Affordances at the Intersection of Museums and Videogames

A Critical Examination of the Potential Application of Videogames as Museum Interpretation

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Abstract

This interdisciplinary thesis critically explores the intersection of museum interpretation and videogames. It aims to identify affordances of videogames which address the needs and challenges of contemporary interpretative practice. This research will enable museums to more effectively and meaningfully utilise videogames as a form of interpretation in a sector which is increasingly interested in the potential of digital and new media. As previous research at the intersection of museums and videogames has rarely focused explicitly on interpretation, this thesis contributes to the development of the emerging field of research at the intersection.

This thesis makes a detailed study of current academic conceptualisations of museum interpretation and how they have developed in relation to new theories and understandings. It then explores areas of significant crossover between museum studies, the professional museum sector, game studies, and the videogame industry which are relevant to interpretative practice. Utilising relevant literature and case studies, this thesis undertakes an integrative review of the following concepts; narrative and storytelling, emotion and affect, and rhetoric.

Bridging the gap between theory and practice, this thesis also documents a six-month placement with the National Justice Museum. Employing a research through design method, the placement explored the possible applications of the research in a practical project. Through the negotiation of barriers and opportunities it examines the implications of the research for future museum game makers.

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Contents

Introduction

'The potential of videogames for museums is limitless.'

- Museum Lab, *When Museums Meet Videogames Handbook* (2022).

Museums and Videogames

In Ubisoft's *Assassin's Creed: Brotherhood* (2010) you play as a character called Ezio in Renaissance Italy. The videogame tells the story of a dispute between the two major fictional groups of the game series, the titular Assassins and the Templars. To contextualise the fictional storyline, Ubisoft attempted to create an authentic representation of the period, featuring numerous historical figures who are reimagined to fit within the world of the game, but nevertheless retain elements of historical accuracy in their depiction. One of these characters is Leonardo da Vinci, who features prominently. Many of his inventions, which are preserved in his writings and drawings, play an important role in the game. One especially difficult level in the game requires the player to control a version of da Vinci's 'fighting vehicle', or as we might know it today, the tank. In 2018, not long after beginning research for this thesis, I visited the Tank Museum in Bovington, UK. The Museum has a cut-away model of what da Vinci's vehicle might have looked like. I was struck by the thought that my experience of playing that mission in *Assassin's Creed: Brotherhood* had added something to my interpretation and understanding of da Vinci's vehicle that the static model and its label alone could not provide.

Museums and videogames are fields in convergence. It is becoming more common to see museums engaging in play; displaying, adapting, creating, and even co-creating games and playful experiences. In many cases these experiences are digital. Amongst these digital projects have been engagements with videogames which have taken various forms; from adaptations of intricate videogames published by major companies to simple independent games made by a small team or individual in partnership with a museum. Videogames too, are gaining cultural significance. The videogame industry continues to grow broader and more complex and in ways which have begun to push the boundaries of what might be considered purely entertainment. Indeed, the wider impact of videogames on society is often recognised, touching upon issues of community, social change, and learning.[1] Once

[1] Recognition of the cultural significance of videogames can be seen in initiatives such as Games for Change which explores the social impact of videogames. Also worth noting is the decision by the Guardian newspaper to include games as a part of its 'culture' section.

considered the domain of the young, it is now increasingly likely that adults will be familiar with videogames. It is therefore perhaps not surprising that museums are incorporating and experimenting with videogames, engaging with a rich field of possibilities which have not yet been fully explored and understood from an academic perspective. This is the understanding of the ongoing project 'When Museums Meet Videogames', an initiative run by the We Are Museums group with Villa Albertine and the Smithsonian, that brings together museum professionals and game designers from across the world in talks and collaborative workshops.[2] Exploring this field of possibilities is the starting point of my research.

The aim of my research project is threefold, constructed around a series of research questions. The first asks, how has our understanding of museum interpretation developed and how do these developments relate to the understanding of museum videogames as an explicitly interpretative product? This leads to the second question, which asks, what do videogames as a medium have to offer that could make them suited for use as part of museum interpretation? A further outcome of this is to identify how videogames could meaningfully contribute to the sector's wider development of digital interpretation. Finally, and on a more practical note, by developing a deeper understanding of the videogame medium and the process of building a museum videogame, this research asks, how can knowledge of videogame properties assist museums in the journey to becoming game makers? This will also involve addressing practical issues such as skills gaps, training, and financial barriers which might also prevent museums from engaging more deeply with videogames. This thesis aims to respond to these questions, and to provide a useful contribution to both the emerging field of study at the intersection of museums and videogames and to the professional museum sector. Alongside this written thesis, a further outcome of this research is a Twine game, *Hard Craft*, created in collaboration with The National Justice Museum in Nottingham. The game can be accessed via figshare (as detailed in the Data Access Statement). It is recommended that you play *Hard Craft* and familiarise yourself with it before reading the chapters in Part Three of this thesis where the design and development processes behind *Hard Craft* are discussed.

Approach to the Research

The research is rooted in an interdisciplinary approach, bringing together the analysis of

[2] The 'When Museums Meet Videogames' series is available at: https://wearemuseums.com/whenmuseumsmeetvideogames

two distinct cultural forms (museums and videogames) and two fields of academic enquiry (museum studies and game studies) in order to critically explore the intersection of the fields and examine areas of crossover and connection that have not been extensively researched. It is exploratory in nature, identifying the potential of the videogame medium to respond to innovations in contemporary museum interpretative practice through an examination of videogame properties. These properties enable deeper understanding of how videogames could be meaningfully employed as museum interpretation. It is also interdisciplinary in the sense that it utilises more than one research method. This research is divided into different parts that draw upon approaches from various fields in order to build a methodology that suits the type of research undertaken in each part.

