16 (2 hours)

2
1
14
3a
12
3b
5
16a 7a
6a
6b 7c
7b

9
0;0

4 (8 hours)

11

8 (13 hours)

10

Legend
🔨 Dig House   ● Portal
🔭 Observatory   ● Player Base
0;0 Beacon   ● Comm Station (see data)
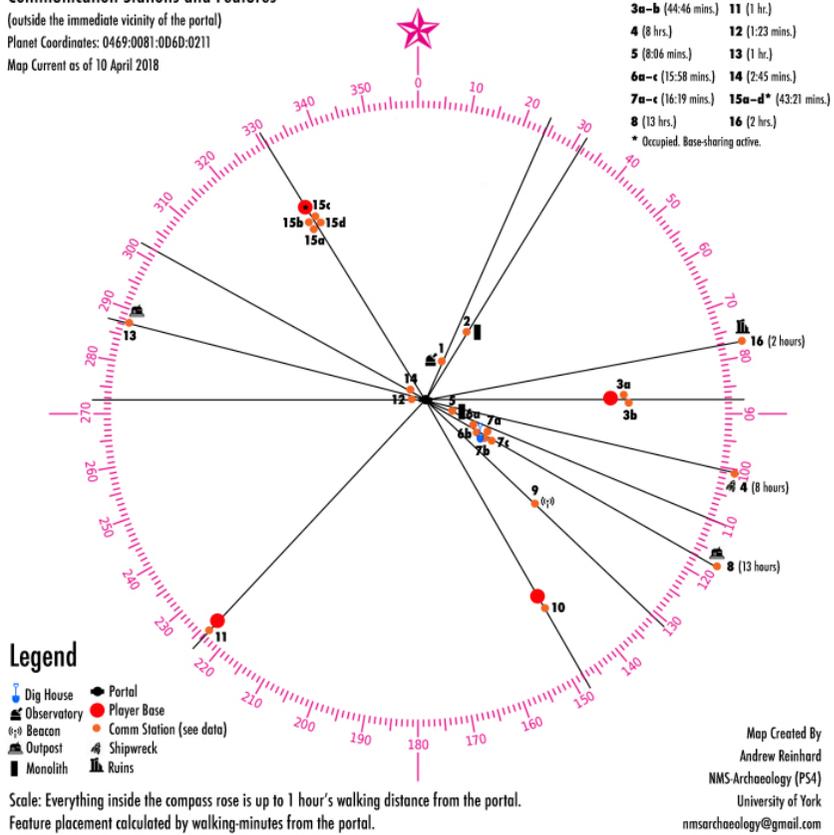🏠 Outpost   ⚓ Shipwreck
▮ Monolith   🏛 Ruins

Scale: Everything inside the compass rose is up to 1 hour's walking distance from the portal.
Feature placement calculated by walking-minutes from the portal.

Map Created By
Andrew Reinhard
NMS-Archaeology (PS4)
University of York
nmsarchaeology@gmail.com

Figure 9.2: Map showing walking distances to communication stations and features on the planet Drogadur, No Man's Sky *(Reinhard 2018b).*

the *NMS* sky landscape are thus very much shaped around the time it takes to traverse them as a player moving through the environment in a standardized way (see Figure 9.2). Reinhard used Photoshop CS5 when creating the map images themselves, as well as the PlayStation's native screenshot and video capture tools during gameplay (Ibid.).

Reinhard's intended audience was "anyone," but more specifically he wants "other archaeologists as well as the NMS player community and Galactic Hub citizens to be able to read the maps and use them should they wish to do some heritage tourism" (Ibid). When I asked Reinhard about the influence of his work, he specifically highlighted the project's ingestion into the Archaeology Data Service's online open access database (Ibid). His work involves recording player communities and their culture, so it is laudable that he wishes to display and archive that data in a way that is as accessible as possible. I am also intrigued by the idea that recording sites in the game contributes to their history and will encourage further play interaction with those environments.

The nature of NMS as an exploratory space game in which the player can name planets and extract resources has led to some discussion of the colonial implications of the game. This is something I brought up with Reinhard himself and he has addressed it in a blog post (Reinhard 2018c). In particular, Reinhard reflected on the allowance for players to name planets and lifeforms in the game:

> The renaming of things by players is possessive and colonial, and maps will reflect these naming conventions. It is up to the mapmaker to use indigenous, game-given names, or both.
> *Reinhard 2018c*

Given how NMS has become a strong element of the public archaeogaming brand, it seems important to me that the nature of the game, how it is being recorded, and how that research is being disseminated, be discussed openly and constructively. It is to Reinhard's credit that he has been willing to publicly reflect on the difficulty in defining what constitutes Indigenous culture and colonialism in NMS. A really important point is that the developers chose to make renaming a key mechanic of the game and that this ties into colonial fantasies of discovery, mastery, and nominative legacy. Underwood puts it well:

> *No Man's Sky* is constantly transgressing the ideological boundaries that form *Terra nullius*. The gameworld appears surveyed and named by some culture to which the player does not belong, and yet these names can be changed with a few keystrokes […] In the end, it should've been clear from the name. Another translation of *Terra nullius* is "No man's land." Which is to say: no man's sky.
> *Underwood 2016*

Proto-ontology of Queer Archaeogaming

Maps do not just come in traditional cartographical forms – they can be mind maps. This is the case with Brieal Moireabh-Tetlock's queer proto-ontology of archaeogaming (2018), in which they examined how different semantic terms interacted with each other in relation to the field of archaeogaming. Different nodes in the mind map are color coded according to different sources, such as the volume *Queer Game Studies* (Ruberg & Shaw 2017). Given the size of the mind map (which took them sixteen hours to create) it is easier to view it in isolated sections, though of course this only provides a partial view.

One node which is important in terms of the praxis of archaeogaming is the 'fields of practice' node, which delineates archaeology as operating in both the analogue and digital world. This links back to the previous discussion of how a study of video game cartography needs to account not only for digital but analogue maps as well. The analogue/digital permeability of archaeogaming is reflected in Moireabh-Tetlock's creative practice as they explain:
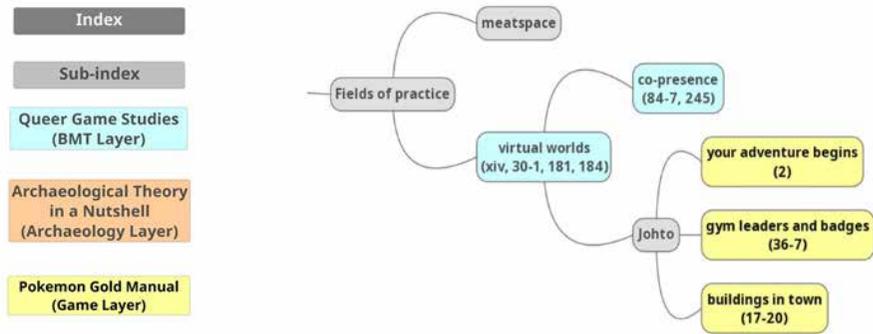
Figure 9.3: Detail of the mind map showing fields of practice and color coding according to source used (Moireabh-Tetlock 2018).

> I worked with acrylic paints and poster board/other art supplies, but in finding the complexities of the map growing beyond that I did the final project using MindMup.
> *pers. comm. Brieal Moireabh-Tetlock, 6 September 2019*

MindMup is the free online mind mapping tool that was used to create the nodes you can see in Figure 9.3. The mind map was not just produced but disseminated digitally on Twitter, which was how I discovered Moireabh-Tetlock's work originally. Moireabh-Tetlock explained that the intended audience was their thesis supervisor Dr. Kate Biittner, but also the #ANTH497 hashtag on social media relating to their undergraduate anthropology course at McEwan University. The aim of the mind map was to organize their thoughts on archaeogaming, and to understand what it means to practice it. I chose to focus on Moireabh-Tetlock's work as they draw from queer theory, which as a queer non-binary archaeogamer myself, I am personally very interested in. When I asked Moireabh-Tetlock whether creating the mind map had problematized their understanding of what archaeogaming is, they replied:

> Archaeogaming is being practised by a broad range of academics and non-academics alike through the lens of other disciplines […] access to the label and subsequent prestige associated with a nouveau term like "archaeogaming" is gatekept to privilege those with class access to higher education.
> *pers. comm. Brieal Moireabh-Tetlock, 6 September 2019*

This made me realize that in focusing on maps created by self-professed 'archaeogamers,' I was limiting the scope of what I consider 'archaeogaming.' As Moireabh-Tetlock pointed out, there are many communities (whether academic or not) that are conducting research which the archaeogaming field can learn from, and their mind map is a visual representation of that.

Desk-based Assessment of NieR: Automata

Now we can turn to the third case study, which constitutes my own work. Using my own research as an example could inspire questions about impartiality, which is why I am framing this map, its creation, and analysis through the lens of autoethnography. Simply put, autoethnography is an ethnography of the self which "can be rigorous, theoretical, and analytical and emotional, therapeutic, and inclusive of personal and social phenomena" (Elis *et al.* 2011). Lammes & de Smale used autoethnography in their article *Hybridity, Reflexivity and Mapping: A Collaborative Ethnography of Postcolonial Gameplay* (2018) in which they recorded their experience playing *Sid Meier's Civilization VI*. In particular, they highlight the paucity of scholarship that contends with player experience when discussing postcolonialism in games and are especially concerned with the representation of maps and mapping within strategy games. Regarding autoethnography, they contend "rather than assuming that the researcher is invisible in the research they conduct, they allow us to acknowledge our subjective dual role as player and researcher" (Lammes & de Smale 2018: 11-12).

In September 2018, I set out to map the location of player deaths in the Japanese action roleplaying game *NieR: Automata* (PlatinumGames 2017). The game is set during a proxy war between machines created by aliens that have attacked earth and androids created by humans. If the game is played with the online network features enabled, players will encounter the corpses of other players on the game map which can then be revived or scavenged. I attempted to create a very rudimentary map using Microsoft Paint to record the locations of player corpses. I had two main aims going with this project: to see if it would be possible for me to adequately map game data with the limited resources available to me, and to gauge how extensively the *Standard and Guidance for Historic Environment Desk-based Assessment* (CIfA 2014) could be applied to a video game.

In terms of the former aim, I had limited success. I created an artificial red line boundary for my survey which encircled the 'City Ruins' area of the game, which acts as a hub between different parts of the wider map (see Figure 9.4). When I first started recording player corpses, I hypothesized that more would spawn every time I left and re-entered that part of the map, or at least each time I quit and restarted the game. This was not the case, and I was limited to the small sample of corpses that had originally generated on my map, with sixteen in total. This was not enough to be able to make any inferences about patterns and concentrations of player deaths within the landscape. On the other hand, creating the map and attempting to apply British archaeological conservation principles (Historic England 2008), such as 'Aesthetic' and 'Communal' value, made me reflect on how subjective the criteria for assessing the significance of analogue heritage is.

As mentioned previously, the map was created using Paint, as this was the software I had easily available to me at the time. I found using this as a map-making tool extremely frustrating as it was difficult to edit text. The research itself was originally done for a presentation at the *European Association of Archaeologists* Conference (Smith Nicholls 2018). At the time, and in an early draft of this chapter, I was highly critical of the map and deemed it to be 'too simplistic.' Reflecting on this now, I feel that this was partly stated out of anxiety over potential critique

Figure 9.4: Site map of the 'City Ruins' area in NieR: Automata, *with numbered locations of player corpses and select screenshots (Smith Nicholls 2018).*

from my peers and a fear that what I was doing was not 'real' archaeology. The map is certainly not *technically* complex, but I was able to include screen shots of different player corpses to provide more context. I was limited by the software I was prepared to use at the time, which supports the argument Gillings and colleagues make that how we map shapes what it is possible to do with the maps we create (Gillings *et al.* 2018). An uncritical usage of what Haraway refers to as the "god-trick" (1988: 576), of appearing to view an entire area at once, would provide a misleading illusion of completeness as I only chose one specific area of the game map and had limited data to draw from. More worrying is my use of player data with no discernible way of asking for permission (I recorded the username of each player corpse I encountered). Even if those usernames essentially anonymize the player, this complicates the ethics of mapping player deaths in an online network-enabled video game.

The Narrative Space of Archaeogaming

In synthesizing these case studies, it is useful to revisit the idea of maps as narrative space. Considering the three examples together, whilst typologically they might be considered heterogenous, there was some thematic overlap. Principally, all three maps were created digitally, but were informed by other recording methods both analogue and digital. All of the maps have been made available online for wider dissemination. Like all maps, they each represented a translation of data to a new medium, curated according to certain aims. The data that can be gleaned from video games and indeed video game studies is vast, which is why it is vital to narrow down what you choose to represent through visualization techniques (Wattenburg & Viegas 2010). Each map surveyed represents a narrative space that was created to direct the viewer towards certain information. Through the wider assemblage of the maps surveyed here, their maker's labor, and my own interpretation with

the aim of further understanding the archaeogaming community, this has been a process of "aggregate narrative building" (Morgan & Wright 2018: 136).

So what is the narrative space of archaeogaming? My interpretation is that its key plotlines involve an interplay between analogue and digital fields of practice, and a tension between traditional archaeological methodologies refined for analogue work and their adaptation to digital space, software, and hardware. Another key commonality has been the importance of involving and respecting player communities, whether that be the Galactic Hub in *No Man's Sky*, those who study video games as human-created culture in different disciplines or outside of the academy, or just the wider community of players whose data may contribute to archaeogaming research. It is for this reason that I believe archaeogaming needs to learn from other player communities and signal boost their work. Studying fan-made maps and mapping practices, would be one potential avenue of further research.

Conclusion

Our journey through video game mapping has considered the subjective and contingent nature of maps as assemblages and their colonial applications. We have explored archaeogaming as a field which applies archaeological recording methodologies to video games, including the use of cartographical methods, and the limits of a traditional static map-making approach when studying an interactive medium. On the other hand, the idea that a birds' eye view is intrinsically colonial and passively indulgent has been challenged. It is essential to consider how maps are used in different contexts.

My intention was to understand the field of archaeogaming through curating a small collection of maps that have been created by its practitioners. Though comparing these case studies has revealed the need for a more dynamic and less traditional approach to mapping video games, it is also fair to critique my approach which has not taken into account the wider context in which these maps were created. As archaeogamers, we are involved with 'collecting' space (Gazzard 2011), whether that be in terms of recording video games through screenshots, streaming, mapping techniques, or even their code base. It is for this reason that we need to be self-reflexive in how we use mapping methodologies and to not consider the mechanics of collecting space in video games and in our own work as neutral. This is why I believe the autoethnographic approach that Lammes & de Smale (2018) use is so valuable.

Drawing from this research, my own definition of archaeogaming is that it is the practice of interpreting and creating narrative space through the archaeological study of video games. There is a famous short story by Jorge Luis Borges (1999 [1946]) about an empire that created a map the same scale as its own territory, which was thus completely useless. It is for this reason that maps must be creative translations of spatial data. My hope is that the narrative space of archaeogaming

will continue to be experimental, collaborative, and if appropriate, non-Euclidean. Perhaps then archaeogaming can flourish as a form of community archaeology, embracing the messiness of play and the incomplete and subjective nature of any archaeological record.

I do not have a map to show the way – let's draw one together.

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Part Three

Historical Research and Learning
through Video Games

10. Scholarly History through Digital Games: Pedagogical Practice as Research Method

Robert Houghton

The power of games and play as tools in the history classroom has long been mooted (Gouglas *et al.* 2014). As early as 1982, Oppenheim confidently stated that tabletop "games and simulations […are] well established as a useful method of teaching history" (Oppenheim 1982: 26) and numerous authors have since echoed this opinion (Kirschenbaum 2014: 202). The advent of widely available computers has spread this potential to digital games and, despite some hesitancy within the field (Compeau & MacDougall 2014: 93; Galloway 2006: 85-106), various studies have demonstrated the learning and teaching potency of these media.[1] This pedagogical use of digital games is facilitated in part by an increasingly close connection between academic history and history in games. Driven by commercial demand for 'historical accuracy' (Champion 2015; Copplestone 2017), numerous studios make use of academic historians and historical research to inform the content and mechanics of their games (Forder 2017; Houghton 2014; Reinhard & Ruatta 2019), providing a growing range of digital games with potential as teaching tools. This field of pedagogical study is wide-ranging and vibrant.

This chapter addresses recent pedagogical developments concerning the use of digital games in history education and argues that these discussions may be applied constructively to develop such games for academic historical research. Several historians have construed digital games as possible research outputs and tools (*e.g.* Antley 2012; Antley 2016; Carvalho 2017; Clyde *et al.* 2012; Houghton 2018; Spring 2015). The three dimensional and widely explorable recreations of built environments, landscapes, and artifacts provided by realist simulations such as the

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1 McCall has compiled a detailed review of the pedagogical literature surrounding digital games (McCall 2016).

Assassin's Creed series (Ubisoft Montréal 2007-2018) could potentially be of use to historians in much the same way as maps, diagrams, and images (Houghton 2018: 21-25; Nicholls 2016; Spring 2015). Through the creation of rules and models within structural simulations like the *Sid Meier's Civilization* series (MicroProse & Firaxis Games 1991-2019) academics could communicate historical theories based on thorough research and rigorous analysis (Carvalho 2017: 812-813; Houghton 2018: 25-27; McCall 2014). By playing these structural simulation games critically, historians may interrogate the arguments represented through their rules and mechanics and suggest shortcomings or nuances through discussion outside the game (Houghton 2018: 27-29). Ultimately, by modifying these games, academics could produce counter-arguments and debate within the game itself (Ibid.: 29-30). As such, it may be possible to produce games not only as research outputs, but as processes of ongoing academic debate.