Before these methodologies are discussed, it is worth introducing a key term and concept that is utilised throughout this research. The concept of 'affordances' first appeared in a study by James Gibson, a psychologist working in the field of visual perception. Affordances, as Gibson (1979:127) explores them, are about the discovery and identification of the possibilities offered by an environment; what the environment offers or provides to those who exist within it in terms of opportunities for different actions (see also Adams 2018:300). The term affordance is not limited to the understanding of a specific medium. Whilst the theory laid out by Gibson was used to consider the affordances of the natural environment, it has since been adopted by numerous fields of academic study, and used to examine both physical and digital mediums. Notably, the concept of affordances often appears in the field of design, including human-computer interaction (Conole and Dyke 2004; Kaptelinin 2014). The term has also been utilised in both academic fields of interest to this study, in discussions about the possibilities offered by different approaches to the design of videogames and museum interpretation (Adams 2018; Levine 2015:374; Ensslin 2014; Wesp 2014). As such, in this research the concept of 'affordance' is used in relation to the videogame medium, and what the medium can offer in terms of possible interpretative design approaches, and the wider opportunities they provide for museums.

Exploring the Intersection of the Fields

As this research explores the intersection of two fields, the approach to examining the literature is, by necessity, a comparative one. Although positioned as a work in museum studies and therefore privileging the exploration of museum interpretation, this research also draws heavily and significantly upon research in the field of game studies in order to provide an informed and considered analysis of the intersection. Much of the writing that follows is based upon an extensive literature review of both fields with a focus on specific

areas of interest to establish an academic research foundation. In many ways this approach draws upon an integrative literature review method which aims to review and critique existing literature by integrating different ideas, findings, or fields where comparative research is emerging in order to provide and contribute new perspectives or understanding about a topic. This type of literature review is commonly found in newly emerging topics which do not yet have extensive research or literature reviews (Torraco 2005:357). It is also suited to interdisciplinary research which, due to its interdisciplinary nature, brings together different perspectives (Snyder 2019:333). The purpose of this type of review is not to cover the entirety of literature on the topic, but instead to 'combine perspectives and insights from different fields or research traditions' (Snyder 2019:335-336). It does this by exploring the literature through a specific lens – in this case, the connections between museum interpretative theory and practice, and videogame affordances – in order to draw out the main themes, ideas, strengths, weaknesses, and their relationships across the literature (Torraco 2005:361-362). In Part Two of this thesis, three themes are identified and explored using this methodology: narrative and storytelling, emotion and affect, and rhetoric. These themes were chosen following initial research into the fields of museum studies and game studies as areas in which the connections between the fields, and to the overarching concept of interpretation, were particularly evident. Employing a critical, integrated review therefore allows the author to undertake synthesis. Synthesis, Torraco (2005:362) explains, is where 'the review weaves the streams of research together to focus on core issues… informed by the author's intimate knowledge of the topic'. As part of the review of the intersection of the fields and in order to also explore the connection between theory and practice, case studies are utilised throughout the thesis to examine the application of ideas and concepts in real-world situations.

Fieldwork

Whilst the majority of this thesis is built upon identifying connections within the literature, it is also intended to be of use to museum professionals. As such, to further bridge research and practice, a significant element of this study took the form of a six-month placement with the National Justice Museum. The methodological approach to the placement briefly introduced here is explored in more detail in Chapter Eight. The primary method for the placement is research through design. Practiced in the field of design, though increasingly common in other fields, a research through design approach aims to gain additional insight into a topic or question through a practical undertaking of the creative design process (Gauntlett 2015:3; Kara 2020:6). In this research the design thinking process is utilised due

to its emphasis on research as the basis of design, and the translation of research into a designed product. Research through design has also been identified as a method which further enables the integration of research and practice (Zimmerman et al. 2007:493). Undertaking research through design thus enables the exploration of the potential implementation of the research in practice, and how identifying and navigating the challenges, issues, and choices that arise from the design process can help in the discovery of relevant solutions and provide further insight into the research questions (Moura et al. 2012:682). The nature of research through design means that the researcher is active in the design process, thus it is important to consider the researcher's reflexivity and positionality. As such, sections of this research are written in an autoethnographic style in order to acknowledge the impact of the researcher's motivations, feelings, and responses upon the final videogame project. The autoethnographic approach is designed to identify and analyse the personal experiences of the researcher and their influence upon the broader research, and it is strongly linked to reflection and reflexivity (Ellis et al. 2011). Autoethnography achieves this by making the researcher's agency within the study explicit, placing the researcher at the heart of the text (Atkinson 2006:383; Denshire and Lee 2013:222). The autoethnographic sections of this research are built upon the notes and observations recorded in a research diary and other materials created and collected during the period of the placement, which can also be found on the figshare.

A final element of the fieldwork is the use of Twine software to develop *Hard Craft*. Twine, originally designed as an interactive fiction software based on hypertext, is utilised as the software for the National Justice Museum game in this research for two main reasons. Firstly, Twine is free to use and browser-based, which makes it accessible to the majority of museums. Secondly, Twine is designed for beginners and does not require knowledge of coding languages. Twine has a significant amount of online documentation, guides, and forums to assist new users with navigating and using the software. My own familiarity with Twine from previous projects was also a consideration, as I have no formal training in game design or development. This meant that I had an understanding of what the software was capable of and did not need to undertake training in its use, and that I could share my knowledge with the collaborating institution.

Navigating this Thesis

This thesis brings together the academic and the practical, museums and museum studies, and videogames and game studies. The following chapters attempt to construct a bridge between museum studies, game studies, videogames, and museum practice with a focus on

interpretation. They aim to demonstrate both the complex nature of the intersection between these areas and offer insight into how affordances of the videogame medium can fulfil the needs of museum interpretation through three specific areas of interest – narrative and storytelling, emotion and affect, and rhetoric - in terms of theory, practice, and additional knowledge gained through research through design.

The thesis is divided into three parts. Part One, formed of two chapters, examines the broader development of museum interpretation, videogames and the intersections between them. Chapter One examines the wider commonalities between museums and videogames, providing an overview of the resulting development of interest and study at the convergence of the fields. It also considers the positionality of the research in relation to ongoing work at the intersection of the academic fields and practice. Chapter Two critically examines the concept of interpretation within museum studies and practice, examining the relationship between the professional and academic in terms of how interpretation within museums is - or isn't - identified and understood. By exploring the development of the concept, this chapter identifies key features of museum interpretation that support Parts Two and Three, enabling the exploration of connections between these features and the videogame medium. Finally, this chapter reconsiders the conceptual understanding of interpretation by making the argument that the concept of interpretation itself can be seen as the exploration of affordances.

Part Two identifies areas where museum studies, game studies and practice intersect in relation to museum interpretation, focusing specifically on narrative and storytelling, emotion and affect, and rhetoric. Chapter Three establishes crossovers in terminology and theory, indicating areas of alignment between the academic fields that enable comparison. Chapters Four, Five and Six then examine the three areas of interest in detail, each discussing museum interpretation and videogames together. These chapters break down the various elements of museum interpretation and videogame design, theory, and practice in relation to the three areas of interest, to identify areas of intersection and indicate the possible affordances of videogames relevant to museum interpretation.

Part Three builds upon the previous parts by examining the bridging of theory and practice through a process of research through design. Formed of two chapters, it describes the six-month placement undertaken at the National Justice Museum in Nottingham as part of the research. Chapter Seven provides an overview of the placement research and methods, and the game outcome, considering the wider opportunities and limitations of the project. Chapter Eight then examines the development of the game using research through design, exploring how the research and insights of the previous parts of the thesis might be applied

in a practical project. Moreover, this chapter reflects upon how the game ties back to the literature, and how the practicalities of the design and collaborative processes influenced the outcome of a videogame designed as museum interpretation.

Finally, the conclusion of the thesis extends the process of reflection. It summarises the key findings of the research and looks to the future of the intersection of museum interpretation and videogames. When this research began in 2018, there was already considerable and growing interest in exploring the potential of videogames in museums. Following the events of the last four years, the acceleration of this interest points to how future work in this area might continue to profitably advance both fields.

Part One

Museum Interpretation and Videogames in Convergence

1. Fields in Convergence

1.1 Videogames and Museums

How is a videogame like a museum? This is a discussion that has become increasingly popular in recent years (Davies 2022; Faber 2021). In a conceptual sense there are many things museum and videogames have in common, more than perhaps is immediately obvious. When I began research for this thesis I did so with the understanding that there was growing interest in the crossover between museums and videogames, based on research for my master's degree dissertation. As part of that dissertation, I directly compared two pieces of writing, the *Museums Change Lives* manifesto by the Museums Association (2013) and Ralph Koster's book *A Theory of Fun for Game Design* (2004), finding that there were many similarities between what the respective authors understood as the key principles and features of museum and videogames.

Take the common principles of videogames, which could be broken down into three categories: accumulation of things that enable or enhance progression; navigation of game spaces; and overcoming barriers to advance through the game. The majority of videogames require players to engage with one or more of these principles. In relation to the intersection of museums and videogames, the first two of these principles are especially interesting. Accumulation relates to activities such as the collection of items, skills or abilities which allow players to progress further or with greater ease through the game. This includes the accumulation of purely aesthetic items, such as clothing or item skins that can improve a player's social or cultural capital. Navigation encompasses the ways in which players move around and negotiate games spaces in order to progress through the game, or to find things to accumulate [Fig 1.1]. Videogames communicate information about these spaces and what is contained within them to aid the player in successfully navigating and completing the game. These ideas and activities are also commonly found in museums. The museum industry is built upon the accumulation of things, things which might take the form of physical or digital objects and artifacts, or the more abstract such as ideas and stories. Similarly, museums involve physical and digital spaces that visitors are required to navigate. These spaces, as with videogames, are frequently designed in order to communicate information about, and engage visitors with, the spaces or collections the museum encompasses [Fig 1.1]. Successful navigation of museum spaces is rewarded with new knowledge, cultural capital or the enjoyment of the experience. This is mirrored by videogames, where completing the journey through the game also results in players gaining

Fig 1.1: Comparing maps - both provide a sense of the space and how it can be navigated, points of interest are indicated with keys to explain the meaning of the symbols.
Top: Part of the map in *Assassin's Creed Brotherhood* (2010). Image © Ubisoft.
[This image has been removed by the author for copyright reasons]
Bottom: The map for the National Museum of Flight. Image by kind permission of National Museums Scotland.

something, be it knowledge, cultural capital, or the achievement of reaching the end.

Museums and videogames are fields in convergence. This brief consideration of the broader aspects that make up the mediums suggests that a convergence has been underway as long as the museum and videogame sectors themselves. The purpose of this chapter is to provide a broad overview of the convergence. It explores the history of crossovers between museums and videogames, drawing out how contemporary practice at the intersection has developed and become increasingly complex. Following this, it considers the emergence of academic interest in the potentials of videogames and museums, establishing where this research is situated within the context of ongoing study.

1.2 Museums at Play

Before delving into the details of the convergence, let us explore the influence of wider factors on museums and play. Changes in the museum sector, which Kidd (2015:415) describes as the 'ludic turn', have created an environment within which videogames and

playful experiences have begun to thrive. Built upon evolving museum practices which increasingly place a focus on a people-centred approach over an object-centred one, this shift mirrors the development of the 'experience economy' where experiential opportunities are becoming a primary appeal for visitors (Hein 2006; Pine and Gilmore 1999). Changing attitudes are also reflected in visitor motivations. Research into audience development and the 'museum experience' has revealed that visitors value museums for more than their educational provision and have complex, and often experience-motivated reasons for visiting museums and heritage sites (Audience Agency 2022; Packer and Ballantyne 2016:136). The manifesto of the Happy Museum Project (Thompson et al. 2011:6) poses the question, 'what other aspects of the museum experience (beyond education, with its clear well-being outcomes) might be worked on in order to increase the well-being potential of a museum visit?'. As museums embrace new forms of practice to cater to different visitor groups and needs, the possibilities of play have often been recognised.