However, while the educational potential of history games has been developed by a substantial range of scholars, their utility as historical research tools has generally been ignored or rejected (Chapman 2013b: 313; Chapman 2016: 6-7). This is often the case even among those historians who have embraced other digital tools and formats for their academic research such as Geographic Information Systems or Relationship Network Analysis (Kee 2014: 1-2). Even as sections of other academic fields such as Civil Engineering (Greenwood *et al.* 2009) and Archaeology (Cegielski & Rogers 2016; Graham 2006; Wurzer *et al.* 2015) have embraced games as research devices, History stands out as one of the areas of academia where games, and the research they may represent, are most vocally rejected (Vowinckel 2009: 322).

There are several practical concerns at the heart of this rejection. There is a substantial divergence between the skillsets of most historians and most game designers (Carvalho 2017: 818-819). There also remains a tendency to view games as an inappropriate medium with which to deal with serious or sensitive subjects (Chapman 2016: 47-48; Kirschenbaum 2014: 200-204). The free form nature of games stands in stark contrast with the linearity of more traditional literary research outputs, demanding a different method of presenting history (Antley 2012; Carvalho 2017: 795-796; Chapman 2016: 46-47). These issues are hurdles to be overcome, but they are far from insurmountable (Antley 2012; Carvalho 2017: 818-819; Houghton 2018: 35-41).

More fundamentally though, there is a deep philosophical issue surrounding the simulation of history through games. We cannot simulate the past, because we can never know the past (Vowinckel 2009: 322). We do not have the data. We cannot confirm the models. To many historians, History as an academic subject is not so much about knowing what happened or even why it happened, but is more concerned with the debate and discussion around these issues. Historical simulation games are often seen as attempts to recreate the past (Clyde & Wilkinson 2012: 51-56), therefore, although the utility of simulation games as teaching tools is frequently acknowledged, they are often presented as inherently incompatible with academic history.

But this reasoning represents a fundamental misunderstanding and misuse of games. Yes, game mechanics represent abstract and static systems and simulations through their procedural rhetoric (Bogost 2010; Chapman 2016: 71-72) which can never be 'historically accurate' as they can never wholly reproduce historical events (Galloway 2006: 103; McCall 2018: 409; McCall & Chapman 2017). But these are model systems. They are theories: modern simulacrums of the past (Dow 2013: 218-219; Elliott 2017: 29-31). They do not recreate history, but rather present ideas and interpretations about earlier periods (Chapman 2012: 42; Chapman 2016: 75; McCall 2012b: 18). They create their historical models from abstractions based on a handful of datapoints, just as historians do (Carr 1961: 9; Chapman 2013b: 322-325; McCall 2012a: 53-54). They do not represent an undisputed and universal reality any more than the theories put forth in a monograph or an article (Chapman 2012: 43-44; McCall 2012b: 19; McCall & Chapman 2017). If we consider games as theoretical models and arguments for discussion and debate rather than absolute and inflexible rhetoric, they become much more useful for academic historical research. They can allow academics to express and explore theory and argument in a new and interactive way. Several archaeologists have argued for a similar approach to the past in games and simulations through Agent Based Modelling (*e.g.* Cegielski & Rogers 2016; Graham 2006; Wurzer *et al.* 2015) and there is little reason why this could not be applied within the field of History.

Studies of digital games as historical educational tools have already highlighted their potential in a learning environment in a fundamentally similar manner to that which would be required for scholarly games. Games may present data through their audio-visual environments, introducing players to new periods and themes (Chapman 2016: 65-66; Levy & Dawson 2014; Nicholls 2016). Playing historical games can form a type of critical analysis of the arguments represented through the game's mechanics (Brown 2008; Clyde & Wilkinson 2012; Flanagan 2013; Zucconi *et al.* 2013). Within a classroom setting students can move this analysis beyond the game itself to consider the validity or shortcomings of the arguments presented within the game, proposing counter-arguments on the basis of their own research and understanding (Ortega 2015; Wainwright 2014). This ultimately allows the display and development of advanced historical analysis and discussion (Kee & Graham 2014). Between these various approaches and elements, the wide-ranging potential of digital games as tools for the exploration of history is keenly demonstrated.

In this chapter, I will argue that the limited consideration of historical digital games as scholarly research tools and outputs is a missed opportunity within the field. Furthermore, many of the methods employed in teaching history through games are applicable, with some modification, to the creation of games as historical research tools and processes for academic use. To this end, this chapter will:

1. Highlight the demonstrated potential of digital games to convey data and historical arguments as a learning tool and suggest that this demonstrates a corresponding potential within scholarly historical research.

2. Consider recent attempts to develop the use of digital games as a platform for historical debate in the history classroom at university level and argue that this shows that games may be used to facilitate scholarly debate and engagement with historiographical issues.

3. On this basis, suggest methods by which the findings and techniques of pedagogical study into games as learning tools may be used to inform the design of games for academic historical study.

Teaching Historical Data and Analysis through Digital Games

Commercial and bespoke digital history games have been used, modified, and created for a variety of learning purposes. At their most basic, games can form an interactive means of conveying historical information (Alcázar 2011: 311). They can provide detailed representations of historical sites and figures for players to explore at their own pace (Chapman 2016: 65-66; Levy & Dawson 2014; Nicholls 2016). Their inherently interactive nature encourages players to engage with their content in a different and possibly deeper way, than more traditional media formats (Costikyan 2006: 194; Dow 2013: 217-218; Zimmerman 2004: 158-159). Realist simulations such as *Assassin's Creed* or *Call of Duty* (Infinity Ward *et al.* 2003-2019) are particularly valuable in this regard as they present the player with detailed environmental simulacra to explore. They can allow the student to become familiar with landscapes, built environments, and material culture.

This demonstrable ability of digital games to communicate data in the form of audio-visual representations of cityscapes and material culture in the classroom implies the possible utility of these games for scholarly research. With sufficient academic support, games similar to those of the *Total War* (Creative Assembly 2000-2019) and *Assassin's Creed* series may provide new perspectives on urban space and design, the topology of battlefields, or the material culture of a period and region (Houghton 2018: 22-23; Spring 2015: 211-212). If traditional visual research aids (such as maps, charts, and photographs) and more recent innovations (such as Geographic Information Systems, relationship network models, and scans of buildings) are viable communication and research tools, there is little reason to exclude carefully researched and produced digital games for the same purposes.

The use of digital games can move beyond this simple communication of visual information to teach arguments and analysis – both fundamental elements of historical study – through models of historical systems (Alcázar 2011: 300-301; McCall 2012b: 13; McCall 2014; McCall 2018: 405-406; Oppenheim 1982: 26; Pagnotti & Russell 2012; Peterson *et al.* 2013: 38). Historical games are in effect working models of an element of the past. They are abstract and truncated, but nevertheless present an internally consistent and holistic explanation for the world they display. This may be in the form of the combat mechanics of *Assassin's Creed*, rules governing social interactions in *The Sims Medieval* (Maxis Redwood Shores 2011), or any other element which forms the focus of a game. By playing the game, students engage with these mechanics and hence the game's explanation of how the world functioned (Kee 2011: 434-435).

Structural simulation games – which focus on the presentation of the past through their mechanics – can provide a particularly deep teaching tool in this regard and a variety of these games have been deployed to this end. For example, games in the *Sid Meier's Civilization* series present geo-political models and arguments about change and conflict throughout recorded history (Ortega 2015; Pagnotti & Russell 2012; Peterson *et al.* 2013: 43). *The Patrician* – which casts the player as the leader of a merchant family – and its sequels (Ascaron 1992-2002) model systems of economics in societies across the Hanseatic League (Peterson *et al.* 2013: 42). The *Total War* series and the numerous Paradox Interactive strategy games provide detailed socio-political models within their specific settings (Apperley 2013; Peterson *et al.* 2013: 41-42; Spring 2015: 211).

Students can engage with these systems simply through play (Brown 2008; Clyde & Wilkinson 2012; Flanagan 2013; Zucconi *et al.* 2013). This can form a valuable introduction to historical themes and periods (Elliott 2017: 37-38; McCall 2018: 416), but, more significantly, playing simulation games and engaging with their historical models represents a more elaborate interaction with the past than simple 'fact'-based learning. By focusing on the factors behind events (the 'why') rather than the events themselves (the 'what') these games can enable the development of more advanced critical thinking (Chapman 2016: 73; Elliott 2017: 23-29; McCall 2012b: 9; Taylor 2003).

Moreover, the nature of structural simulation games like these is such that students are obliged to engage with and learn their mechanics, and the historical systems these model, in order to progress (Bogost 2008; Chapman 2013a: 67; Douglas 2002; Fogu 2009: 118; McCall 2014: 229-230; McCall 2018: 407). If the player wants to win the game, they need to learn how to play: how to maximize production through worker placement in *Sid Meier's Civilization*; how to access and exploit the most lucrative trade routes in *The Patrician*; whether a goal may be achieved most successfully through diplomacy or violence in *Europa Universalis IV* (Paradox Development Studio 2013). All of this requires that the player learn the mechanisms within the game which represent these systems and how to manipulate these systems to achieve their objectives.

The key difficulty in this approach is the limitation of the arguments which are represented through the mechanics of these games. Commercial games tend to present the past in a Eurocentric, Whiggish, and Militarist manner greatly at odds with modern approaches and models (Adams 2014; De Groot 2016: 156-157; Douglas 2002; Fogu 2009; Ford 2017; Mir & Owens 2013; Schut 2007; Smith 2018; Smith & Johnson 2018; Whelchel 2007). Players' pre-existing cultural subjectivity and broader engagement with games as a medium will undoubtedly color their use of these products in a classroom setting: a player's experience with a genre of games is likely to dictate their playstyle and expectation of any similar games (Carr 2007; Chapman 2016: 34-35; Ford 2017). For example, players of *Crusader Kings II* (Paradox Development Studio 2012) – a grand strategy game set in the Middle Ages – tend towards military expansion even though the game itself does not require or encourage this: they seem to be driven by their personal and collective expectations of the genre (Houghton Forthcoming 2021). Games must be used cautiously and in a broader context of study.

However, these are issues which must be addressed when teaching history in more traditional ways. Literature on every field in every period has its own peculiarities which must be addressed in class. Students also invariably come to the classroom with pre-conceptions about the period or subject. Certainly, students must be trained to engage with games critically, but this is fundamentally no different from training them to engage with more traditional primary and secondary sources. The interactive nature of the medium provides a different, but still valid, method of exploring historical data and arguments through critical play and engagement (Elliott 2017: 20-21; Houghton 2018: 17; Zimmerman 2004: 158-159).

The representation of useful models and arguments about the past through game rules and mechanics can clearly function as a teaching aid, but they could also act as a communication tool for scholarly arguments between academics. The systems based explanations and procedural rhetoric used by the designers of structural simulation games are capable of presenting detailed and complex arguments about the past (Bogost 2008; Frasca 2003; Uricchio 2005). With the support of appropriate research and analysis, mechanics could be created to present academic historical arguments (Chapman 2013b: 322-326; Houghton 2018: 26-27). Political historians could create models of power structures and international diplomacy through games similar to *Sid Meier's Civilization* or *Europa Universalis IV*. Social historians could present discussions of personal interactions through the mechanics of a game like those in *The Sims* series (Maxis 2000-2020). Economic historians could develop more complex and detailed versions of the trading models within the *The Patrician* series.

Digital Games as Classroom Debate

The introduction of historical data and arguments through digital games is an important element of their teaching capacity but this does not fully realize the potential of the medium at higher levels of study. As undergraduate education requires that students go beyond the presentation of facts and development of analysis to engage with historiographical traditions and debates, games for university level learning should allow students to engage critically with the complex theoretical frameworks surrounding our understanding of the past and to construct their own arguments on the basis of primary and secondary sources.

The perceived inability of games to engage with history in this way has contributed to their relatively sparse use in higher education and as scholarly research tools (for an example of an exception, see Lawler & Smith, Chapter 12). Games are restricted to presenting a single viewpoint through their mechanics (Chapman 2016: 75-79; Kee & Graham 2014: 278; McCall 2012a). While the outcome of different playthroughs may vary considerably, the rules which guide these outcomes are static by necessity. The argument represented through the game's mechanics can be explored quite easily through play, but its place within broader historical thought is much harder to identify. As a result, it is difficult for digital games to facilitate engagement with varied historical theories in the same way as traditional written outputs.

However, as I will illustrate below, pedagogical scholars have proposed and trialed several methods to circumvent these difficulties within games and the metagames surrounding these media. These approaches include modification of commercial games, creation of bespoke original games, discussion around the game, and game modification and creation by students as a learning and debating process. These methods are embryonic and require refinement to address issues with their delivery, but they nevertheless provide a clear demonstration that while digital games are poorly suited to the delivery of scholarly discussion through traditional methods, they can facilitate this debate in a different but nonetheless valid manner.

Kee has suggested that historical theory may be approached through specially designed games. He posits a multiplayer adventure game similar to *Myst* (Cyan 1993) – a genre where the player typically begins in a position of ignorance and slowly develops an understanding of their surroundings through interaction with the game world, ultimately piecing together evidence to solve puzzles and form conclusions (Kee 2011: 432). In Kee's hypothetical game, the player would be challenged to collect and engage with a range of historical sources and create their own arguments by deciding which pieces of evidence to privilege and which to marginalize (Ibid.: 435-436). The players would then proceed to compare their arguments and approaches with each other within the game (Ibid.: 436). Through this process, student players would mirror the research and discussion required within a university history module through the artificial and enclosed environment of the game.

There is substantial educational potential in such an approach, but this is balanced by practical resourcing issues. The creation of a game of this sort would demand a substantial commitment of time and finances and would require the creator or creators to possess skills well outside the portfolio of most historians. This issue does not invalidate Kee's suggestion, but it does limit the utility of the approach in many classrooms.

This approach also restricts the data and arguments available to the students. Any documents or other materials to be considered within the game need to be incorporated within its code. If they are not, then students cannot make use of them: players are ultimately restricted by the content selected by the game's designers (Chapman 2016: 37-38). This is a more fundamental issue as it potentially leaves the game isolated from important sources and presents the historiographical debate as a static model. Certainly, this method could provide a valuable introduction to historiography and historiographical thought, but it restricts the student's ability to further develop these theories.

A less resource intensive method makes use of commercially available games and facilitates discourse and argument through the metagame: games are used to present information and arguments through their world and rules, but students critically assess these elements outside the game. Through his module *History and Computer Games,* Wainwright had students engage with various historical games alongside traditional literature (Wainwright 2014). For example, students explored *Sid Meier's Civilization*, *Railroad Tycoon II* (PopTop Software 1998), and *CivCity: Rome* (Firefly Studios & Firaxis Games 2006) through the lens of economic history (Wainwright 2014: 583-585). Ortega takes a similar approach through his use of *Sid Meier's Civilization V* as the base point for student discussion of

the historiographical perspective presented by the game (Ortega 2015). Students identify the Whiggish, expansionist, and Eurocentric viewpoint presented through the game's mechanics and tie these to critical analysis of these mantras within the broader literary tradition (Ortega 2015: 1-4).

These practical implementations of digital games as part of historiographical discussions by Wainwright and Ortega demonstrate the viability of this format as a teaching tool. The process is significantly less resource intensive than Kee's hypothetical game: there is no need for the teacher to create a game, as a suitably complex and historically grounded commercial game can be employed immediately.

Furthermore, this approach allows the potential for broader discussion and exploration of theories and debates. Unlike Kee's hypothetical game, the externalized discussion used by Wainwright and Ortega is not limited to the topics and information represented within the game itself. Students are encouraged to look beyond the data and arguments within the game rather than choosing from the sources and analysis contained within its code.

However, this approach makes rather limited use of the games. They are used to present points for debate, but the actual debate is conducted outside the game. The games used here augment traditional learning but remain at the periphery. The approach supports learning in an important and innovative way which is easily replicable by other teachers, but does not make full use of the potential of digital games.

In his more recent work, Kee, in collaboration with Graham, has moved the focus of game driven class discussion towards the code of the game itself (Graham 2014; Kee & Graham 2014). They highlight the potential for students to mod and design their own games in response to the arguments put forward through a game's mechanics (Graham 2014; Kee & Graham 2014: 278-279). They observe the collaborative process behind the development of mods for *Sid Meier's Civilization IV* through the *CivFanatics* forum. Modders regularly upload their products for consideration by their peers. The mods are played and feedback is provided, albeit in an informal manner, on the forums. The modder will often engage in discussion with the respondents and this will frequently lead to the adjustment of the mod. These responses include demands for greater 'historical accuracy' through the inclusion of particular factions and discussions over the best rule sets and mechanics to represent particular periods of history (Chapman 2016: 38-39; Kee & Graham 2014: 279-281).

As Kee & Graham note, this discussion and collaborative development of understanding is fundamentally similar to many classroom discussions. These mods represent modders engaging in historical analysis and debate through the medium of games (Kee & Graham 2014: 279). They conduct advanced analysis and consider historiographical discussion in order to create a new theory of the past (Chapman 2016: 39; Elliott 2017: 19; McCall 2018: 411-416). Kee & Graham propose that this modding, and the discussion and debate it represents, could be viable in an educational environment, simply with greater academic rigor. They have developed these ideas into practical classroom exercises and assessments where students created their own historical games engaging with a variety of themes and in a range of genres (Kee & Graham 2014: 281-285).

This approach requires a quite substantial degree of digital literacy amongst students and teachers. It requires an understanding of how digital games can represent historical arguments through their mechanics and the confidence to change these mechanics to illustrate more nuanced or convincing arguments. These skills are quite distinct from traditional methods of historical debate and would need to be addressed before the exercise was undertaken. As a result, this approach is only viable in dedicated and extended courses and may require inter-disciplinary projects in conjunction with game design students.

However, this modding approach to history overcomes the key educational limitation of simulation games: their inability to show more than one explanation of history (Chapman 2016: 75-79; Kee & Graham 2014: 278; McCall 2012a). By changing these mechanics, students may represent a potentially limitless range of theories and ideas. The game is not only the starting point for discussion – as is the case with the methods used by Wainwright and Ortega – but forms the central stage for ongoing and evolving academic debate.

Furthermore, this modding approach places an emphasis on understanding game mechanics and what they actually represent. Game mechanics can provide detailed and complex (if abstract) working models to represent the past. However, the interactive nature of games typically leads players to focus on how to manipulate mechanics to progress or win the game rather than what this manipulation simulates (Chapman 2016: 40-41). Players learn how to play to win, and often lose sight of theme of the game (Carr 2007: 222). The game can become an exercise in puzzle solving rather than engagement with history (Floyd & Portnow 2017). By making students consider how these mechanics are put together to create arguments, modding in this manner demands a more careful consideration and analysis of the systems and worlds they create.

Although there are practical difficulties with each of these three methods, there is certainly a great deal of potential for digital games to augment traditional teaching approaches at university level. These difficulties are not insurmountable, as demonstrated through the successful deployment of several of these methods in the classroom, and these approaches allow games to be used in support of some of the most advanced historical skills taught to students. The format requires a different form of literacy, but can nevertheless be used to address historiographical and theoretical concepts and to facilitate historical debate.

These various embryonic methods which employ digital games as the foundation of academic historical discussion at undergraduate and even postgraduate level underline the potential of this medium within scholarly history. As the creation of a well-researched and critically constructed mod demonstrates the advanced historical and historiographical skills expected of a late stage undergraduate or even postgraduate student (Kee & Graham 2014: 279), such projects approach the paradigm of professional academic research. One of the key purposes of an undergraduate or postgraduate degree in history (or associated discipline) is the acquisition of the requisite foundational skills for continued and more advanced study. If, as the work of these various authors strongly suggests, games are an appropriate medium to develop and display these fundamental academic skills,

they present substantial potential as a medium for communicating and developing historical theories constructed by academics.

The modding approach advocated by Kee & Graham appears most promising as a platform for scholarly debate. Kee's earlier suggestion of a game which discusses the theory of history through its mechanics has potential as a research tool: indeed, Clyde, Hopkins, and Wilkinson used a similar approach in the creation of their research game *Shadows of Utopia: Exploring the Thinking of Robert Owen* (Clyde *et al.* 2012). However, this approach focuses by necessity on the theory of history rather than the explanation and discussion of historical events which limits its broader use (Antley 2012; Carvalho 2017: 806; Houghton 2018: 15-16). The methods used by Wainwright and Ortega are likewise promising and allow for the wider debate of history with only minimal development of additional digital skills and literacy. But this debate is conducted outside the game and so the interactive function of the medium is marginalized. By centering the game as not only the point of departure for discussion but also the means of discussion, Kee & Graham embrace the unique nature of the medium and hence the opportunities it presents for teaching and, by extension, research.

This process of scholarly discussion through modding could begin with the creation of a game which expresses a relatively simple argument through a basic rule set. This game would be played by other academics familiar with the theme of the game and the historiographical traditions which surround it. The game's mechanics would be interrogated through play, allowing the player academics to explore the argument on which these rules rest. The players would mod the game to nuance or reject the argument put forward through the rules of the original game. Through a process of iterative design, the game would change and evolve in a manner similar to a more traditional academic debate.

Pedagogical Practice as Research Method

The construction and modification of digital games may therefore allow the presentation of historical data, arguments, and debate with a scholarly standard of rigor. An academic game such as this would need to rest on a complex analysis of the primary and secondary literature. The origin of data would need to be cited thoroughly and linked to reputable sources (Carvalho 2017: 811). Any abstractions would need to be clearly highlighted with thorough explanations to justify this created data. The theories behind the mechanics would likewise require clear expression. Ultimately, the game should meet the same standards as a peer-reviewed article. These standards are far removed from those of many commercial games (Houghton 2018: 35-36; McCall 2018: 407; Salvati & Bullinger 2013: 153), but if a scholarly game could be produced to meet these qualifications it should be accepted as a valid research tool.

The creation and modification of a scholarly history game like this could be informed by the pedagogical methods and principles developed for the use of digital games in history education. While this work is primarily concerned with effective learning and teaching, many of its conclusions have implications for the design and use of games to address scholarly issues and the development of a scholarly gaming culture. The following commentary is by no means exhaustive, but does

highlight several of the key findings of these authors and their applicability in the development of scholarly games.

Most basically, practical use of games in the classroom has demonstrated that different genres of games are better suited for teaching different elements of history and hence are likely to be better suited for different research uses. Realist simulations are better able to present visual reconstructions of landscapes and physical environments (Chapman 2016: 61-66; De Groot 2016: 152-153; Salvati & Bullinger 2013: 156-157) while structural simulations allow interaction with historical arguments and theories through their complex mechanics (Chapman 2016: 70-75; De Groot 2016: 155-159; Kee & Graham 2014: 275-278). Structural simulations are also more likely to be suitable for historical debate through modding (Kee & Graham 2014: 278-281). There are of course overlaps between realist and structural simulations: this should be seen as a spectrum rather than a binary system (Chapman 2016: 59). Nevertheless, it is clear that different types of game will be better suited for different research purposes and this must be considered when creating games for research.

The findings of pedagogical studies in this area could help to overcome the cultural barriers surrounding the use of digital games as tools for history research. Students and academics are often dubious about the validity of digital games as historical tools and this must be overcome if games are to be used to their full potential (McCall 2016: 532-533; O'Neill & Feenstra 2016). As such, their entertainment capacity should be ignored or downplayed (McCall 2016: 533): while this factor may be useful in fostering an interest in history (Houghton 2016: 24-25), it can undermine efforts to use the medium for study. Whether using digital games for teaching or research, it is important to emphasize the ability of these games to present the past in a useful and innovative manner: a scholarly game may well be entertaining, but this should not be its primary design principle.

A further step towards overcoming these cultural barriers requires students and academics to learn to play critically (McCall 2012b: 19; McCall 2016: 534). Digital literacy and confidence cannot be assumed for all students or academics. Egenfeldt-Nielsen (2010) discusses potential approaches in depth, but most fundamentally, the nature of games and the ways in which they present history must be established when using the media in the classroom (Elliott 2017: 21-26; Juul 2005: 163). Scholarly games, and the arguments they present, must be designed with this critical play in mind: designers and players must be able to read arguments put forward through the game's mechanics.

A corollary of this broader issue is that using a digital game for teaching or research requires appropriate lead in time for players to learn the mechanics of the game (McCall 2016: 533). Despite the increasing popularity of the medium, a substantial proportion of both groups have little experience with the kind of structural simulation games best suited to advanced study and research (Carr 2007: 225; Houghton 2018: 36-37). Learning to play would be an integral part of understanding and engaging the argument of the game, and in many cases players may need to play the game multiple times to fully engage with its mechanics. This time commitment should be taken into account when creating research games. It may be necessary to create smaller games dealing with clearly delineated and finite issues in order to make these

games accessible to a broad academic audience. Likewise, it may be necessary to employ broadly familiar game mechanics to widen access.

The issue of accessibility should be central to the production of scholarly games. Complex structural simulations can provide incredibly varied and nuanced arguments through their mechanics, but these are often concealed behind a steep learning curve requiring that a player dedicate dozens or hundreds of hours of play to fully experience them. As such, the complexity of games must be considered when selecting for teaching (McCall 2016: 533) and this approach should be mirrored in the creation of scholarly games. Mechanics must be constructed so they can be parsed by the player. The link of cause and effect must be visible and it may be necessary to explain and highlight these connections in greater detail than would be the case in a commercial game.

To support this goal of clarity and simplicity, teaching and research games should present their mechanics as openly as possible and avoid the common practice of hiding key elements of the rules from the player or even the modder (Antley 2012). If the player is unable to access all of the data and mechanics of the game, they cannot see the full detail and justification of the argument put forward by the designer. This is a fundamental issue as this obstruction of information undermines the logic and strength of the arguments put forward through the game and hence its academic rigor. When creating their own games or mods, students should be encouraged to make their mechanics transparent and this would apply equally to academics creating games for research.

While clarity of argument and mechanics are important, abstraction within scholarly and educational games does not undermine their value. Game designers are obliged by the nature of their medium to abstract complex information into discrete numerical values: characters, units, and weapons receive a series of statistics to describe their abilities. Where data is unknown or unknowable it must be estimated to feed the game engine. This is at first glance a departure from best historical practice, but in reality it is simply a different manifestation of traditional scholarly approaches. All historical theory is based on extrapolation of limited data points to create an abstract explanation of the past (Chapman 2012: 43-44; McCall 2012a; McCall 2012b: 19-21). What differentiates games from traditional media is the fact that these abstractions are given solid form through the statistics and data of the game. In the classroom this requires an awareness of the different ways in which games and written historical works present their arguments. When students create their own games or mods it is important for them to identify their abstractions clearly. These conditions should be mirrored when creating scholarly games: abstractions will be necessary, but they should be carefully thought out and should be explained through appropriate notes within or around the game.

Teaching and research through games must also be grounded in the broader historiography of the field (McCall 2016: 534-535). The information and arguments presented in the game through its world and mechanics should be clearly linked to primary sources and traditional secondary outputs. This could be achieved through citations, external links, incorporation of material within the game, or explanatory text. All these methods have been used within various commercial games and several have been adapted within teaching methods. They

could be adapted for scholarly games by linking to more authoritative sources (Carvalho 2017: 811-812).

Finally, games for advanced study or research must provide means for the player to interrogate, nuance, and reject mechanics and the arguments they represent (Kee & Graham 2014). As demonstrated above, this element is vitally important to the use of digital games at university level and could potentially be embedded within games, conducted through discussion around games, or expressed through the modification and creation of games. All of these methods are viable in the classroom and have potential to support research, but to fully utilize their potential it would seem to be most beneficial to conduct debate through the creation and modification of games. As such, any scholarly games should be designed to facilitate user modification and, hence, debate. This could be accomplished through the use of comparatively simple mechanics or through dedicated modding tools produced alongside the game.

Conclusion

Digital games therefore appear to be viable and flexible tools for scholarly history. There are several caveats to this statement: scholarly games would present history in a different way from narrative works; they would need to be academically rigorous; they would need to be imbedded within existing research; they would need to withstand peer review. Nevertheless, appropriately grounded digital games could present historical data, demonstrate analysis, and facilitate debate.

There are various challenges surrounding the development of games for this sort of research, but these should not be insurmountable (Houghton 2018: 35-39). A cultural shift is required to accept games as a potentially viable research platform but also to adapt to the ways in which they can represent the past and discussion of the past. A game is not a monograph and must be engaged in a different manner. In more practical terms, it would be necessary for historians intending to use or develop these tools to acquire a grounding in new skills from the fields of game studies and game design. There are also resourcing issues surrounding the creation of games (Carvalho 2017: 818-819). All of these points would need to be addressed to facilitate the successful production of a scholarly game.

As I have suggested elsewhere, board games may provide a useful first step towards the creation of digital games as scholarly tools (Houghton 2018: 40-41). These physical games are more accessible, present their mechanics more visibly by necessity, require fewer resources to produce, and are easier to modify than their digital counterparts (Antley 2012; Houghton 2018: 40). As Antley observes, this grants them a strong potential as teaching tools (Antley 2012): there is little reason why these qualities could not be beneficial when creating a scholarly game.

Furthermore, many of these issues have already been considered and mitigated through existing pedagogical scholarship. Most research in this area has been conducted in relation to teaching with games rather than using them for historical research, but the conclusions and methods built through these pedagogical studies have strong applications in the development of games for research. The development of teaching strategies using digital games at university level is especially pertinent here as it demonstrates the ability of these games to facilitate advanced study and

debate in practice. This wide-ranging pedagogical research is a vital resource for the development of scholarly games.

These games could be incredibly diverse depending on their purpose and which element of the field they address. Games similar to *Call of Duty* or *Assassin's Creed* could be used to present fully explorable models of landscapes and material culture. Specially built grand strategy games using mechanics fundamentally akin to those of *Sid Meier's Civilization* or *Crusader Kings II* could be used to explore complex political systems. Nuanced reworkings of games such as *The Sims* or *The Patrician* could address historical social structures and economic models respectively.

As Chapman has argued, we need to move beyond seeing digital games as something informed by academic history or even as something which is only for teaching purposes (Chapman 2012: 42). Digital games represent a substantial new resource for historical research and have the potential to open new avenues and approaches for study. There are certainly difficulties and limitations to this approach, but this is true of any method of historical study. Digital games are not a panacea for teaching or scholarship, nor can they replace traditional research outputs or methods, but they can augment our understanding of the past. Despite their shortcomings, this resource should not be ignored.

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11. Life Was Really Hard! Designing and Using Digital Games to Explore Medieval Life in Primary Schools

Juan Hiriart

Introduction

Digital games are an important part of young people's lives and culture and a good number of titles in the spectrum of the most successful games on the market are based on historical events, characters, or settings. These games not only provide countless hours of entertainment but also play a key role in shaping how players imagine or make sense of the past (Houghton 2016). Schools, however, have been slow in recognizing this potential and engaging effectively with games and youth game's culture. Part of the blame lies in the significant challenges of integrating games into well-designed lessons and unit structures (McCall 2011). What are the advantages of using games to teach history? How can they be designed and effectively integrated into the (primary school) classroom?

The project of answering these questions became a PhD research set to investigate the intersections between history, games, and educational theory. As a game designer and developer, my research approach relied on 'making:' developing historical game prototypes, engaging in a dialogue between the practical and theoretical aspects of historical game design. Indeed, in a typical game creation process designers, developers, and producers take many crucial decisions as the project moves from initial conceptual phases to playable artifacts. Despite their subjective and idiosyncratic nature, each one of these decisions or "design moves," as Schön (1985) calls them, can be seen as small experiments, subject to be evaluated and reflected upon. In this way, the very process of designing and developing a functional game becomes an advantageous way to illuminate some of the most obscure aspects of a complex design problem (Mateas & Stern 2005). Often, the emergent nature of this research method also helps to uncover aspects unforeseen at the beginning of the investigation.

Figure 11.1: Primary school child's drawing representing everyday life in early medieval Britain.

This investigation led to the development of *Saxon* (Hiriart 2019), a game focused on the early medieval period of Britain, which is studied by pupils of Key Stage 2 (8-11 years old) in primary schools of Britain and Wales. The game would be iteratively developed through a succession of prototypes, each one hopefully better than the previous one. Historians, archaeologists, and history teachers would be included in the creative process using participatory design methods, contributing to the project with their criticism and disciplinary-based perspectives. As the game reached a final stage of production, the plan was to evaluate it in its intended context of use. For this, I contacted a primary school from Cheshire, which was keen to collaborate with this project. A series of play-testing sessions were planned with the school teacher to evaluate the game, looking into the best ways to integrate it within the school history curriculum. To understand the educational potential, effect, and future design directions of the project, an array of data collection methods was used, including children's drawings (see Figure 11.1), interviews, and gameplay data recorded by the game itself.

In this chapter, my intention is to give an overview of this process, focusing on the design challenges and paths of solution followed throughout the different iterations of the game. First, the development of a historical game world, where players could interact with the environment, agents, buildings, and artifacts of historical significance, will be described. Following, the focus will move to the evaluation of the historical game in the school classroom, reflecting on the situations where its educational potential became more evident.

The Anglo-Saxon Game Project

The Anglo-Saxon period, marked by the arrival and settling of Germanic tribes – Saxons, Angles, and Jutes – into Britain after the departure of the Romans in 410 CE, was a time of great change, when the identity and socio-cultural institutions of this land were radically transformed. Following the accounts of the British monks Gildas (n.d.) and Bede (1898), the Anglo-Saxons came first invited by the local warlord Vortigern to serve as mercenaries, helping in defense of the territory against the Picts and Scotts, kept at bay by the now retiring Roman military machine. According to the British monks, the feared invasion from these neighboring groups never took place on the expected scale; however, tensions with the invited protectors soon became untenable, leading to the taking over of the country by the very people hired to defend it.

As I walked into the primary school classroom, I took note of all the materials and activities done by the children studying this historical period. They had played a role-playing game developing characters, stories, and their own 'Anglo-Saxon passport.' They had reserved a large space of the room for making a 'museum' with books, drawings, and all sorts of hand-made historical objects. They had also researched the archaeological site of Sutton-Hoo. On the wall, a piece of paper demanded pupils in big letters to consider: "How would your life be like, if you lived in 690 AD?"

An important part of developing historical thinking skills in primary schools concerns the ability to imagine everyday life in the past. The Department for Education of the United Kingdom, in this sense, recommends to help "pupils to understand the complexity of people's lives, the process of change, the diversity of societies and relationships between different groups, as well as their own identity and the challenges of their time" (DfE 2013: 1). This level of understanding, which comprises everyday actions as well as attitudes and forms of ritual (Eckert & Jones 2002), is a complex undertaking for many children. When consulted about this, a primary school teacher commented that "this is something they find really hard; when everything is mass-produced now they find it really hard to imagine that to get a new piece of clothing someone had to make it, and that would take a long time" (pers. comm. anonymous school teacher, 2 December 2016). Another teacher remarked on the proclivity of many children to rely on overt generalizations: "they all did this, they all lived like that, all of them had the same subset of experiences" (pers. comm. anonymous school teacher, 4 September 2017). An important goal of the game, thus, was to bring an adequate sense of life in the past, encouraging children to consider that the Anglo-Saxon period was as wildly diverse as we are today.