The concept of play has been the subject of many academic studies. One well-known study is Johan Huizinga's 1938 book *Homo Ludens*. Huizinga (2003:28) understands play as a voluntary activity, defined by the sensation of fun, that occurs outside of the ordinary routines of life, and which has rules and aims which people agree to adhere to. Following Huizinga, Caillois (2001:5) further argues that the value of play is not found in the material or physical, but rather through the experience of play itself. During play we negotiate, learn, and come to understand the game, objects, social interaction, others, and ourselves. Therefore 'all play means something' (Huizinga 2003:1). In recent years, museums have opened up considerably to the idea of play as part of the museum experience. This is not to say that play is a new concept. Witcomb (2006:353) notes that interactive museum installations with a focus on play have been prevalent for some time. However, over the last decade many museums have undertaken projects which aim to increase the use and understanding of play. This is perhaps most clearly seen in initiatives such as the Happy Museum Project which has supported research into play, including Manchester Museum's explorations of children's play and how it might be implemented in museums which resulted in the publication of a handbook for the sector entitled *Rules for a Playful Museum*. The handbook emphasises the importance of facilitating creativity and enjoyment, alongside skill development and learning, as outcomes of playful activities in museums (Derry 2015:2). Similarly, the 2019 exhibition *Play Well* at the Wellcome Collection explored the role of play in society, investigating how 'play develops social bonds, emotional resilience and physical wellbeing'. The exhibition established connections between play and creativity, imagination, learning, social skills development, storytelling, and emotional

expression.[3] The facilitation of playful experiences in *Play Well* was at the forefront of the Wellcome Collection's design approach. Curator Shamita Sharmacharja commented that they wanted to 'provoke a desire to play' (Smith 2020).

The growing interest in play can also be seen in co-produced exhibitions at Derby Museums. Created in collaboration with visitors, these exhibitions invite playful and dynamic interpretation and engagement techniques. The 2015 exhibition *Notice Nature Feel Joy* featured masks, magnifying glasses, and tactile opportunities alongside traditional textual interpretative methods. The National Justice Museum's approach to their co-productive exhibition programme also involves play. Weekly creative workshops led by artists enable visitors to interact with the Museum collection in imaginative and playful ways, such as printing their own wanted posters using traditional techniques and creating Lego protestors with individual messages.[4] The playful approach is carried over into the exhibition as materials from these sessions inform and sometimes become part of the interpretation. The playful museum has been emerging digitally as well as physically through online workshops, social media initiatives and the adoption of various digital media. This increasing openness towards play has almost certainly contributed towards the accelerating convergence of museums and videogames.

1.3 A Brief Overview of Contemporary Convergence

1.3.1 Museums and Heritage in Videogames

Interactions between museums and games have a complex and varied history. Connections can be traced back to some of the earliest computer games. For example, *The Oregon Trail* (1971-) was developed by three teachers from the Minnesota Educational Computing Consortium to educate schoolchildren about part of their cultural heritage, the realities of life on the frontier of exploration by American settlers in 1848. The game gained considerable popularity following its release to schools and was re-released numerous times to keep up with changing technology – most recently in 2011 (Bouchard 2017; Lussenhop 2011). Such is the impact of *The Oregon Trail* that it is still referenced in popular culture today, particularly through the phrase 'you have died of dysentery' which indicated the end of many playthroughs. The integration and inclusion of museum and heritage

[3] The interpretative text for the *Play Well* exhibition can be found in the image gallery, available at: https://wellcomecollection.org/exhibitions/XSg-7xEAACcAGVXc

[4] 'Make It Yours' Creative Workshops at the National Justice Museum: https://www.nationaljusticemuseum.org.uk/museum/whats-on?category=workshop

objects, locations, and environments in videogames is perhaps where the intersection of the fields is most easily recognised. Videogames utilising these elements continue to emerge, including the aforementioned *Assassin's Creed* series which simulates historic cities and environments. Recent instalments *Assassin's Creed: Origins* (2017) and *Assassin's Creed: Odyssey* (2018) have included a 'discovery mode' which acts as an in-game museum, offering 'tours' around the game environment which explore various topics from architecture to social history. Notably, the games utilise objects from museum collections as the basis for in-game re-creations, images and information about which are included in the tours (Batchelor 2018). Proving popular with players and educators alike, the latest game in the series *Assassin's Creed: Valhalla* (2020) will also include a discovery mode. Videogames have also used museums as settings for game areas. These include in-game 'museums' which display objects designed for the game (*The Stanley Parable* 2013), the use of museum settings to provide contextual information about the game world (*Bioshock* 2007), and museums as locations in the game where things collected by the player can be stored, displayed, and interpreted (*Animal Crossing* series 2001-). These are but some of the ways in which videogames have engaged with museums, evidencing the breadth of opportunities at the intersection.

1.3.2 The Growing Interest in Videogames by Museums

Museums have also been engaging with videogames. Primarily, this has involved tackling questions surrounding the collection, preservation and display of videogames. In 2013, Paola Antonelli, a curator at the Museum of Modern Art (hereafter the MoMA), gave a TED Talk entitled 'why I brought Pac-Man to MoMA' which explored the Museum's acquisition of 14 videogames. The rationale behind which videogames to collect, Antonelli (2013) explains, was based in the potential of the videogame medium to explore interaction design, and games which represented certain things such as 'gratuitous violence' were avoided. Growing interest in videogames has resulted in the development of institutional forms at the intersection. In the UK, an early example of this was the 2002 touring exhibition *Game On* by the Barbican Centre, which explored the culture and history of computer games. More recently the Victoria and Albert Museum's (hereafter the V&A) 2018 exhibition *Videogames: Design/Play/Disrupt* examined the game design process and the wider impact of videogames on culture and society. Beyond exhibitions, institutions dedicated to this intersection have been established such as the National Videogame Museum in the UK and the Computerspielemuseum in Germany. The development of museums which collect videogames has required further negotiation of issues around preservation and display.