Building an Anglo-Saxon Game World

An important design goal of the game was to bring an accurate representation of the physical landscape of early medieval England, allowing players to visit representative buildings and interact with objects and artifacts of cultural significance. For this, an alignment of the game world with historical and archaeological interpretations of this period was considered essential. To achieve this, I carried out a number of tasks. First, a thorough review of academic sources describing how the early Anglo-Saxons lived was conducted. Although there is an

abundance of material in archaeological records, many of these works are evidently written for an audience of specialized archaeologists, thus involving a level of technical writing that was difficult to put into context for a neophyte like myself. Fortunately, more introductory texts such as dr. Sally Crawford's *Daily Life in Anglo-Saxon England* (2009) provided a wealth of information for building the virtual Anglo-Saxon world. Also, and perhaps unconventionally, I decided to revise historical fiction, such as Bernard Cornwell's *The Saxon Stories* series (2004-2016). Although this information needed to be read bearing in mind the author's creative licenses, it offered vivid and indeed useful descriptions of the Anglo-Saxon living spaces and way of life. Take, for the sake of illustration, this paragraph extracted from Cornwell's first book:

> We waited in the hall. It was, indeed it still is, a great wooden hall, strongly thatched and stout beamed, with a harp on a dais and a stone hearth in the centre of the floor. It took a dozen slaves a day to keep that great fire going, dragging the wood along the causeway and up through the gates, and at summer's end, we would make a log pile bigger than the church just as winter store. At the edges of the floor were timber platforms, filled with rammed earth and layered with swollen rugs, and it was on those platforms that we lived, up above the draughts. The hounds stayed on the bracken-strewn floor below, where lesser men could eat at the year's four great feasts.
> *Cornwell 2004 n.p.*

According to findings from archaeological sites such as West Stow in Suffolk and Mucking in Essex, early Anglo-Saxon villages generally lacked the sophisticated organization found in later medieval towns, typically structured around churches and connected through roads. In contrast, typical settlements from the pre-conversion period (fifth-sixth centuries) were rather small and dispersed (Crawford 2011). For the most part, they consisted of unenclosed homesteads made out of farmsteads inhabited by small family units.

Most of everyday life in these early Anglo-Saxon settlements revolved around the neighboring fields, woodlands, rivers, and water sources (Ibid.). The archaeological interpretations of sites from this period show that two characteristic types of buildings were used. Along with the 'Grubenhäuser' or pit-house – the relatively small and primitive type of construction partly dug into the ground – archaeological sites from this period also typically show timber-built halls, a rectangular structure far more spacious than pit-houses. They were solidly structured by supporting pillars and characteristically presented two opposing doors centrally located within the larger walls.

Regarding the constructions' inhabitation and forms of use, it has been remarkably difficult for archaeologists to reach a definitive conclusion and the debate very much persists. The stereotypical and basic forms of both the pit-house and hall are generally inexpressive, providing very few clues about the sort of activities carried out on the inside (Blair 2018). Despite the lack of agreement, modern interpretations tend to place daily life in the large and more comfortable space of the timber-built halls, rather than in the damp pit-houses. Judging from

the evidence excavated from their pits, the latter seemed to have been used more as workshops for productive activities such as weaving, pottery making, and smithing, rather than living quarters (Crawford 2009).

Along with the study of scientific articles and publications about Anglo-Saxon archaeology, I considered it essential to complement this information with the more direct approach of visiting and studying in-situ existent reconstructions of Anglo-Saxon sites. This is not something that can be done for most archaeological projects, but in this case there were some reconstructions in the United Kingdom, constructed and maintained by archaeologists and historical reenactment societies, that could be visited. To gain a more in-depth and more immersive insight into the Anglo-Saxon world the heritage site of Jarrow Hall in Northumbria was considered advantageous. This site, dedicated to the life and work of the eighth century monk Bede, provided a glimpse into the world in which he lived through a dedicated museum and a reconstructed Anglo-Saxon farm, where a range of representative buildings, period-specific animal breeds, and agricultural activities and crafts could be encountered.

At Jarrow Hall, both the replicas of the hall and the pit-house were extensively documented by photographs and sketches. My documentation focused on the spatial configuration of the buildings, materials, and construction details, all critical information for the virtual reconstruction of these buildings within the game. Perhaps even more important was the phenomenological understanding gained from walking through the farm and inside the buildings, gathering a wealth of sensory information from the place. Relations of scale, smells, and light conditions were the sort of data that were not readily available by consulting the literature, yet they contributed to a better virtual reproduction of the Anglo-Saxon world.

Figure 11.2: Screenshot: in-game reconstruction of the Grubenhäuser or pit-house.

Based on the gathered information and direct perceptual experience, three-dimensional models of both the great hall and the pit-house were built (see Figure 11.2). These buildings had to be implemented so as to allow the player to see their appearance and architectural details both from the outside and the inside. As the player's avatar was followed by a distant third-person camera, however, this created the problem of losing sight of it when walking inside buildings. Taking a similar approach to other third-person games such as *The Sims* (Maxis 2000-2020), the problem was solved by making parts of the building transparent when the avatar was inside, thus making the player visible at all times.

Interacting with the Environment

While the virtual reconstruction of an early Anglo-Saxon settlement communicated to a reasonable degree how things might have looked at that time, the project was also committed to conveying, with a similar degree of closeness, how people lived in this world. This level of representation in virtual worlds is embedded through computer code, the writing of which always implies the translation of complex cultural and social processes into the mathematical structuring of simulations. How to bring an adequate sense of past everyday life through functions and equations?

Historical and archaeological interpretations of the Anglo-Saxon period emphasize the hardships of livelihood in the challenging landscape of post-Roman Britain. At that time, people had to devote a significant part of their lives to the finding and producing of food and drink for themselves and the members of their households. These activities determined their lives "both at the basic level of survival and at the level of everyday social interaction" (Crawford 2009: 93). In broad strokes, this interpretation of life seemed to align well with survival game mechanics, a form of gameplay based on exploration and resource management in which players have to be continually looking for the means to prevent their avatar stats – hunger, thirst, and so on – to deplete. From this initial definition, the core gameplay of the game prototype consisted of keeping the player character, an Anglo-Saxon free peasant or *ceorl*, alive for as long as possible using the tools, resources, and practices available in early medieval times. In the case of any of the character's physiological stats falling to zero, the game would be lost.

A crucial part of surviving as Anglo-Saxons involved the intimate knowledge and understanding of the environment in which they lived. Following Ingold (2000), this relation was translated into the game by the procedural equivalences of the acts of *collecting* (*i.e.* taking things from the environment) and *producing* (*i.e.* growing or making things). While the game started to take shape with these actions, a more abstract definition of the relationship between people and things, as a common denominator between past-inhabitation and game-inhabitation, was very much needed. The conceptual framework for this definition came from Gibson's (1979) theory of ecological perception and, more specifically, the concept of affordances. For Gibson, this concept involves "the possibilities of action of a particular animal-environment setting" (Ibid.: 4). In real as well as virtual worlds, the perception, action, and transformation of the environment follow what it 'affords' to the player, as a function of his or her capacities for action. A wall may be 'climbable' only if I am agile enough to reach to the top.

Using these theoretical frameworks to guide the design of the game, the integration between the player and the reconstructed world was conceptualized as a virtual journey where players were provided with opportunities to explore and learn from meaningful interactions with environmental objects and artifacts. These interactions, however, always follow a purpose. Everyday life can be seen as composed of a never-ending flow of tasks or 'things to do.' For Ingold, these are the primary analytical units of human inhabitation. He describes tasks as "the constitutive acts of dwelling" defined as "any practical operation, carried out by a skilled agent in an environment" (2000: 195). Tasks are multi-layered clusters of meaning, which require being enacted to be fully interpreted. At its most basic expression, they can be seen as the means to survive in the environment, but they also carry cultural meanings and traditions, define identities, roles, and social interactions. Thus, the game was conceptualized as a 'playable taskscape.'

Adding Empathic Social Interactions

With a historical game environment to explore and interact, I turned my attention to the development of meaningful social interactions. Here, the goal was to immerse players in the multicultural diversity of fifth century Britain, communicating how Anglo-Saxons may have engaged between each other and with other cultural groups. For this implementation, many referents from commercial games do exist; however, I cannot hide my frustration with most of them. While popular titles such as the *Assassins Creed* series (Ubisoft Montréal 2007-2018) are capable of bringing highly populated environments, sooner or later the illusion of social presence dissipates as I realize that non-player characters (NPCs) are just 'props' filling an otherwise inert polygonal landscape. With their repetitive dialogue lines and lack of meaningful interaction, these NPCs resemble mannequins or theme park audio-animatronics rather than real people. Conscious of this problem, other games such as *S.T.A.L.K.E.R.: Clear Sky* (GSC Game World 2008) have made a significant effort in creating more believable social characters, with A-Life systems enabling them to have independent and complex lives. Still, it does not feel right.

Reflecting on this problem, Rejack (2007) blames much of the failure of historical video games to create engaging and empathetic characters on their weak AI. Analyzing his emotional involvement while playing the WWII game *Brother in Arms: Road to Hill 30* (Gearbox Software 2005), he describes how he was supposed to establish a close bond with a member of his squad, whose sudden death he had to witness, powerless to do anything to avoid it. The event was based on real characters and events, but despite the evident efforts from the game's developers to make him feel the emotional weight of the loss, the lack of realistic human behaviors by the characters made it impossible for him to feel the loss of his comrade. As technology moves forward, Rejack reckons "virtual characters [will] help to produce historical knowledge" (2007: 415).

While the inclusion of characters able to exhibit realistic behaviors would undoubtedly help to create more empathic and emotional responses, I am not convinced that this is the main reason why *Brother in Arms* failed to engage players effectively with historical events. This line of criticism ignores the role of play and the interplay of choices and consequences as primary drivers of the affective

involvement within games. Because players can make their own choices and experience the consequences of their actions, games hold unique powers to evoke a range of emotions (Isbister 2016: 13). Thus, I would argue that the main potential of historical games does not reside so much on their capacity to accurately simulate social life but to engage players in a dramatic experience capable of driving them to *care* about the characters around them. As Noddings argued, "[a]s humans beings we want to care and to be cared for" (2013: 7).

Recent commercial games seem to echo this observation. The very successful *God of War* (SIE Santa Monica Studio 2018), for example, which in previous releases featured the solitary feats of the vengeful Kratos, in its latest installment introduced a second character – Atreus, Kratos's son – who accompanies him throughout the whole game. Despite the technical challenges that the introduction of this character implied for the development team, it was considered pivotal in adding psychological depth to the main character and the game's overarching narrative. In the same line, other commercial titles introducing similar design patterns are *Brothers: A Tale of Two Sons* (Starbreeze Studios 2013) and, more recently, *A Plague Tale: Innocence* (Asobo Studio 2019).

Thus, the design goal of incorporating social actors who are able to connect empathically with the player was added to the project. In the game, the player would enact the role of an Anglo-Saxon free peasant responsible for a small son and a teenage daughter (see Figure 11.3), two actors with different physical and emotional needs. These characters would communicate primarily through text-based dialogue trees designed to reveal different aspects of Anglo-Saxon culture and ways of life. Historical concepts related to religion, cultural values, norms of conduct, and so on were introduced through these interactive conversations, presenting problematic situations for the player to solve. In connection to the
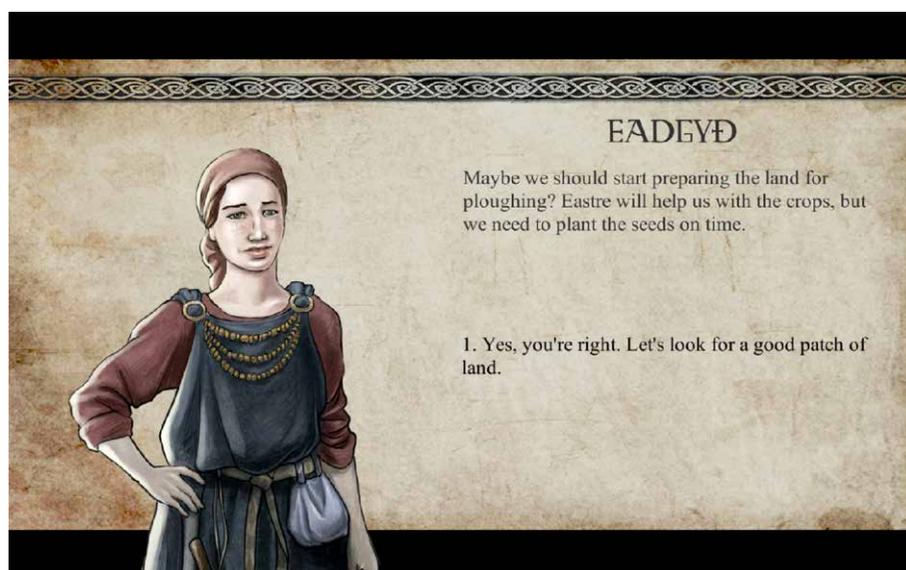

Figure 11.3: Screenshot: text-based dialogue with Eadgyð, one of the player's family members.

game's core survival gameplay, tasks could be delegated to the 'family members,' liberating the player of part of the burden of having to do everything by themselves. In return, the player would have to take care of their virtual family's wellbeing.

While developing the family system, one of the most critical aspects was the extent to which the represented parenting relationship reflected the way Anglo-Saxons saw and related to their kin. As expert reviewers remarked in the game testing sessions, it could not be assumed that Anglo-Saxons perceived their children and took care of them according to modern parenting standards. Barbara Greenleaf, for example, remarks that:

> Until very recently people considered childhood just a brief, unimportant prelude to adulthood and the real business of living. By and large they either ignored children, beat them, or fondled them carelessly […] When they gave serious thought to children at all, people either conceived of them as miniature adults, or as peculiar unformed animals.
> *Greenleaf 1979: xiii*

In spite of the fact that this view has been ascribed by some Anglo-Saxon historians (*e.g.* Keufler 1991), ample evidence in historical sources can be found supporting the counterargument that Anglo-Saxons saw their children as psychologically different from adults and considered that they deserved to be treated kindly, gently, and lovingly (Crawford 2009). Many children's rights were recognized and protected by specific codes of law, and there is also evidence that parents loved their children and cared for their physical and spiritual wellbeing. Although the archaeological evidence supporting this view is practically non-existent, Crawford comments on an unusual artifact found in an infant's grave, a "mammiform vessel with a pierced base" (2011: 77) that could have been constructed in a desperate attempt to keep a baby alive who was not able to breastfeed by itself.

Using and Testing the Game in a Primary School

Once most of the projected systems were functional and the game could be played, the research continued in a primary school classroom. To evaluate the design hypothesis, the research adopted a pre-post test design. This methodological approach, commonly used in educational research, involves gathering data concerning an outcome of interest *before* and *after* a particular intervention is implemented (Bell 2010). Accordingly, the first session focused on collecting data about children's historical preconceptions. To this end, the children were asked to produce drawings representing how Anglo-Saxons lived. While they were working on their drawings, informal, unstructured interviews were carried out, asking them to elaborate on particular aspects of their drawings. In the sessions that followed, the children played the game on school computers, all programmed to record children's in-game actions, decisions, and spatial navigation for later analysis. Finally, the evaluation ended with another drawing session structured in the same way as before, allowing, by comparison, to study how the interaction with the game affected the pupil's historical preconceptions.

The analysis of the collected data was conducted through a mixture of qualitative and quantitative methods. Interestingly, the analysis revealed that children's historical conceptions about the Anglo-Saxon age, such as 'life was violent,' 'life was hard,' and 'life was social' were very much present when they interacted with the game and were either reinforced or challenged by its ludic and narrative structures. In the next sections, we will focus on two of these learning situations: the construction of historical meaning through the interaction with the game's spatial and temporal structures, and the narrative engagement with conflicting aspects of Anglo-Saxon life.

Learning from Procedural Spatial and Temporal Interactions

According to game scholar Espen Aarseth, the "defining element in computer games is spatiality" (2001: 159). When game designers use this medium to convey narratives, they "don't simply tell stories; they design worlds and sculpt spaces" (Jenkins 2004: 121). This renders this medium biased towards the spatialization of historical semantics (Schut 2007). In contrast with other forms of historical mediation, such as books or films, history in games is presented through two-dimensional or three-dimensional worlds, capable of raising arguments based on spatial ideas and relationships. From this perspective, historical game worlds can be compared with non-digital procedural systems such as LEGO or Playmobil. When children, and indeed adults, play with these systems, their imagined worlds are laid out spatially, generating meanings from the recombination of the system's individual components. What makes digital games different, however, is their capacity to formalize these spatial relations through computer algorithms determinant to the player's intentions and goals. For example, as children had to walk their Anglo-Saxon avatar to perform tasks such as fetching water, the relative distance to the nearest river or well became an important factor to consider when deciding where to build their homes. When playing in the classroom, one child recommended another to carefully consider this factor because "water runs-out quick." We can identify these types of realizations as nuggets of 'material life wisdom,' a particular form of understanding, based on direct experience, with the capacity of illuminating the ways of doing and living in the past.

Despite the emphasis that some authors put on the spatial properties of the medium, the focus on everyday life of the Anglo-Saxon game drives us to also revise its temporal properties. More than anything, survival within the game was a challenge defined by time. As game-days passed inexorably, children found themselves working hard to sustain themselves and their virtual families. One child recounted that "finding the time to do things" was a constant struggle. The relevance of time as a primary category in historical thought is well-recognized. Kubler, for example, states that "[w]ithout change there is no history; without regularity there is no time. Time and history are related as rule and variation: time is the regular setting for the vagaries of history" (Kubler 1962, *quoted in* Ingold 2000: 194). Historical change within games, however, does not occur in one single path but along different intersecting timelines. Drawing from the reflective analysis of the game prototypes, we can distinguish at least four levels of time representation. The first level, identified as *perceivable movement*, corresponds to updating cycles

of the machine, or what in computer jargon is known as frame rate. At this level, any object in the game world identified as being alive needs to update both in terms of its virtual model and graphic representation. In a second level, the focus shifts to the game agents' biological and social needs, emphasizing the rhythms of the body: the physiological needs of hunger, thirst, sleep, excretion, and so on. As these systems are structured as "metronomes" of life experiences, this timeframe can be considered "rhythmanalytical" in the Lefebvrerian sense (Lefebvre 2005). In a third level, we recognize the temporal dimension conformed by the grid of tasks performed in the environment, which, following Ingold (2000), turn the game into a playable taskscape. The fourth and final level corresponds to the seasonal, cyclical changes experienced throughout the year, which become imprinted in social and cultural manifestations such as rituals and celebrations.

Needless to say, space and time should not be considered as separate dimensions, independent from each other. Rather, they intertwine in their effect over the historical gaming experience. Their inter-dependency became clear as I saw how children's survival strategies turned more sophisticated as they advanced in their understanding of the game's procedural structures. While at the beginning of their playing session an intuitive understanding of the game interface made it possible for them to execute relatively simple tasks, such as collecting and using resources readily available in the game environment, a more complex comprehension of the game's temporal and spatial structures was necessary for them to deploy more effective survival strategies, such as farming.

Coming to this point, it is important to ask: to what extent can this sort of engagement be considered useful from an educational perspective? Are students gaining an understanding other than just becoming good at playing a game? When consulted about these questions, history teachers agreed that to work as a learning resource, the game needed to be integrated with the pedagogical goals planned for the learning units and for this children had to engage in other learning activities designed to help them rationalize and expand their experience in the game. In this way, children not only would have gained a better understanding of a historical topic but could come back to the game with "more historical knowledge and enjoy [the game] in a different way" (pers. comm. anonymous school teacher, 2 December 2016).

Learning from Ludo-narrative Conflicts

Through interactive text-based dialogues with the 'family members,' the game attempted to bring in historical concepts not necessarily related or even opposed to the overarching pragmatic goal of surviving the medieval world. This design goal, however, was not entirely successful. For the most part, children skipped the dialogues, refusing to spend time reading them with the necessary level of concentration. Moreover, for many children, the agents were regarded as no more than a 'hassle,' always getting in the way of their primary goal of 'winning' the game by being the player who survived the longest. In contrast, for a small proportion of children, their virtual families were seen as important and worthy of taking care of and they made a serious effort in keeping them in good shape.

While part of the failure in engaging children empathetically with their virtual family members can be attributed to the disruptive nature of the character dialogues, which demanded children to momentarily pause their interactions to read them, post-testing interviews revealed another part of the problem: the interplay between different identities adopted by players in the gaming context. As sociologist Alan Fine elaborated in his book *Shared Fantasy* (1983), players constantly switch between different modes of consciousness while interacting with games' ludic and narrative structures. First, they adopt the identity of a *player* when they follow patterns of interaction where their goal is to understand the game's rules and develop the best strategy to 'win' (or avoid losing). Second, players also adopt the identity of their *avatar* as they immerse themselves into the fictional layers of the system, becoming someone different from who they are in the real world. Whomever they choose to be in this fictional context, this choice is never neutral. 'Being' a particular person implies a particular way of seeing the world as it is presented and experienced within a game. Finally, Fine also identifies the identity of a *person* where the individual's values, ideologies, beliefs, moral codes, and other personal elements come into play, affecting the game experience as well as the player's actions and decisions within the ludic and fictional gaming context.

The analysis of the data collected in the playing sessions showed that the most important learning moments arose from situations where children's playing identities were set in tension. This is exemplified by a particular character dialogue wherein the player's son, named *Wilburg*, asks not to be sold as a slave in the looming prospect of the household crops failing to produce enough food for the whole family. This scenario, not unlikely according to historical sources, caused surprise and triggered a noticeable dissonance for many children, who had to face the problem of deciding whether to act as a 'good parent' according to their personal understanding of what this entails, or doing what an Anglo-Saxon parent would do under indeed difficult circumstances. When the playing session ended, the conflict originated by this narrative remained very much alive and, on the children's request, had to be resolved through an open discussion led by the teacher, who took the opportunity to discuss at length topics ranging from parenthood to slavery in the past as well as in modern times.

Based on this experience, I would claim that for history to be presented in a digital game taking advantage of the full expressive and educational potential of the medium, relevant historical concepts need to be configured as ludo-narrative conflicts, capable of driving players to care about the studied topics. Dewey, on this respect, remarks that:

> [C]onflict is the gadfly of thought. It stirs us to observation and memory. It instigates to invention. It shocks us out of sheep-like passivity, and sets us at noting and contriving. Not that it always effects this result; but that conflict is a sine qua non of reflection and ingenuity.
> *Dewey 1922: 300*

Dewey's remark seems especially true in the context of games. As Salen & Zimmerman claimed: "[c]onflict, a game as a contest of powers, is a core

component of [the] definition of the term 'game.'" (2004: 250). It is, therefore, through the determination of relevant conflicts, defined from relevant historical concepts, that history can be translated into meaningful play. Through this type of engagement, where meaning is created from the dynamic relationship between player actions and system outcomes, students are provided with opportunities to foster their empathic understanding of the past. This form of understanding, as Gilbert reflected in her analysis of historical empathy in narrative video games, is amplified "through a visceral sense of lived experience and empathetic engagement with [game] characters" (2019: 119).

Conclusions

After engaging in this creative exploration, I conclude that the medium can be a valid and, in some respect, advantageous form of historical engagement, with specific affordances not available in other media. This conclusion stems from a conceptualization of historical understanding not solely as the mere recalling of factual information about the past, but on the capacity of thinking historically, understanding the components, relationships, and underlying operations that characterize historical processes.

Regardless of their level of abstraction, historical game environments are not constructed only to be seen but to be *lived*; to be explored and inhabited in ways that are unique to this medium. Within game worlds, the past becomes alive through computer code. This makes digital games an advantageous medium for the exploration of components, systems, and formal relationships.

Drawing from the evaluation of the game in the school classroom, we can argue that the value of digital games as historical mediums can be judged according to their capacity to present relevant conflicts, that is, conflicts capable of challenging naive forms of historical understanding or capable of bringing novel historical perspectives. For this to happen, an effective historical game-based learning environment should be capable of bringing into play not only the identity and goals of the participants as players, but also their personal and fictional identities and goals. When these identities are successfully brought into the gaming experience, the system opens opportunities for players to become *insiders* into the virtual world, enabling them to empathize with the historical agents' particular circumstances. For this, it is essential that the characters included in the game are programmed to exhibit complex behaviors and thoughts, familiar in some respects to our present understanding of the world but very different in others. Through their interaction with them, players should acquire an elevated sense of responsibility by engaging affectively with and caring about them.

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12. Gaming the Past: Video Games and Historical Literacy in the College Classroom

Jeffrey Lawler & Sean Smith

Introduction

Across the United States, the value of a liberal arts education is coming under attack from federal and state legislatures who are moving money away from humanities instruction in favor of science, technology, engineering, and math (STEM) programs. As a result, university administrators and humanities faculty are engaged in a tug of war as liberal arts disciplines fight to prove their value in a climate of ever-shrinking budgets and the impression that the liberal arts do not provide modern skills (Harris 2018). According to a recent survey by the American Academy of Arts and Sciences, fewer than one in twenty degrees awarded in the US come from humanities disciplines traditionally associated with classic liberal arts degrees (AMACAD 2018). The numbers are even more grim for traditional history departments that are struggling to fill both their classrooms and their major. In 2016, the number "of students earning baccalaureate degrees in history dropped below 1.5 percent, the lowest level on record" (Townsend 2017). Looking for solutions to the crisis, historians across the country are working to integrate novel ways of bringing students back into their departments. And yet, historians have been slow to embrace technology as a means of bridging traditional history methods with digital humanities and the skills supported in many STEM programs. Our study finds that using the creation and exploration of video games in both upper division history classes for majors and lower division general education history courses has proven an effective tool when applied properly for teaching both traditional historical methods and historiography, offering students an engaging and familiar way of coming to historical texts and introducing them to technology and computational skills that add perceived and real value to their history major.

In the fall of 2017, we began work to create an effective means of combining history, games studies, and computational skills into the history curriculum. The solution we landed on was threefold. The first step was the creation of an upper division course, *Playing the Past: Games as Historical Narrative, Public Memory, and Cultural Representations*. The second was the creation of the Center for the History of Video Games and Critical Play, a playable archive (www.criticalplay. org). Third, and the focus of this chapter, was the integration of video game design and creation into a variety of general education and history specific curricula: developing a constructivist pedagogical model that brings students together in creating an engaging and contingent history has the potential to more completely immerse students and game players into a deeper sense of history and the historical process.

Games as Popular History

For many American students, their first experience with history is through the video games offered as treats in their childhood classrooms. Rewarded for finishing their worksheets, doing their homework, and/or to fill time in the computer lab, they played games like *The Oregon Trail* (MECC 1971-2011), *Mission US* (WNET Thirteen 2010-2020), *The Yukon Trail* (MECC 1994), *Freedom!* (MECC 1992), and *Where in Time is Carmen Sandiego*? (Brøderbund 1997 [1989]) Often these games were presented without any context. Their narratives unexplained, their interpretations accepted as fact, and their conclusions undeniable. In *Fond Memories: the Oregon Trail,* video game critic for IGN Levi Buchanan says of his generation's experience, "…really, that's all these computer classes were to Reagan Era kids – an excuse to play *Oregon Trail* and *Where in the World is Carmen Sandiego?* Learning was involved, though, as these twin titans were loaded with historical facts. But it was done on the sly" (Buchanan 2009). Like history textbooks, these games are presented as authoritative and unbiased, as unassailable (Wineburg 2001). The history in the games, read by the students and presented by the teachers, were offered as objective and factual, not as histories written by the game's developers motivated by their own interests, the company's profits, or for the entertainment of those who would play them. After all, why were these games presented in classrooms or in institutional settings and offered to students by teachers if they were not valuable? Students are conditioned to simply play these games in an uncritical fashion, assuming games offer an authoritative historical voice. The authoritative voice of the games and the fact that they were also presented as a reward for finishing 'real work' means that most students when they enter our college classrooms bring with them fond, often nostalgic, memories of historical video games and the role those games played in sparking their interest in historical study.

While students' interest in history may have emerged from the games they played in their primary grade classrooms, the games that they currently play on their own game consoles and PCs have had an even deeper impact on their historical understanding and have shaped their beliefs about history and historical study. In fact, an ongoing survey of the authors' undergraduate students (an informal classroom poll at the beginning of each semester of nearly 800 students, from the fall semester of 2017 to the spring semester of 2019, in both upper division and

lower division history courses) revealed nearly seventy percent of them became interested in history or the history degree program at our university because of a video game they had played or are currently playing. While anecdotal, these informal polls reveal the significant impact video games have on our students' decisions about not only their degree paths but also the way they negotiate and understand the past. And this impact becomes more acute when one sees statistics that reveal that nearly two-thirds of U.S. college students play video games on a regular basis. Many dedicating more hours of their time to gaming than to their college studies (Jones 2003).

Not only are our students playing hours of games often at the expense of their classwork, the games they regularly play are rooted in historical themes. Writing in *Pastplay: Teaching and Learning History with Technology* (2014), Kevin Kee & Shawn Graham argue that much of the video game market is related to historically themed games. They write, "while the humanities have shown limited interest in games, games have shown great interest in the humanities, and especially history. A recent survey showed that 26 of the 133 PC-based games that have sold at least 1 million units have been based on a historic theme, or have employed historical tropes" (Kee & Graham 2014: 271). The data from our own classrooms shows that students have an interest in these history-based games. Asked about the games they play, students in both upper and lower division courses revealed a penchant for games from series like *Assassin's Creed* (Ubisoft Montréal 2007-2018), *Kingdom Come: Deliverance* (Warhorse Studios 2018)*, Battlefield* (EA DICE *et al.* 2002-2018)*, Wolfenstein* (Muse Software *et al.* 1981-2019), *Sid Meier's Civilization* (MicroProse & Firaxis Games 1991-2019), and *Red Dead* (Rockstar San Diego & Rockstar Studios 2004-2018). These games, while set in what are perceived as historically important eras and driven by a historical narrative, offer a less than critical or scholarly vision of the past.

While it is encouraging that video games bring students to history classes and help to foster an interest in studying the past, their influence remains problematic. Students are already conditioned to read games uncritically by their past classroom experiences and the nostalgia they have for these games. Additionally, their consumption of contemporary history games with interpretations that serve the developers agenda or narrative interests creates a prior historical knowledge that they bring to the classroom rooted in simplistic often heritage-based interpretations of the past. The games are written with notions of popular history and, whether intended or not, are loaded with historical myth or allusions that players internalize. Our students are clearly not equipped with the skills necessary to read video games critically and gauge their historical value. History is often conflated by students as a story well written and told. But the study of history is more than just the creation of a narrative of past events, it is a body of skills and knowledge that lead to historical thinking.

All games are encoded with historical memory and interpretation that are part of the same complex processes that bind more traditional sources to historical interpretation and public memory. Games often serve to confirm a popular historical narrative, reinforce cultural myth, or offer simple solutions to complex social and political moments. This exceptionalist view can be seen in the plethora

of American-centric military based first-person shooters, where players take the role of heroic defender of democracy and liberty, unquestioningly mowing down an anonymous enemy who has also been reduced to a caricature or stereotype. Through the playing of these games our students come away with an uncritical examination of the past that heralds the advances of western cultures and men in manifest roles while most often casting women and traditionally marginalized peoples as passive and/or stereotypical historical actors (Schut 2007). In a recent U.S. survey course when students were asked 'what is history?' several respondents offered that "history was written by the winners," or "it was a recounting of important people" and "important events" (Lawler & Smith informal in-class survey). Commercial games reinforce this popular idea of history as a series of gains and losses, as winners and losers, or they present imperial conquest and gain over often racialized others as normative and progressive (Mukherjee 2017; Pobłocki 2002). While others have written about the use of history games as "problem spaces" or "simulations" of actual history (McCall 2012a; McCall 2012b) what we argue for is a more formal analysis of these games giving students a way to deconstruct them as part of the historical process and to understand them as part of a popular historiography; introducing them to both the games' cultural meaning and their narrative biases.

But what makes a video game historical? For many, the definition of a history video game is fairly narrow; it is a game that is driven by historical themes and purposely uses the past as a historical space to play in (Chapman 2016a; Elliot & Kapell 2013; McCall 2012a). In our study, we argue that all video games can be subject to historical analysis and interpreted by students in the classroom. Games do not need any intentionality of being a history game. If we concede that what is popular, or at least not academic, which would be the case for most games considered historically based, then the mere use or integration of popular historical themes and historical events can be seen as a form of historical creation (Wineburg 2018). For instance, in *BioShock Infinite* (Irrational Games 2013) players are introduced to an alternate vision of the United States built on an objectivist model. A world that bears little resemblance to the 'real' or historic United States, but one nonetheless worthy of exploration in the history classroom. The game and its settings play with notions of patriotism and nationalism. In one particularly relevant part of the game the player explores *The Hall of Heroes*, where players experience George Washington portrayed as an iconic hero of the American Revolution, The Battle of Wounded Knee, where Native Americans are cast as heathen, murderous, and savage, and The Boxer Rebellion, where the Chinese participants are drawn in the most debased and racist stereotype with sharp, claw-like hands gesturing madly at our protagonist. These images are a part of the objectivist idealism featured in the game and present a dangerous interpretation and one that begs discussion in a history classroom. In this way and others, games are suggestive historical makers and the ability to read them and their historical allusions are pertinent to a student population that is engrossed in them. We also see the embodiment of atmospheric representation demonstrated in games that are less than purely historical. For example, in the game *Firewatch* (Campo Santo 2016) there are several instances when the protagonist Henry walks near or by trash

that is strewn about. While one is not able to fully engage with these items, such as aluminum cans, they help to create the setting of an environment that has been tainted and exposed to human damage. In these ways, the game's environments serve as representational markers that require the ability to read and deconstruct the meaning behind them. A portion of our project provides students with digital literacy skills so they can more fully analyze the use of history within games and the medium of games in general.

Even point and click narrative-based games like *Gone Home* (The Fullbright Company 2013), a game in which players explore their family's empty house in an effort to discover and interpret the life of their sister who has left home, have a place in the history classroom as they force players to engage in the historical process of discovery. The house is full of clues and references to older forms of technology, such as answering machines, and sets the cultural stage of the mid-1990s with era-appropriate video games, like *Street Fighter* (Capcom 1987), and bands such as Riot Grrrl. The historical and the history within the game are of two kinds: process and formal. Games are suffused with purposeful historical allusions that often demonstrate a common heritage-based approach to history, can impact how one thinks about the past, and can provide the game's player with either an infusion of historical representations or a conflation of those realities with the past.

In his book *Historical Thinking and Other Unnatural Acts* (2001), Sam Wineburg relates an anecdote that describes the ease with which a noncritical reading of media can lead to conflating history with the fiction provided by games and other visual genres. In Wineburg's example, a student inadvertently mixes their own understanding and knowledge of the Vietnam War with the film *Forrest Gump* (1994). The unconscious internalization of the film's account of the Vietnam era and the facility with which the student absorbed and ascribed historical veracity to the events portrayed in the film demonstrated the ability of mediums such as film and video games to engrain and create new historical truths (Wineburg 2001). Having students think about games and the uses of history within a variety of types of games gives them another tool for analyzing different forms of media, much like learning how to read film, paintings, or other unwritten text. Integrating historical analysis of video games and using their creativity in class not only allows students the means to read games critically, it also helps build students' traditional historical thinking and research skills. Thus, allowing for a broader discussion of the nature and meaning of history, the historical process, and how the past is and can be represented.