Antonelli (2013) commented that the best way to preserve the medium is to acquire the game code as the technology upon which certain games are played is becoming obsolete, but that this often proves difficult due to the reluctance of game companies to share game code. The difficulties are perhaps most neatly summarised by the collection and display of *Flappy Bird* (2013), a popular mobile game, at the V&A. Displayed behind glass on a mobile phone which itself will likely degrade over time and eventually fail, the game cannot be played or interacted with in its intended manner. It prompted curator Kristian Volsing (2014) to question how videogames can be collected and displayed in museums in a manner that is authentic and representative of the original game experience, if it is possible at all.

More broadly, museum professionals have engaged with ideas of how videogames and museums might be connected. In 2015, James Collins, Digital Media Project Manager at the Smithsonian Centre for Learning and Digital Access, discussed how games had the potential to transform museum experiences stating that museums need to experiment more widely to understand what games can offer, a stance echoed by a more recent article for MuseumNext by journalist Lauren Styx (Joseph 2015; Styx 2022). The San Francisco Museum of Modern Art commissioned a report into games and how they might fit into the Museum's programme prior to their appointment of a game designer in residence. Brin (2015) specifically noted in her report her hope that the Museum would move away from the idea 'that games are exclusively for children' by implementing games for adults in their programming. Marchese (2020) writing for the Grey Art Gallery in New York on the collection of videogames by museums commented on the broader convergence of museums and videogames in recent years. The potentials at the intersection have also been explored through discussions on videogames at museum sector conferences. For example, MuseWeb and Museums Computer Network conferences have included talks on videogames, with the MuseWeb's GLAMi (Galleries, Libraries, Archives and Museums Innovation) awards often including submissions of games made for and by museums.[5] Also of interest are videogame conferences which have begun exploring the possibilities of games in museums, such as the 'Cultured Games and Bildning' workshop at DiGRA 2020.[6] Explorations of the crossover between museums and games is ongoing. In the first half of 2022, MuseumNext held a three day 'Museums, Games and Play' summit, Museum-iD ran workshops on the topic of 'creating immersive games in your museum', and a conference entitled 'Play! Interdisciplinary

[5] See *Escape from the Ballatine House* and *iThrive Sim: Lives in Balance* which were nominated for a GLAMi award in 2021. The details are available at: https://mw21.museweb.net/glami-award-finalists/index.html

[6] The 2020 DiGRA workshops can be explored at: https://digra2020.org/workshops/

Conference on Digital Games in Museums' was held in Germany.[7] Put together, these developments contribute to the wider convergence of museums and videogames and illustrate the complexity of the intersection(s).

1.3.3 Videogames For/By Museums

Turning then, to videogames adapted and made by museums. Games designed specifically by and for museums have been increasingly emerging in practice and a number of successful projects have captured the sector's interest. One example of a project that received critical attention is *High Tea* (2011). *High Tea* is a free online strategy and resource management game about the opium trade between the UK and China in the 1800s which was produced by Preloaded for the Wellcome Collection. Designed to complement the Wellcome Collection's exhibition *High Society*, the game's purpose was to reach new audiences and engage players with a difficult subject matter to encourage further research into the topic – potentially including visits to the Museum (Birchall and Henson 2011:3). As such, *High Tea* was released both on the Museum's website and on popular online game distribution platforms, such as Newgrounds. The success of *High Tea* is evident in its evaluation report, where Birchall and Henson (2011:3) record that the game was played 1 million times in its launch week and was primarily encountered and interacted with outside of the Museum's website. These interactions also took unexpected forms such as reviews, YouTube walkthroughs, and comment threads on social websites discussing, for instance, the ethical issues explored by the game (Birchall and Henson 2011:13). Interestingly, whilst the game had educational aims embedded within its design, it was approached from a perspective which recognised the importance of ensuring the wider gameplay experience was enjoyable.[8] This mindset likely contributed to the success of *High Tea* where other museum-based games have struggled. *Nubla* (2016), an experimental art game created in collaboration between the Thyssen-Bornemisza Museum and Gammera Nest, also reached a wide audience and was released on major game platforms including the PlayStation 4. However, although many players discovered the art of the Museum through the game and found the game concept interesting, reviews were more negative, with players describing

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[7] The 'Museum, Games and Play Summit' by MuseumNext can be explored at: https://www.museumnext.com/events/museums-games-play-summit/; The Museum-iD workshop on creating games for museums at: https://museum-id.com/museum-ideas-study-day-creating-immersive-games-in-your-museum/; 'Play! Interdisciplinary Conference on Digital Games in Museums' at: https://colognegamelab.de/about/campus-life-networking/play/play-english/

[8] *High Tea* on the Preloaded website: https://preloaded.com/work/wellcome-collection-high-tea/

the play experience as simplistic and boring.[9] When done well museum games can be highly successful, however museums have also recognised that a poorly designed game can potentially be damaging, resulting in a degree of caution towards their use.

Following the success of *High Tea* and similar projects, more museums have chosen to invest in videogames. In 2014, the V&A announced that they would be employing Sophia George as game designer in residence to create a game based on their collections. This culminated in *The Strawberry Thief* (2014), a free iPad game inspired by the V&A collection of William Morris prints. Collaborations with game designers and companies have continued to be a popular avenue. One company, Preloaded, has worked with a variety of museums including the National History Museum of Utah to create *Utah Climate Challenge* (2018), and Nottingham Castle designing hybrid physical-digital games for their 2021 refurbished Robin Hood Adventures gallery. Hybrid and mixed reality games in particular have seen a growth in interest as the technology required to play them has become cheaper and more widely available. Explorations in this area have led to a variety of interesting projects such as the Dambusters Virtual Reality experience at the Royal Air Force Museum which debuted in 2019. The experience used a physical replica of part of a Lancaster bomber as the setting for a virtual reality (hereafter VR) re-creation of the 1943 attack on the Möhne Dam. *Father and Son* (2017), a mobile game made for the Museum Archeologico Nazionale de Napoli by TuoMuseo, also utilises the potential of hybrid and mixed reality. This project is especially interesting as parts of the game can only be accessed by scanning codes within the physical Museum, potentially drawing in new visitors.

As videogames can be an expensive investment, and one that does not guarantee success, many museums have searched for alternatives to creating their own games, resulting in the use and adaption of existing videogames. The potential of this form of practice can be examined through the varied and creative use of a single videogame. For example, the popular game *Minecraft* (2011) has found its way into many museum projects. The British Museum set up the *MuseumCraft* project in 2014, in which the Museum encouraged the existing *Minecraft* community to re-create their buildings and collections in *Minecraft.* In 2016, the Museum of London commissioned a group of *Minecraft* players to create a replica of the city of London during the Great Fire of London in 1666, resulting in a set of downloadable maps with re-creations of the city before, during, and after the fire, allowing players to explore and discover the impact of the fire. During 2020, the National Museum

[9] Reviews of *Nubla* by various game sites: https://adventuregamers.com/articles/view/39877, https://www.bonusstage.co.uk/archives/83306, https://www.thegamer.com/nubla-review/

Wales ran a 'Minecraft Your Museum' outreach contest, taking advantage of a national programme which made *Minecraft's* Education Edition freely available for Welsh schoolchildren, challenging children to design their own 'museum' and submit it to the competition. Finally, English Heritage used *Minecraft* to re-create one of their sites, Kenilworth Castle, and by working alongside *Minecraft* YouTubers was able to create in-depth build tutorials on how to make realistic castle designs.

Museums are increasingly experimenting with the various ways in which they can tap into the growing popularity of the videogame industry. This brief review of some recent examples of museum engagement with videogames suggests that the museum sector is becoming more familiar and experienced in working with the medium. The breadth and creativity of these various projects highlights the many different possibilities being explored and experimented with by museums across the world. Yet, whilst these advances are promising, I would argue that for the most part museums continue to engage with videogames and their potential in a limited way.

1.3.4 Limitations and Barriers to Videogames in Museums

Whilst videogames are becoming more common in museums it is important to acknowledge there are a number of limitations and barriers to wider use and experimentation. Practical limitations, such as the need to have the knowledge, skills, or financial capability to commission or create videogames mean that videogames remain out of reach for many institutions.

First is the issue of resources. In the contemporary environment, many museums are facing financial difficulties. A survey of UK museums found that 35% of respondents expected to be working at a deficit in 2022-2023 (Art Fund and Wafer Hadley 2020). Videogames can be costly to make and maintain. Certain types of games, such as VR experiences, require expensive equipment which must then be kept in working condition. Therefore, investing in videogames is a decision that has to be carefully considered. This is perhaps why it is more common to see complex or numerous videogames at larger museums such as the Science Museum. However, free game-making software such as Twine, Bitsy, Construct 3, GameMaker Studio, and Unity is becoming increasingly accessible, providing more opportunities for institutions to create videogames at minimal cost. This brings us to another barrier, knowledge and training. The vast majority of museum professionals have little if any experience in videogame development, which can result in museums struggling with pre-conceptions and skills gaps in the design of effective experiences (De Angeli and

O'Neill 2020:37-38; Maye et al. 2014). An increasing number of beginners workshops, resources, and guides to designing games have been published. For instance GameChangers, an international movement championing games in education, has workshops and resources which introduce games and the design process.[10] During 2020, the National Videogame Museum also ran workshops for beginners in the use of Twine, Bitsy, and other game-making software.[11] Museum-specific resources have also emerged, such as John Sear's tutorials for museums on the use of various types of game and game software.[12] As such, it is possible for museums to begin to overcome these barriers. This is not to say that a videogame is always the right choice, and the goals and reasoning behind using a game should be carefully considered.

Concerns about the ability of visitors to understand and engage with digital tools have been long held in museums. Gammon (2010:282,284), reflecting on his own experience designing computer-based games for museums, concluded that although visitors in general were not techno-phobic certain design elements could cause problems, such as restart buttons which caused visitors to lose progress and confusion caused by the increasing assumption that all screens should be touch-screens. Yet, since 2010 the videogame industry has grown into one of the largest entertainment industries in the world.[13] Ofcom's (2021) survey on media literacy found that 60% of UK adults and 91% of under-15s reported that they played videogames during 2020. Further research by The Association for UK Interactive Entertainment (UKIE) into player demographics found that the average player in 2021 was 31.3 years of age, and that women are just as likely to play videogames as men.[14] As such, an increasing percentage of the UK population are developing the skills and knowledge required to understand how videogames are played and interacted with. Studies have also noted that as a result of the growing popularity of videogames, museum visitors are becoming more likely to have experience with the medium (Kidd 2015; McGonigal 2012). Concerns regarding visitor capability to successfully engage with games may therefore be partially resolved through increasing visitor familiarity with the medium, rather than

[10] GameChangers resources and workshops can be explored at: https://gchangers.org/history/
[11] Beginner's workshops at the National Videogame Museum are available at: https://thenvm.org/learning/learn-at-home/
[12] John Sear's tutorials can be found at: https://www.johnsear.com/tutorials/
[13] Statista's 2019 report shows the videogame industry bringing in a global revenue of more than the film and music industries combined. The report is available at: https://www.statista.com/chart/22392/global-revenue-of-selected-entertainment-industry-sectors/
[14] Player Demographic research by UKIE can be explored at: https://ukiepedia.ukie.org.uk/index.php/Player_Diversity_%26_Demographics

through specific design choices. Recent research indicates that the COVID-19 pandemic led to a renewed interest in videogames, with new players engaging with the industry and existing players spending more time playing (Ipsos MORI 2020; Skwarczek 2021). The acceleration of museum interest in videogames during this period enabled further exploration of both barriers and opportunities.