Games as Historical Texts: Making History with Games

The literature on what is history and how history is both made by and different from the past is expansive (Ashby *et al.* 2005; Dunn 2001; VanSledright 2002; Wineburg 2018). In brief, history is an attempt to reconstruct particular moments, ideas, eras, etc. while relying on discipline-specific methodologies that help create meaning and structure from remaining fragments of the past. It is an assemblage of information that is reliant on the historical creator as much as it is on the 'traces' of the past that not only remain but are deemed usable or necessary (Ginzburg 2012). When moving away from traditional history production and working with students to create history based games, it is important to expand the focus of

the project beyond the assembling of information and interpretation to having students create a meaningful representation of the past using an unorthodox medium (Rosenzweig & Thelen 1998; VanSledright 2002; Wineburg 2018). Unlike a traditional research paper, the games students create are a representation of the past that focus on fictional individuals based in historical reality, featuring historically driven characters that are derived through analysis and research that is embedded in a 'lived' life that showcases the daily experiences of individuals within a broader historical construct imbued with some amount of historical empathy (Goss 2018). Ultimately, our aim in using game engines such as *Twine* is to have students explore historical creation in a new way that forces them to construct meaning and necessitates the understanding of context, contingency, and choice.

In these projects, the creative element is highlighted and affords students the freedom to explore the past and create their own historical interpretations rooted in comprehensive research methods that still showcase the ability of history to tell a compelling, meaningful, and 'accurate' story (White 2005). These student-created narratives use fictive characters and elements while still remaining appropriately historicized (Sweeting 2019). To make narrative creation more accessible for students, we found that using the perspective of an individual within the game is helpful. This individual, or historically driven character, is of the students' creation and, as discussed later, must be rooted in historical research but cannot be a real person. Students are able to create historically authentic narratives with these fictive characters, as all elements of the story are clearly substantiated and based on historical methods (Chapman 2016a; Chapman 2016b; Goss 2018). The opportunity to employ a meeting point between history and fiction without being subsumed by a fictitious past provides students with a creative element that also challenges their understanding of what the past means. As Adam Chapman stated in a conversation with Jeremiah McCall "[authenticity is] less about getting 'it' (the past) right and getting the feeling of it right. It is a feeling that we all have when we experience historical media" (McCall 2018). These student generated games are historical creations and tell a history, and while they are histories that did not exist in some past form, they are resolved to tell a historical story, not by bending the rules, but by blending different mediums to tell a historically meaningful yet fictive narrative.

The games students write must apply historical evidence and the methods of historical research. As with a typical research project, students must imbue their work with historical context and make key choices regarding the material that is most appropriate to their narrative. Doing so, students focus on the difficulty of analyzing and connecting sources, and then applying that content to their accounts of the past. As Beverley Southgate states, "when attention does turn to history's content, further questions inevitably arise about what that content actually is, or should be, and how and why one subject, rather than some alternative is included" (Southgate 2009: 149). Having established a setting for their game's narrative, students are then tasked with devising an appropriate character to occupy that space. What to include, or rather whom to include, or the perspective with which to begin a historical narrative, game, or otherwise, challenges the student to establish a position that is reasonable and motivated by their own understanding

of events and the decisions individual actors might have made given their historical circumstances (Rosenzweig & Thelen 1998).

Students crafting a game that uses their own historically driven character removes the problem of having them try to understand how individual real historical figures would have acted and made choices. Even for the best historians, fleshing out their subjects is often pure speculation. Historians like Eric Larson, Doris Kearns Goodwin, and Edmund Morris have met with tremendous criticism for putting words in the mouths of their subjects and/or speculating at the actions of historical figures in their work (Masur 1999; Morris 2004). The games our students produce avoid this type of make-believe by situating and historicizing the actions of a fictional character rather than speaking for an actual individual from the past (Chapman 2016a; Chapman 2016b; Rosenstone 2006; Southgate 2009; White 2005). As Salvati & Bullinger write, "it is not fact vs. fiction per se, but rather which elements are foregrounded as establishing authenticity" (Salvati & Bullinger 2013: 157).

Placing the focus on fictive characters gave students an ability to analyze and use documents to create a reasonable narrative within a game designed to demonstrate their own understanding and provide a tool for teaching agency within a historical context. Having students create a fictive character added additional value to the assignment. In doing so, they were forced to use personal narrative as a storytelling device. As Rosenzweig & Thelen outlined in their book *The Presence of the Past* (1998), the past is personal for individuals and the connection to the past is mostly through an individual's personal experiences, particularly as they connect to the stories and history of the people that surround them. The use of a fictionalized character served to help personalize the narrative in two ways. Rather than being assigned a prompt or regurgitating information from a text, students were given more agency over their own historical creation. First, they created specific types of experiences and choices for their character within their narrative game that most connected with their own interests and understanding of individual lives in the past (Wineburg 2018). This creative control provided a form of agency as opposed to having them simply reading a real or presumed authoritative text and we witnessed students claiming ownership over their work that we do not often see with traditional assignments. Second, the creation of a game based on an individual story helped to instill historical empathy into the game. As we reveal in the case studies below, several students took it on their own to create novel historical spaces that used similar settings and mechanics to a variety of walking simulations and point and click narrative style games like *Gone Home* that students mimicked within their own games. Those who chose this model also crafted a game with a more intimate connection to material culture and objects of the past such as photographs, newspapers, and other ephemera that imagined a more meaningful historical space with its connection to the personal and private. In creating these games students relied on their historical training and the methods of historians while demonstrating the intricate and varied ways that historical agents engaged with and were controlled by external forces. Rather than just consuming history, students took an active role in the analysis of the past and its concomitant sources and the production of a historical text.

Twine Case Study: A Tale of Two Classes

History 172: Early United States History Survey (Lower division course required for all first-year students: U.S. history from pre-Columbian settlements to 1870)

Integrating *Twine*-based games into the lower division history classroom meant providing students with clear guidelines for the project and gave ourselves a way of measuring expectations and outcomes. As such, we broke the process down into four essential and distinct parts: Historical Method (historical questions, research, citations); Historical Content and Narrative Creation (plausibility, accuracy, purpose, reasonable fictive elements and characters); Technical Merits and Ethics (leveraging technology and practicing good internet habits); Playability (is it a good story that contains historical empathy, pathos, and a historical moment). While these 4 parts can in some ways be taught concurrently, they must be addressed clearly and distinctly and students must be given the time to adjust to the expectations. Without one of these elements, the games will not serve the intended purpose of providing a historically realistic (accurate) depiction of the past that engages the player in an empathetic and meaningful world. A story that implements historical ideas such as agency, contingency, and context needs the proper attention of both the instructor and students to make sure that they have the requisite historical and technical skills and knowledge to fulfill the goals of the project.

The experiment with *Twine* in the classroom began for Lawler during Spring semester 2017 in a *History 172: Early United States History* and was held in an Active Learning Classroom (ALC) designed for a flipped curriculum, a teaching strategy that reverses modes of learning where lecture and content are delivered online and then actively applied in the classroom. The technology included a computer with multiple inputs and a large monitor for each table that allowed for students to share their own devices and fully writable surfaces that could be used for brainstorming and note taking. These classrooms afford students the opportunity to engage in and use their own technologies and apply skills and knowledge to the content they consumed online and in the creation of their game project.

The first version of this curriculum was enhanced by the use of an ALC, allowing students to work closely in groups, and offered Lawler the ability to actively engage with student application of content and assist students with their projects in a

Figure 12.1: Panoramic image of an Active Learning Classroom, California State University, Long Beach (photo by: Jeffrey Lawler & Sean Smith).

close manner. This strategy broke down the distance between learner and expert, creating a community where students took an ownership of their education, learned to constructively criticize each other's work, and created an environment where the professor, rather than just a conduit of information, became an active facilitator in the creation of a project that was both creative and content driven.

While Lawler thought the experiment was successful as a learning experience, the students came away from the process with mixed feelings about their participation in this process. At the end of the semester, students noted a lack of breadth in content and a curriculum that was too focused and preferenced the historical content of the game over that of the broad content normally provided in a survey class. In fact, student evaluation surveys often reported that "taking part in creating a game on twine gave a whole new perspective to view history. Creating this game allowed us to research a specific part of history and truly dissect the whole era of that time" (SPOT Evaluation Form). Smith's first attempt in an honors program section of his survey class (*History 172: Early United States History*), much like Lawler's, was equally positive but without its own problems. Like Lawler's initial attempt, Smith's syllabus introduced the *Twine* assignment in the third week of the semester, giving students nearly 12 weeks to complete their projects. This time allowed for the scaffolding of historical research skills and offered enough time to concentrate on teaching the complexity and variable mechanisms within *Twine* that would help students create interesting and thoughtful narratives. The games in this class presented an interesting mix of historical subjects. For students, the video game model presented them with the need to think about what stories were important to tell and from what vantage to tell those stories. Interestingly, in both sections of *History 172*, the majority of groups created narratives that focused on marginalized groups, including Native Americans, enslaved persons, and women, for example. Making these choices often led students to question what moments, ideas, or events were important to include when telling the history of the United States and their own historical stories, thus revealing a more inclusive history and the relationship between their choice of sources and the narratives they created. The freedom to choose and evaluate source material allowed students to follow their own interests and resulted in work that spanned more primary and secondary sources and content than our traditional class' midterm or research paper prompts.

Too much freedom, however, often resulted in an overly narrow focus and some of the student-crafted games posited history as a set of binary choices that reinforced the idea of historical inevitability. Our students' prior knowledge regarding choice and historical outcomes was partly responsible for their inability to see history as multifaceted rather than simply moments from the past. Yet we bear some responsibility for this as well: having to teach both the historical skills and technological skills made it difficult to balance history thinking concepts like contingency, choice, and causality with the skills necessary for students to write effective *Twine* games. As a result of this lack of balance in teaching, some student-created games suffered because of the unclear parameters that we set out regarding these key historical concepts. Indeed, several of our students' games modeled the past in a way that the characters faced only one or two choices and/or suffered from teleological constraints. While some student groups faltered, many succeeded and we

were encouraged by the number of students who leveraged the programmatic power of *Twine*, crafting games that simulated the choices of historical actors in the past.

History 306: Playing the Past (Upper division course for history majors)

History 306, our '*Playing the Past*' course that consists entirely of History majors and has a broader approach to games, also had students create historical situated games. The outcomes from these courses were quite different than the lower division examples above and the games mostly suffered from a lack of creative development, possibly because of the limited time afforded to students to complete the project. *Twine* is not the only focus of the curriculum in this class, *History 306* is an upper division course designed to teach game theory, games as public memory, and history and game creation as a tool of historical narrative. In total, these students were provided with 6 weeks for the development and final creation of a historical game. A factor in limiting the time for these students was that they come into the classroom having already taken history methodology and theory courses that provide them with a critical lens for historical research and inquiry. However, they did not have any affinity with *Twine* or, broadly speaking, many of the tools and technology needed to understand games and game creation.

History 306 is still a work in progress that evolves with each iteration. Having taught the course a few times we have found that it is ostensibly two classes in one, each equally relevant to our goals and each has proven successful in their own way, but teaching it has revealed a few areas that need improvement. The first half of *History 306* is dedicated to games theory, criticism, and the cultural/historical deconstruction of video games to help our students create a vocabulary for analyzing games and their historical content. We also spend several weeks discussing the history of video games to help contextualize the development of games and game design. From there we move on to analyzing games from the lens of public history and memory as it helps to situate the genre and provide students a window to critique specific uses and historical representations within a variety of games. In addition to the analysis of games, there is also a need for the academic study of the industry. Currently, most histories of the games industry are written by games journalists and game bloggers who often present a less than critical, often bordering on the hagiographic or nostalgic, take on games of the past and those who created them. As a midterm project, we have our students write a more formal history of some aspect of the industry to reinforce the need for a more critical history. These foundational weeks establish a pathway for helping history students build their gaming literacy and offer them a set of theoretical frameworks for their own game development. The complexity and newness of these topics take students by surprise and they have reported feeling overwhelmed by the readings, discussions, and application of these ideas. Many students revealed a desire for more time with each of the topics and wanted to dive deeper into the class content, but if we are going to build games in class we are forced to move on to topics that would help them with the technical and historical aspects of their own game projects.

Unfortunately, our culminating project, which is meant to combine what they have learned and allow them to create a sophisticated history-based game in *Twine* that breaks from heritage and exceptionalist narratives, was given too little
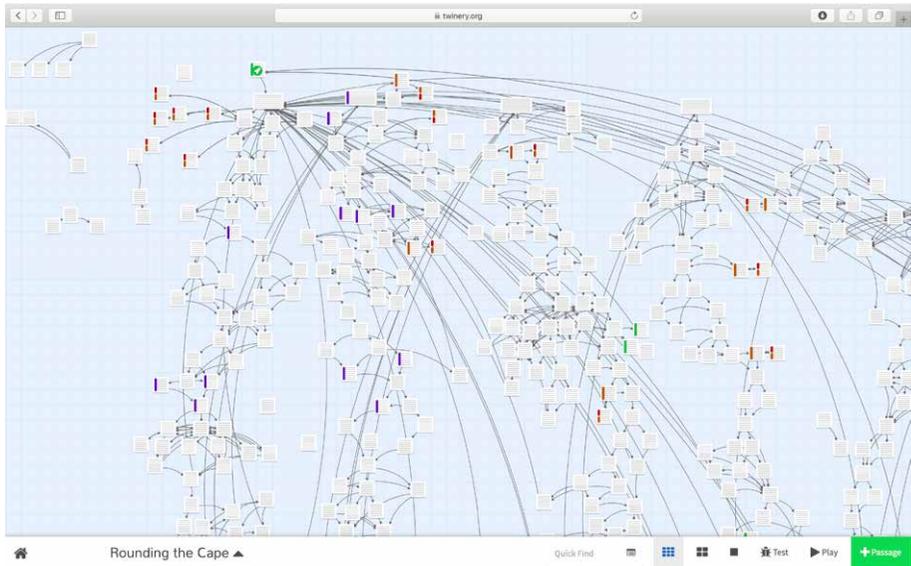
Figure 12.2: Screenshot: a student game created in Twine *(History 306, Spring 2019).*

time to develop. By the end of the term, many students have the games literacy and critical vocabulary to dissect games and have a research agenda and focused subject for their game, but they do not have enough time to learn *Twine* and to make engaging historical narratives. Instead, their time was often divided between those who invested in learning *Twine* and those who were interested in doing in-depth historical research. Students who became overly invested in learning the technological capabilities of *Twine* and focused on leveraging the power of *Twine*'s customizability, learning to craft variable expressions that create interesting computational ways of exploring chance and randomness in historical encounters and situations, created mechanically sophisticated games but they were not able to craft a historical narrative equal to the technological skills they had developed. Those who put too much of their attention into the creation of clever game mechanics and character choice often suffered from thin or inaccurate historical context. Like our lower division students, those *History 306* students who spent the bulk of their time in historical research crafted games with historical depth and content but they were often less interesting, conveying the historical material more like a research paper rather than a recreated historical moment with developed character agency and historical choice mechanics. Again, we take the blame for this and are working to redesign the course in a way that affords students more time with the creation of their games and offers them more direction. Importantly, we found that clear rubrics for game creation and time management are an essential component to student success. When our expectations of the assignment were not clear, when we failed to give sufficient attention to the games' historical content, or when students were not afforded ample time to apply all of the necessary components for solid game creation, the games clearly suffered.

Conclusion

Overall, students in our games-based curriculum have learned how history is manipulated to fit a game's narrative, how characters are bent to a narrative arch, and how the decisions that are made in a game are often predetermined unlike the decisions real historical actors made in the past (Spring 2015). In attempting to write game narratives rooted in traditional historical thinking skills, students build their own historical vocabulary and skills, and learn to challenge the gaming experiences and prior knowledge they bring to the classroom. And while the experience and outcomes from each class have differed in relation to time, major, and class level, the use of simple game creation in the university classroom has specific benefits – mainly that when students apply historical tools with interdisciplinary and technological skills, they become more holistically engaged in their history education and gain skills that provide value to their career path that reinvigorates the importance of the liberal arts in the twenty-first century.

The creation of a choice-based game subverts students' understanding of the historical process by engaging them directly in manufacturing possible historical choices that are based on real and reliable sources and historical events. This creative process provides students with a sense of agency and helped them create a narrative contingent on their own interpretations, an interpretation rooted in a solid historical methodology and traditional historical thinking skills, yet presented in a novel fashion (Rosenzweig & Thelen 1998). Moving the historical creation and narrative process over to students has the potential to reify students' connection to the past and its meaning, thus allowing students to engage with "the past on their own terms" while maintaining strong methodological underpinnings rooted in research, analysis, and contextual contingency (Kee 2014).

The use of *Twine* in the classroom has not proven to be a panacea, but, when used in very particular circumstances and with sufficient engagement and feedback, students do benefit. Adding games discourse and integrating *Twine* into class projects has provided a number of ways to help students think and relate to the past. Specifically, we see *Twine* as a tool that provides students applicable historical methods of analysis, agency in narrative creation, and an understanding of contingency and context and that agency and choice are important elements when creating a representation of the past. It has also helped students distinguish the difference between what happened in the past and how we tell accurate and meaningful stories that represent a fuller picture of the history of the United States.

Kapow!

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13. Of Ecosystems and Landscapes: An Essay on Grasping Themes of Environmental History in Video Games

George L. Vlachos

Digital Games in the Service of History

This essay will attempt to place environmental history in digital game studies. More precisely it will assess the position of the discipline in the world of digital games and then try to utilize it in order to flesh out challenges and debates located in the heart of environmental history. Before doing that however, we must first address very briefly a general point: why should we associate video games with history?

After a quick visit to online distribution platforms such as Steam or GOG, one thing becomes clear: video games very often depict history. Or at least pseudo-history, history as it could have been. This reflects the fascination that we, both as humans and as gamers, exhibit towards the past. It was not long before educators and scholars saw that there was an opportunity to be seized here. Why not use historical video games to teach history? The educational potential of video games was underlined by Condry & Keith as early as 1983 (Condry & Keith 1983) – a time when video games were comprised of only a few hundred pixels and a few hundred lines of code. Naturally we have come a very long way since then (*e.g.* see Robert Houghton; Juan Hiriart; or Jeffrey Lawler & Sean Smith, Chapters 10-12) .

As Paul Darvasi informed us recently, the grand-scale strategy game *Total War: Rome II* along with *Assassin's Creed: Origins* were used to give aspiring future historians a taste of the deceptive world that is the cross-examination of primary sources (Darvasi 2018). On this same path of unfolding the relationship between history and video games trod several other works, like the collective volume published in 2013 by Matthew Kapell & Andrew Elliot or the influential monograph by Adam Chapman (2016).

It is rarely, however, that we see non-historical games (namely games that do not strongly reference a historical era or take place in a world synchronous to ours) used as tools to learn about history. This is of course not inherently a problem, as confirmed by the above scholarship. However, at times it can be proved to be a little restricting, in the sense that most video games that depict and take place *in history* tend to steer the player into very specific schools of history. Surely, the *Total War* (Creative Assembly 2000-2019) franchise is one bottomless well of stimuli for someone who wishes to learn more about military history or geography. Series like *Sid Meier's Civilization* (Firaxis Games 1991-2020) or *Anno* (Max Design *et al.* 1998-2019) additionally give you an honest interpretation of the voraciousness of imperialism and colonialism, as the game mechanics always urge the player upwards and onwards toward complete, uncontested domination. Similarly, *Crusader Kings II* (Paradox Development Studio 2012), *Europa Universalis IV* (Paradox Development Studio 2013), and *Victoria II* (Paradox Development Studio 2010) play out more as *realpolitik* simulators of the era that they present, rather than your average carefree, fun video game.

The study of history is not monopolized by military or political narratives though. On the contrary, those schools reflect a very limited, not to mention oversaturated, field of historical studies. On the other side of the spectrum, intellectual historians, for example, have yet to see a video game in which the topic of their scientific research is not represented in a caricature-like manner, as Marx and Machiavelli were portrayed in the *Assassin's Creed* (Ubisoft Montréal 2007-2018) series. By the same token, social history, perhaps one of the most esteemed schools of thought and practice is grossly overlooked and the few bones that *Kingdom Come: Deliverance* (Warhorse Studios 2018) threw to its gamer base did not do the trick.

A Round of Definitions

Emanating from this unevenness in representation, I decided to examine whether environmental history has been part of the video game cosmos. To be more precise, I already knew that the answer was negative before even setting the question. Not being one of the most illustrious fields of historiography yet, but rather seen as an alternative side-school, environmental history went mostly unnoticed by game developers. In recent years, however, this particular school has been on the rise, as exemplified both by the interest that major university presses have shown for the discipline especially since 2010, as well as by the general 'spatial turn' that the Humanities have taken (Isenberg 2017; Kümin & Usborne 2013). Bearing that in mind, I set out to find a way that a historian could use video games as a means of exemplifying key concepts and terms that feature in environmental history. Subsequently, after grinding through the gameplay of several video games, I came to the conclusion that there are two particular digital game genres that very well capture – albeit almost certainly not on purpose – a dichotomy that lies at the heart of how historians perceive and write environmental history: the dichotomy between the notions of *landscape* and *ecosystem*. Surprisingly, it was not an array of historical games which did this, but what I will be referring to in this paper as 'first-person survival video games' and 'walking simulators.'

To make this point more tangible, it would be wise firstly to address what exactly environmental history is, its scope, and its goals. The label that this particular school bears can be deceiving. While the environment is indeed a major focus of the inquiries made by environmental historians, environmental history is not a discipline that vaguely documents the changes which occurred in certain environments over periods of time. Instead, at its epicenter lay human actors or institutions, namely the interaction of mankind with its natural realm, in a bilateral form of symbiosis (Smout 2005). In this framework, the natural world becomes the malleable space which defines the actions of humans and which, at the same time, is being defined by those same actions as humanity administers, manages, and often damages its natural world. As such, environmental history is not a chronicle of the environment, but rather a discipline that follows the development of *ecosystems*, of which people and their own systems of production are intrinsic parts. By this token, environmental historians narrate an anthropocentric history of the social, political, and economic repercussions of the transformation or degradation of a given *ecosystem*; and eventually that history will end up telling us more about humankind and less about the ecosystem under scrutiny. This theoretical emphasis on the role of the human actor urged many environmental historians to coin and promote the insightful term *Anthropocene*, suggesting that we have inaugurated an era wherein the creation and destruction of ecosystems is the result of our collective actions, as opposed to natural processes (Moore 2017; Steffen *et al*. 2007).[1]

As for the term *landscape*, a quick look in the literature would be enough to realize that the terms *ecosystem* and *landscape* are often used as substitutes to describe places, environments, and habitats or even interchangeably. The truth is that defining *landscape* can be very challenging. Every scientific field seems to stick by its own definition. A *landscape* can be the host of several ecosystems, a delineated area that differs enough from its other adjacent areas, an environment, all the above, or even none of the above. For the purposes of this paper, however, we will go back to the usage of the term by those who most casually used it: painters, artists, and romantic poets and writers (Johnson 2008; Labbe 1998). As Kenneth Olwig informs us, the word *landscape* was initially loaned from the German term *landschaft* which described a definite piece of land destined mainly for agricultural purposes (Olwig 1996). However, by the early nineteenth century and with the help of a circle of early Romantic philologists and classicists known as the Jena Circle, the term had acquired a purely iconic essence. To them, as well as to the painters of the Dutch school that immortalized nature as early as the early seventeenth century, the *landscape* was the instantaneous depiction of a natural setting from afar. Being an ephemeral representation, its existence was only a matter of aesthetics while the interaction with its beholder was minimal.

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1   It is worth noting at this point that the term *Anthropocene* is not uncontested. A large number of scholars in environmental humanities prefer to use the more political directed term *Capitalocene* as defined by Jason W. Moore (2017), asserting that it is not the human race that is responsible for the degradation of the environment, but the capitalist system of production and consumption.

Landscapes were there not to be engaged with, but to be gazed upon by an external observer who did not wish to interfere with the scenery.

By now, the contrast between the two notions should be stark, especially in terms of the role that an agent undertakes in both situations. The passivity exhibited by someone who simply paces through a *landscape* marveling at it, differs on many levels from the complexity of an actor that participates in an *ecosystem*. The reason is that in the latter case our agent is a dynamic player in a nexus of intertwined relations that they are capable of affecting. The reason why environmental historians tend to be drawn more to the study of such ecosystems, looking to analyze the importance of each new factor that comes into play, should be sought exactly in this complexity. This does not mean that *landscapes* have not been the topic of environmental historians. In fact, it was the study of cultural landscapes that announced the emergence of environmental history as a separate discipline, when Carl Sauer introduced the term in his legendary paper *The Morphology of Landscape* in 1925 (Sauer 2007).

Environmental Historians into the Digital Wild

First-person Survival Games

While it seems that this thorough theoretical discussion is completely alien to modern video game culture, it does not need to be. Perhaps unbeknownst to them, game companies and developers have succeeded in incorporating the essence of the landscape | ecosystem dichotomy in video games. This should not surprise us, because despite the fact that environmental history has never been represented as a distinct historiographical school in digital games, realistic digital environments *are* present in an increasing number of video game titles. In fact, the more pristine video games grew in terms of visual appeal, the more their 3D environments became a major selling point for them. The leaps forward have been outstanding, particularly in the last two decades within all the digital games genres: from the early 2000s games such as *Gothic* (Piranha Bytes 2001) and *The Elder Scrolls III: Morrowind* (Bethesda Game Studios 2002) which both introduced us to vast worlds open to exploration, to the 2007 first *Assassin's Creed* title featuring step-by-step recreated cityscapes, and to the recent 2018 topographic majesty of *Red Dead Redemption 2* (Rockstar Studios 2018). Becoming always more complex and intriguing, those digital environments and the player's interaction with them could serve as convincing simulations for a scholar of environmental humanities to use as a means of illustrating the conceptual differences that lie between *ecosystems* and *landscapes*.

In this struggle, first-person survival video games (henceforth FPSV) are capable of aiding us in understanding the interconnectivity of the building blocks of what was defined as an ecosystem in this chapter. 'First-person survival video games' is not a market term, however. In others words, video game tags in Steam and other popular online game stores do not describe them as such. Instead, other keywords are used to do so: 'open-world,' 'sandbox,' and 'crafting' being the most common. However, they all include a couple of gameplay characteristics that allow us to group them together.

The first-person perspective is, of course, their most recognizable feature. The whole game is presented through the eyes of the protagonist. In fact, in most of the cases, switching to a third-person camera – one that would follow the player in their footsteps from above and behind – is not even an option. In addition to that, the second defining feature present in all FPSVs is, of course, the survival element. Regardless of any other main objectives that you have to fulfill to win the game – if there are any at all – the main characteristic that drives the gameplay is your struggle to overcome adversities and survive over time.

The FPSV list of games is undoubtedly very long and grows longer by the day. What is striking, though, is that the success of one game triggered the flooding of the video game industry with similar titles: the 2011 release of *Minecraft* (Mojang 2011). Although not a realistic FPSV, seeing as it takes place in an infinite world comprised of perfect square blocks of materials, *Minecraft* appealed to a broad gaming audience. The mixture of gameplay that was easy to get into but very hard to master, the large array of cartoonish antagonists (who were nevertheless possibly frightening), and the ease with which the player could create and destroy everything around them, led to the establishment of *Minecraft* as one of the most innovative games to choose from. The intricate, outstanding contraptions you were capable of creating out of what you could gather from your in-world environment made the game an instant success. This success is not only reflected in the high selling rates that the game achieved, but also in the dozens of more serious applications it has received along the years, ranging from becoming a mental trainer intended to reinforce memory, to functioning as a platform where gamers engage in the production of ethnographic spaces (Clemenson *et al.* 2019; Pellicone & Ahn 2018).

The next batch of FPSV's that was (and still is being) released was structured around this same initial fundamental idea of the player having to make everything from scratch in order to survive. Each subsequent title contributed something new to the genre. *Rust* (Facepunch Studios 2018) for example, made the experience much more multiplayer-oriented. *Subnautica* (Unknown Worlds Entertainment 2018), *Stranded Deep* (Beam Team Games 2015), and *Raft* (Redbeet Interactive 2018) each introduced a potent aquatic element to this concept, while *The Forest* (Endnight Games 2018), on the other hand, gave it a horror twist. What these all had in common though, is that their developers put considerable effort into creating realistic environments for their games. The in-game world was no longer comprised of big, pixelated blocks as in *Minecraft*. Instead, it realistically imitated real-life environments or at least environments which players could relate to. Even if they were set in fantasy worlds, as was the case with *Ark: Survival Evolved* (Studio Wildcard 2017) and *Conan Exiles* (Funcom 2018), they were all made to remind us of familiar settings: forests, animals, bushes, rocks, dirt, rivers, and lagoons, all elements which the human-player would have some prior ideas of as to how to utilize them.

Before long, the whole genre of FPSVs was built upon the same premise which could be summarized in four stages. The first stage is distress. In any given title, the protagonist-gamer spawns in immediate danger. In *Stranded Deep* you play as a castaway, completely isolated from the rest of the world. In *The Forest* you are a survivor of an airplane crash, after which 'barbarian' hominoids abduct your son while feasting on the corpses of your co-passengers. Likewise, in *Conan Exiles* you

find yourself crucified, naked, and left for dead in the heart of a desert. No matter which FPSV release one chooses to examine, what dominates the gameplay at the beginning of the game is the sense that you have to learn how to survive against all odds. This serves a very important purpose on the part of the game creators. By creating a weak and destitute character, they force the player to start interacting with their environment in an attempt to overcome these initial challenges.

Being the only way to play the game, this imposed interaction leads us to the second stage in question, which is characterized by the manipulation of the surrounding environment by the protagonist. By doing that, the player will inevitably alter its status. This is, in fact, not a by-product of the game's experience but the game itself. Through actions that balance well between satisfaction and tediousness, the protagonist proceeds further. They chop down trees; mine stone and minerals; gather berries, mushrooms, and fruit; hunt animals; and build their first shelters as well as infrastructure that will make their life easier and their survival more plausible.

Hunger, thirst, and wild creatures are still their main antagonists and they must employ different strategies each time to fend them off. In *Green Hell* (Creepy Jar 2018), for instance, one of the most recent notable additions to the FPSV genre, a snakebite early in the game is very likely to end you abruptly, while remaining in the water for too long will lead to the protagonist losing their mind as fistfuls of leeches crawl up their hands and feet. This means that in order to maximize their chances of survival, the player has to learn how to bypass areas with very dense vegetation, which is where snakes lurk, and also learn how to obtain drinking water and fish from ponds as quickly as possible. Similarly, in *The Forest* one of the strategies that the player develops to stay safe from marauding cannibals, is to construct gruesome effigies made of the severed heads and limbs of cannibals, provided that they have already killed some of them, which is a very effective way of remaining confrontational in the game and not simply cowering away.

Adapting efficiently into this environment, which always urges you to obtain more, kill more, mine more, and build more, is what introduces us to the next stage of an FPSV playthrough. This stage can be described as consolidation. The player now has learned how to survive and has developed certain tactics to do so. To put it in a more disenchanted way, they have learned the mechanics of the video game. This allows them to thrive in the expanse of their in-game environment even more. The few trees that they felled at the beginning now go down by the dozens, leaving games like *The Forest* heavily deforested (see Figure 13.1). Surface minerals and rocks have vanished in a radius that extends hundreds of meters around the player's base, having been harvested as raw materials toward the construction of more solid structures and the development of better tools and weapons. In most cases the player is even capable of re-inventing some kind of sustainable economy. This might be something as simple as agriculture – planting seeds in order to gain a food surplus – or as intricate as specialized animal farming toward the production of fertilizer or other complicated materials, as featured in *Ark: Survival Evolved*.

The last stage of an FPSV should be labeled domination, a phase in the game when survival is no longer truly a challenge. After hours upon hours of gameplay, the player has now managed to develop a *modus operandi* which has rendered the

Figure 13.1: Screenshot: deforestation in The Forest*, a phenomenon that can occur during the process of playing the game.*

game easy through a continuous process of trial and error. Hunger, thirst, wild animals, or animalistic humans have not been a problem for a long time, while the environment in which the protagonist operated has been bent to their will and molded to their advantage.

At this point, the correlation between the term ecosystem in environmental history, as described in this essay, and the 3D environments, as envisioned in FPSVs, should be clear. In the course of writing environmental history, a historian will ask questions that emanate from changes observed in a certain ecosystem. They will eventually depart on a series of inquiries hoping to find the agents behind those changes. In FPSV games you *become* one of those agents the moment you start to utilize your in-game environment as a field of economic activity; in other words when you turn an environment that does not include you into an ecosystem that does.

There are of course some serious limitations to the use of video game paradigms as methodological tools. In the case of FPSVs, the serious drawback that most of them have in that regard is that they present those ecosystems as nondepletable pools of resources. Granted, game developers do not generally destine their digital creations to become an instrument of environmental pedagogy (although this was the case with a recent addition to the *Civ* series, *Sid Meier's Civilization VI*; Chalk 2019) so they do not opt for environmental realism. Did your pixelated avatar run out of woodlands in *Minecraft*? No problem. Plant a dozen tree saplings – which you easily get from fallen trees – in an open space and there you have it. The next day you will wake up to a nice grove that you can harvest again. In a similar fashion, in *Stranded Deep*, *Ark: Survival Evolved* and *Green Hell*, the constant slaughter of wild animals will not put any pressure on their populations, as they miraculously tend to respawn in the same places.

One could easily argue at this point that, in the interest of avoiding the pitfalls of the environmentally unrealistic aspects embedded in FPSVs, the environmental historian could use another genre of digital games to effectively explain the ecosystem concept. Real time strategy games (henceforth RTS) could possibly be the answer. It is true that in titles like the *Age of Empires* franchise (Ensemble Studios 1997-2018), careful management of resources matters. Especially those who have enjoyed *Age of Empires III* in multiplayer mode know very well about the importance of securing sources of gold early on in the game. They also know that building coin-producing factories (an ability interestingly reserved only to Western civilizations) is the only possible way to achieve victory when gold sources run out. They have also learned that the transition from a hunting-gathering society to an agriculture-dependent one must happen at the beginning of the game for the player's faction to have any fighting chance against their opponents. Be that as it may, RTS games are not without their own drawbacks. Its main drawback should, in fact, be blamed on the position that the player occupies in the world.

Contrary to an FPSV game, wherein the protagonist is a feeble human wandering through an unknown land trying to gather wood by beating trees with rocks – a process that you experience from a first-person perspective – in RTS games you play as an omnipotent military mastermind. For one, you experience the in-game environment in macroscopic terms, which entails that you are capable of assessing the resource situation from the beginning of the game. Secondly, seeing the map from a bird's-eye view and commanding units toward resource-gathering sites or toward their death, means that you experience the world more as a theater of war rather than an ecosystem, which certainly defeats the purpose of this process. Having said that, however, it would be crucial to underline that first-person video games should not be automatically regarded more immersive because of their camera perspective. Nonetheless, as Edward Schneider and Mark Claypool demonstrated with their colleagues (Claypool *et al.* 2006; Schneider *et al.* 2004), first-person video games that feature good game design as well as a relatable story, tend to immerse their audience more. Even though this might not be applicable to all FPSVs, some of which have elementary narrative backgrounds, it certainly holds true for the digital game genre that could very easily convey the meaning of the second term present in this essay, the term landscape.

Walking Simulators

The game genre in question is generally described as 'walking simulators.' Often used as a derogatory term by those who prefer a more action-packed experience on their consoles and computers, walking simulators (henceforth WS) are games that rarely require more than the direction keys on a keyboard or the thumbsticks on a controller in order to be completed. WS have been around for as long as FPSVs have. Perhaps one of the first games to which the term WS can be attributed was *The Path* (Tale of Tales 2009), although it is not always played from a first-person perspective. However, by far the most memorable and successful title that consolidated the legitimacy of the genre in the eyes of a larger gamer-base was the 2012 game *Dear Esther* (The Chinese Room 2012).