1.4 Pandemic Gaming: An Acceleration of Interest

Whilst the pandemic posed numerous issues for museums, it resulted in a renewed and accelerated interest in videogames and the development of new examples of experimentation in practice. During the periods of lockdown in the UK, museums were forced to close and had to rely on online programming, meaning that for a time digital engagement became the best way to reach visitors. The ways in which museum staff and visitors interacted with and interpreted objects shifted to accommodate the new restrictions and opportunities of working in a solely digital museum space. For visitors with access to the internet museums became increasingly accessible with tours, talks, workshops, and livestreams providing diverse opportunities to engage with collections and stories in ways that were not necessarily available pre-pandemic. The pandemic led many museums to rethink and better integrate digital elements into their work – supported by organisations such as the Heritage Digital Academy.[15] Relevant to this research is that a number of museums, institutions, individuals, and organisations responded to the pandemic by utilising videogames as an avenue to engage audiences and explore collections.

Museum interactions with *Animal Crossing: New Horizons* (2020, henceforth *AC:NH*) during the pandemic provide a particularly interesting example of how continued interest in videogames can result in interesting and innovative ideas. *AC:NH* tasks players with developing a deserted island into a destination for villagers and visitors. Much like the diverse use of *Minecraft*, *AC:NH* appeared in many museum projects during 2020 and 2021 (Hondsmerk 2021). Released serendipitously in April 2020, coinciding with lockdowns in the UK and USA, the game gained considerable popularity. There are many affordances of *AC:NH* which enabled museums to utilise the game to their advantage. Notably, *Animal Crossing* games commonly include an in-game museum which displays items such as fossils, bugs, fish, and works of art which have been collected and contributed by the player. *AC:NH* built upon this mechanic by introducing a special event celebrating International Museum

[15] The Heritage Digital Academy was set up in 2020 by The Heritage Alliance and can be found at: https://charitydigital.org.uk/heritage-digital-academy

Day, creating a clear opportunity for museums to engage with the game and its players. Several articles were published by museum professionals and academics which compared the design of *AC:NH*'s museum and the practices of its director and curator, an owl named Blathers, to real museum practices. For example, Humphreys (2020) explored the ethical and legal issues with the approach to the museum in *AC:NH* in comparison to the standards of the real museum sector in the article 'An investigation into Blathers' (see also Carter 2020; Han 2020). Equally, the affordances of the game mechanics in *AC:NH* provided opportunities for diverse and creative interactions between the game, visitors/players, and museums.

The Metropolitan Museum of Art (hereafter the MET) and the Getty Museum in the USA used *AC:NH* to widen access to their collections. Utilising the in-game custom design tool which allows players to create pixel art, the MET and the Getty Museum made thousands of artworks available for players to download to decorate their islands.[16] Several players used their islands to create versions of museums, galleries and related visitor attractions. One island, by installation artist Shing Yin Khor, re-created the MoMA and many of its popular art exhibits [Fig 1.2]. Particularly interesting in regard to interpretation was a project run by The Museum of English Rural Life (hereafter the MERL). The MERL, which had a strong online presence even before the pandemic, had recently held an exhibition on rural smocks. Taking advantage of the custom design mechanic in *AC:NH*, the MERL challenged visitors and followers on Twitter to design their own smock. The response to the challenge evidenced the variety of ways players had engaged and interpreted the theme of the 'smock', varying from traditional cultural designs, references to pop-culture and attempts to directly copy historic smocks from the MERL's collection. The response inspired the Museum to create a new gallery on its website which displayed the submitted smock designs.[17] These player-made, digital-born, *AC:NH* designs were treated as though they were themselves museum objects, displayed in an online gallery with accompanying interpretative text that incorporated information shared by the original designers and further context provided by the Museum.

However, museums did not just adapt existing videogames. During the pandemic, many museums became comfortable and confident in playfully engaging visitors, resulting in a rich variety of digital games. Many of these games were simple, easy to produce and use,

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[16] The Animal Crossing Art Generator tool created for the Getty Museum can be found at: https://experiments.getty.edu/ac-art-generator/

[17] The online gallery, #AniMERLCrossing: A Gallery of Smocks, can be found at: https://merl.reading.ac.uk/explore/online-exhibitions/animerlcrossing-smocks/

Fig 1.2: Marina Abramovic's The Artist Is Present re-created in *AC:NH* by artist Shing Yin Khor.
Image © Shing Yin Khor.
[This image has been removed by the author for copyright reasons]

Fig 1.3: Museums engage with digital games on Twitter at the start of the pandemic.
Images © Henry B Plant Museum [left], Abingdon County Hall Museum [right].

Fig 1.4: A page from *Off the Walls: Inspired Re-Creations of Iconic Artworks* by the Getty Museum (2020)
Image © Getty Publications.

such as crosswords and puzzles made using freely-available online tools; meaning that they were not necessarily beyond the skill of museum professionals who did not have the knowledge or training to take advantage of more complex game formats. A search of the #MuseumGames hashtag on Twitter provides numerous examples of different museums using simple, digital game-based methods to engage visitors [Fig 1.3]. One particularly popular game that emerged during this period was a challenge set by the Getty Museum. The Museum asked their visitors and Twitter followers to re-create artworks from their

collections using objects found around their homes. The challenge became so popular that the Museum later published a book entitled *Off the Walls: Inspired Re-Creations of Iconic Artworks* (2020) which brought together many of the visitor submissions [Fig 1.4].