Even though it is a very short game that one could easily go through in only one sitting, *Dear Esther* contained the quintessential features that would define WS for the next years. The game takes place on a deserted fishing island in Northern Scotland. You play as an unknown character wandering through a gloomy setting, while a nameless narrator cites fragments of letters addressed to a certain Esther, a woman who tragically died in a car accident. As the cast of people mentioned by the narrator grows, their tales intertwine up to the point that the game reaches an ambiguous end, open to interpretation by the player. The plot, albeit powerful, does not matter for the purposes of this essay. What matters is that this plot is structured *vis-à-vis* the progression of the player from one area to another. Each setting that the player visits gets embellished with narration that is meant to make the given setting memorable. Thus, the player passes through an abandoned lighthouse, an underground system of caverns, a beached fishing boat, and a peculiar rock formation, all of which trigger a special response by the narrator who gradually pieces together the puzzle of what is happening (see Figure 13.2). *Dear Esther* is not the only example one can give here. *Firewatch* (Campo Santo 2016) was an even more popular WS that came out in 2016. Unsurprisingly for a game of its genre, *Firewatch* bears many of the same virtues as *Dear Esther*. Essentially a story about depression and the struggles of life, the game tells the story of a recently widowed man, Henry, who decides to volunteer as a fire lookout in order to get away from his miserable city life. Before long, things around the forest start getting weird and Henry finds himself investigating what he believes to be a mystery. Similarly to *Dear Esther*, the protagonist will go through several areas which will acquire special meaning to the player due to Henry's actions or due to his dialogue with the other character in the game, his friendly supervisor Delilah.

If we were to strip WS games down to their most fundamental building blocks we would see that the recipe is rather simple. A finite map, built around a certain path that the player is obliged to follow, meandering around certain landmarks

Figure 13.2: Screenshot: one of the many iconic landscapes *that the player can only observe in* Dear Esther.

that the player is forced to notice; but only that. The protagonist does not have any actual interaction with them. They cannot touch, change, or manipulate the in-game environment. It is just there to be stared upon by something that is basically a detached camera floating in a 3D visually appealing world that gradually gets signified by the player. It is a process that truly resembles the construction of cultural landscapes either by contemporary urban hikers, travelling on trails gawking at natural sites, or bigoted twentieth century nationalists who sought the roots of their imaginary nation among woods, mountains, and lakes. In both situations 'nature' is not a space with which one should meddle, but an image to admire; simply put: a landscape.

Concluding Remarks

This essay is written from the point of view of an environmental historian and enthusiastic gamer and not an educator in environmental humanities. In it, I tried to show in empirical terms how we could adequately explain a significant conceptual dichotomy present in the scholarship and research of environmental history that lies between the terms *ecosystem* and *landscape* by playing it out on two specific digital game genres. What must be noted in this effort is that neither of them is related to history in the way that popular titles like the *Assassin's Creed* or *Sid Meier's Civilization* series are. This is to say that it is not necessary to use video games that depict history in order to convey historical knowledge.

It is very difficult to imagine a world where environmental history enjoys the same popularity as military or political history among the gaming public. The presentation of environmental history-affiliated games will never become the main event at an Electronic Entertainment Expo (commonly referred as E3) or any Gamescom convention. It seems unlikely that there ever will be video games explicitly inspired by the theory and methodology of environmental history. That would require the possibly awkward conjoining of historians, biologists, geographers, and game developers in a meeting that would resemble the last days of the Tower of Babel. This, however, should not stop us from trying to introduce some educational video game patterns into the study of environmental history, perhaps even to stress issues like climate change and environmental degradation.

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14. Stories Around the Campfire

The Interactive Past Community

Curated by Csilla E. Ariese

Playing video games certainly is fun. It can be a relaxing activity in the same way as any other type of recreation or hobby. But playing games can also be a significant, meaningful act.

Some games come to us as surprises. We start them for one reason and in the course of playing through them they take on a deeper meaning. They become the online game in which you met someone who would become a dear friend, the game that provided escapism when you needed it the most, or the game that unexpectedly gave a different meaning to your offline life.

Games can be profound sources of learning. In this book many of the games discussed have been about real or imagined pasts. These histories can teach us content knowledge or give us insights into historical processes. Additionally, we may learn problem solving skills, spatial awareness, and tap into our creativity. Furthermore, playing games can teach us about society and social interaction; about ourselves and others.

These meaningful experiences with games and play are highly personal. Yet, they are not rare. For this chapter, we reached out to our interactive pasts community and asked them to contribute their experiences. In their own voices, you can read examples below of meaningful gameplay. And perhaps, these will trigger memories of your own.

What story in a game made the deepest impact on you, and how/why?

> When I got the original *Xenoblade Chronicles RPG* one Christmas, I was quickly lost in its rich world and hundreds of quests, partly as an escape from grief. A few weeks earlier our child had died suddenly. I felt guilty for playing

a game, and put it off for some time, but it seemed like I needed the relief. As the game progressed, I began the longest and most complex side-quest, which is to rebuild a totally destroyed colony. The process of unlocking each set of buildings, and finding individual settlers who slowly form a community, became unexpectedly profound. Even though it was all fantasy, the slow and difficult work of recovering from disaster, together with the opportunities to help characters in need, were strangely empowering. It's a magnificent game anyway, but in that very dark time for me it was personally meaningful as well.
Anonymous

Tell us about a time when you felt personally connected to a video game character.

In my late teens, when I played the *Prince of Persia* trilogy (backwards, story for another time), I could relate with Prince's struggle with himself and the feeling of loneliness present throughout the second installment: *Warrior Within*. However, it was the *Assassin's Creed* series which introduced me to the character I felt personally connected to. The first game was profound and had a huge impact on me; it motivated me to read history and philosophy more. The Ezio trilogy was enjoyable. But when the trailers for *Assassin's Creed III* first came out, I was a little disappointed that they were taking it to American Revolution. I thought, doesn't everyone know about that already? Why do Americans always have to get all the attention? But as a pious devotee of the series (back then – not so much now), I played that one too and was pleasantly surprised! Before this, I wasn't aware about Indigenous people's struggle, their history, their perspective, I knew nothing. Most people hated Connor/Ratonhnhaké:ton but I felt a very close connection with him, I deeply associated with his anger, his naivety, and especially his struggle to maintain a relationship with his overbearing father. The fact that they stood opposite to each other on a political and ideological spectrum really struck a chord with me, made me think about the relationship with my own father, question my own situation, reflect on colonialism etc. All of that brought me some shocking realizations years later. I still enjoy playing it whenever its possible.
Gaurav Kalyani

Can you remember an example of something you learned from playing games?

My best friend Niels lives in Ireland, and we have a remarkable way to play video games together. I share my screen with him and together we make decisions in the game being played on my PC.

In this way we found ourselves as ruler of the Kingdom of Mali, in the Paradox Interactive game *Crusader Kings II*. Boxed in between the edge of the game map and a strong Islamic kingdom to the north, we were playing a slow game, nursing our economy and military might over the centuries.

As you can imagine, in a game called *Crusader Kings*, religious conflict plays a large role. The Mali people were proud animists and we had decided we would keep them that way, no matter the pressure from the north.

It began when we started to notice increased interest in our kingdom by our Islamic neighbors. We had no allies to speak of, nor any maneuvering space. Our fair lands would soon be fair game.

The holy war was declared shortly after, and our armies were ruthlessly swept aside. There was nothing standing between us and complete defeat.

Or was there?

In *Crusader Kings*, your ruler may convert to any religion that is being adhered to in your family. We discovered that one of our sons had stumbled from animism to Islam. The best way to end the war was to let our ruler convert to the Islamic faith. But that would go against the promises towards ourselves.

At the end of the day, as with so many things human, pragmatism prevailed. Our ruler converted, the war was over, our kingdom in crisis due to the sudden switch in religion. But so what, at least we had a kingdom!

But ever since, I have been looking at history in a slightly different way. As if my eyes were opened to the pragmatic side of many important decisions throughout the ages.

Marten Jesse Pot

Has a game ever inspired you to do historical/archaeological research?

Inspiration can come in many forms, but I never knew it would come from a playthrough of my favourite RPG, *Dragon Age Inquisition*. When I was studying for my masters in archaeology at University College London, I felt like I was in a perpetual crisis over what I would do for my thesis. There were many ideas floating around my head, but none that inspired me to devote a whole 20,000 words to them. Throughout my gameplay I was obsessed with the in-game environments, especially the castle Skyhold. The elven character Solas paints a number of frescos within his study depicting the game's narrative as you progress. I found myself looking at these and trying to work out some sort of hidden meaning within them. While I was studying for the masters, I was working at Westminster Abbey, which entailed patrolling many areas of the church. One of my favorite areas was the Chapter House, famous for its surviving medieval frescos. The prominent frescos depict the Apocalypse, the Beast from the sea, and whore of Babylon. While these frescos had obvious meaning, there were a number of others depicting a number of animals with no obvious meaning or function. Drawing from this inspiration, I did an interpretation of these murals. My research entitled *Being Human: Animals as*

Symbols of Sins and Morality, found evidence that these bestiary scenes served as a mnemonic system to instill morally right behavior in monks who viewed them every morning.
Franki Webb

Truth be told, I'm not a gamer and still don't consider myself one but I am most certainly intrigued by the reception of history in games, specifically digital archaeogames. The interest came about after teaching two History classes with a group of gamers, who constantly talked about 'Civ' and 'AC.' It was the latter's 2017 edition – *Assassin's Creed: Origins* (AC:O) – that led me into an academic rabbit hole of historical research.

The media's representation of ancient Egypt is a heavily debated topic amongst Egyptologists: the traditionalists refuse to acknowledge the significance of the emerging area of research while the non-traditionalists recognize that if the field does not expand to include 'reception studies of Egyptology,' Egyptology may become irrelevant in the near future. However, with the recent release of AC:O, both traditional and non-traditional Egyptologists have published reviews, articles, and podcast episodes about the game's depiction of ancient Egypt.

I am no exception. Upon the release of the game in 2017, I picked up a gaming console for the first time and after much struggle, I immersed myself in the Graeco-Roman Egyptian world of Cleopatra VII. As much fun as it was for friends to watch me set myself on fire and ride my camel/horse into innocent NPCs, the opportunity to immerse myself in a world I spent my tertiary education learning about, was even more exhilarating.

AC:O has inspired me to dive into uncharted territory – to investigate how the archaeogame's fictional narrative was shaped by Egyptian myth, mythology, and magic, and the possibility of using pop culture's representation of ancient Egypt as a tool to cultivate historical thinking and literacy amongst students, who rather look at screens than paper.
Michelle Low

"Hey, stop moving a second I want to look at that!"
My husband sighs as my exclamation takes him out of the gaming trance he'd been in seconds before. "Can you back up and look at that skeleton again please?"
I direct him, like a futuristic detective examining crime scene photographs, "zoom in there," I get up and move across the room to better point at the screen, "can you turn left a little… does crouching get you closer?" He obliges and I end up nose to the TV, examining the pile of human bones that caught my attention. Anatomically correct, the bones lie supine and stretched out, the skull staring up at me. I wonder where this skeleton came from. Was it lifted from an anatomy textbook? Were these renderings of real bones, from someone who had once existed?

The placement of the skeleton, lying partially submerged on the banks of a fast-moving stream, intrigues me. "The taphonomy is all wrong," I say, now in my own trance. I can't believe this would be fully articulated in this environment. Some skeletal elements would surely have moved downstream. I check the context of the find – a post-apocalyptic landscape – and decide that nuclear disaster and mutants should not preclude normal decomposition. I am suddenly resolved to look at all the games I play and enjoy with an explicitly osteological eye. What stories are digital bones really telling us?
Linzi Harvey (@HarveyArchaeo)

Share a meaningful time when you played a game together with someone.

Ocarina of Time was my all-time favorite game growing up. Something about the journey of Link through Hyrule – the locations, characters, enemies, music (!) – inspired me so much and I just wanted to share those emotions and experiences with someone. Sure, my younger brother saw me pull the Master Sword from its pedestal, and two friends often sat and watched me play. But my dream was to share every moment of OoT with the person most important to me: a girlfriend. Many came and went, but I never played OoT with them, for various reasons. As I grew older, I drifted away from 3D *Legend of Zelda* games, but found a game that scratched the same itch and then some: *Dark Souls*. It quickly bumped OoT from its throne. I fell in love with the challenge, the story, the possibilities. I have over 438 hours in the first *Dark Souls* alone. I've spent the majority of those hours playing with friends. Every single game in the series means a lot to me – more than OoT ever did – and my old dream resurfaced. And my girlfriend was willing to play co-op with me!
It exceeded every expectation. I watched in awe as she quickly mastered parrying, held her own in fights, saved me, suggested tactics, and eventually we defeated all the bosses together. I've tried explaining to her how much this meant to me, but I think I can't convey it in words. I can't wait to play the other *Dark Souls* games with her.
Bram van den Hout

Undoubtedly my memories are distorted and polished by a layer of nostalgia. Since weeks after I was born, twice a year we would drive from Amsterdam to Budapest and spend time with my Hungarian family. Pre-social media, e-mail, and WhatsApp, the passing of time between visits could have disconnected us cousins, but instead we'd wonder which new video games they would have to play at their house.
Instead of awkward shyness, I remember visions like this (see Figure 14.1). Several sets of hands coming together on one old, grimy keyboard. Here, we are racing cars in *Lotus*, cheered on by those waiting for their turn. I remember the deceptively cute-looking game *Jump 'n Bump* whose gory exploding bunnies made us laugh out loud as up to four players jumped around trying to

Figure 14.1: Cousins playing Lotus III: The Ultimate Challenge *together on splitscreen, c. 1995 (photo by: Ákos Lőrinczi).*

win by brutally squishing the others. In play we came together, even when we were all playing against each other. Many of the DOS-games we played were splitscreen multiplayers. My older cousin would teach us how to navigate the system and we'd remember how to start up the games we liked. There was only a single computer which had to be shared, so even single-player games were played together – in unbearable impatience for your turn. Crowding around the computer we would try to remember the puzzle or the code, pointing the way out of a map, or recommending a strategy.

Today, I still pick playing a game together over playing something alone, every time. But even in the same living room, completing a dungeon in *World of Warcraft Classic*, it feels different with everyone on their own device.

Csilla Ariese

How do you envision the future of interactive pasts?

One of the most recent games that has kept me thinking about possible implications (and applications!) for archaeology as an ever-changing practice is *Hypnospace Outlaw*, an indie game released in 2019 in which you play as an Enforcer (read: early internet moderator) of a late 1990's online community. In the last part of the game, the Player jumps forward to the present, where they are part of an archival team looking to archive pages from the now-defunct Hypnospace community. Working as a 'cyber archaeologist,' the Player must not only use a 'Wayback Machine'-type program to find different

variations of web pages (as these would, of course, change over time based on community members), but also utilize other programming tools and codes to access hidden files and pages.

Playing this game really set off my imagination, thinking about future archaeologies and how our archaeological practices will need to adapt to the rules of the digital world. For example, while the tools used in-game to 'excavate' the Internet borrow methodologies from traditional archaeology (such as using Harris Matrix-like frameworks to contextualize each webpage you recover) you also utilize tools that have been specifically created for the issues that would be specific to cyber archaeology. By the end of the game, I was left with many questions regarding future excavations of the Internet – like, what happens as we lose access to certain HTMLS? What advances in coding and programming would be necessary to navigate 'dead' websites?

Alex Fitzpatrick

This story is about how interactive pasts will become less 'game-like' and will become characterized by ever larger and more interesting groups of people and types of experiences. We've stabbed enough people from the past, we've lived through uncountable battles, and we've colonized every continent a trillion times over. I believe future play will be about more diverse discoveries, wonderings, and personalities and be more truthful to the full breadth of humanity's passion for our past.

We may see Ubisoft teaming up with the BBC to produce a playable historic drama, more engaging than any *Assassin's Creed* to date. Instead of another 4X retelling of civilization, we will live through and make histories that are more intimate but equally grand. It's not that such experiences are not available to us yet. Games, like Wispfire's *Herald*, featured in *The Interactive Past* book (van der Schilden & Heijltjes 2017) or this volume's *Where the Water Tastes Like Wine* and *Fragments of Him,* show this can be done. That this can be done at larger scales is also hinted at by the popularity of Netflix's *Black Mirror: Bandersnatch* or the colorful *Apple Arcade*. It will be these types of platforms and experiences in which the digital past-playgrounds of tomorrow will evolve. This is not a vision, it is simply a story of hope. As any good story, it will be based on the imagination and hard work of many, it will blow everyone's mind, and it will open up new, undreamed of branches of interactive pasts. Part of this story will be told at *The Interactive Pasts Conference 3*! I, for one, can't wait to hear it!

Angus Mol

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Return to the Interactive Past

A defining fixture of our contemporary world, video games offer a rich spectrum of engagements with the past. Beyond a source of entertainment, video games are cultural expressions that support and influence social interactions. Games educate, bring enjoyment, and encourage reflection. They are intricate achievements of coding and creative works of art. Histories, ranging from the personal to the global, are reinterpreted and retold for broad audiences in playful, digital experiences. The medium also magnifies our already complicated and confrontational relation with the past, for instance through its overreliance on violent and discriminatory game mechanics. This book continues an interdisciplinary conversation on game development and play, working towards a better understanding of how we represent and experience the past in the present.

Return to the Interactive Past offers a new collection of engaging writings by game creators, historians, computer scientists, archaeologists, and others. It shows us the thoughtful processes developers go through when they design games, as well as the complex ways in which players interact with games. Building on the themes explored in the book *The Interactive Past*, the authors go back to the past to raise new issues. How can you sensitively and evocatively use veterans' voices to make a video game that is not about combat? How can the development of an old video game be reconstructed on the basis of its code and historic hardware limitations? Could hacking be a way to decolonize games and counter harmful stereotypes? When archaeologists study games, what kinds of maps do they draw for their digital fieldwork? And in which ways could we teach history through playing games and game-making?