There were also examples of institutions using freely-available game-making tools, such as Twine and Bitsy, to create original digital games based on their sites and collections. The tongue-in-cheek *British Library Simulator* was created using Bitsy. Complete with in-jokes and forth-wall-breaking narrative, the simulator attempted to re-create the experience of visiting the British Library, with the aim of raising awareness of the ways people could still use the library even when the physical building was closed [Fig 1.5]. The simulator went on to win a British Library Labs Staff Award.[18] Practitioners working at the intersection of museums and play also took the opportunity to engage museums in the development of games. John Sear, a self-described designer of games for museums, used the lockdown periods to build a framework and online tool for the creation of digital museum escape rooms. The project resulted in a pre-designed example game along with an online design tool and instructions explaining how museums could use it to create their own games.[19]

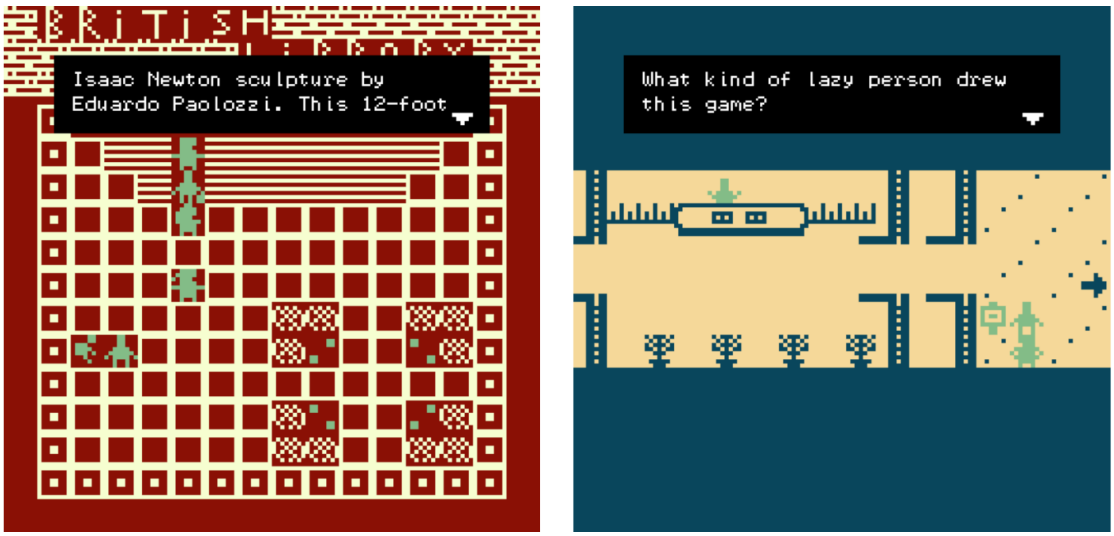

Fig 1.5: The British Library Simulator
Images © Giulia Carla Rossi.

This brief overview evidences the continued acceleration of interest in how videogames can contribute to museum work, influenced in part by the necessity for new ideas during the pandemic. The wide variety of projects and interactions that resulted from this heightened

[18] An introduction to the British Library Simulator game by its creator, curator of digital publications Giulia Carla Rossi is available at: https://www.youtube.com/watch?v=20Wu-oGbVAA
[19] John Sear's example escape game is available at: https://yourmuseum.guide/tours/view/FUN

engagement is suggestive of the potential of further work at the intersection.

1.5 Academic Interest

1.5.1 Growth in Interest at the Intersection

Despite the increase in interest, academic work has only recently begun to examine the implications of this intersection in terms of academia and practice. It is worth noting that museum studies and game studies (particularly in relation to videogames) are, relatively speaking, young academic fields. The debuts of now-established journals reflect this. *Game Studies*, a cross-disciplinary venture exploring the impact of computer games published its first issue in 2001, and *Games and Culture*, exploring the socio-cultural, political and economic impacts of videogames, started in 2006. Similarly, whilst practice-focused museum studies courses have been offered at universities since the mid-1960s, critical approaches to museums studies in academia did not develop fully until the 1990s (Merriman 2020:173-174).

The first texts that identified and explored the intersection of videogames and museums tended to emerge from practice rather than academia. These often took the form of sections in practical guides, reports, and evaluations, such as a section on computer-based games in the Futurelab report *Learning with Digital Technologies in Museums, Science Centres and Galleries* (Hawkey 2006). Similarly, the edited collection *Museums at Play* (Beale 2011) contained essays from a variety of museum professionals on the various ways in which videogames and museums were interacting. Case studies of museum videogames formed the basis of many chapters in the collection, such as *Time Explorer* at the British Museum and *High Tea* at the Wellcome Collection, with authors contextualising and analysing practice within a critical and academic framework (Birchall and Henson 2011a; Prudames 2011). The influence of practice upon the development of academic interest is clear, with case studies forming the basis of many academic texts. Whilst professionals continued to advance and innovate, academic works began to delve into some of the deeper questions evoked by their projects, providing critical analyses of practice (Kidd 2019; Poole 2018; Proctor 2015). However, the findings of academic works do not necessarily feed back into practice – an issue that collaborations such as the V&A and Abertay University project 'Video Games in the Museum' have attempted to overcome (White and Parker 2016). This thesis therefore aims to undertake critical examination of the potential of videogames as museum interpretation in a manner that is useful and accessible to both academics and practitioners.

Recently an increasing number of academics have looked critically at the potentials and

possibilities afforded by the use of videogames in museum work. As a new and emerging area of study, developments at this intersection can be 'somewhat fragmentary' (Camps-Ortueta et al. 2021:196). Due to its multi/interdisciplinary nature certain areas of research have received more attention than others, resulting in gaps in the literature and between literature and practice. Jenny Kidd (2013:103) noted in her book *Museums in the New Mediascape: Transmedia, Participation, Ethics*, which contained a chapter exploring empathy in online museum games that, at the time of publication, online gaming in a museological context was 'significantly under-researched'. Academic work at the intersection has developed significantly since then, evidenced in publications specifically on the topic of videogames in the museum sector. Yet, scholars have continued to recognise that the potential of this intersection goes beyond the current scope of study. As Zeiler and Thomas (2021) comment in their introduction to a special issue of the *International Journal of Heritage Studies* on videogames and cultural heritage, the ways in which scholars have previously approached videogames has been somewhat limited. In particular they highlight that works exploring wider viewpoints through which the intersection of videogames and museums can be considered have remain rarer (Zeiler and Thomas 2021:265-267). This thesis aims to respond to this need for broader perspectives on the potential of videogames for museums. The value of this type of study is beginning to be recognised. For instance, Beavis, O'Mara and Thompson (2021:295) comment on the diverse capacity of videogames to contribute value to museums. Additionally, submissions to special issues on culture and games of the *Journal on Computing and Heritage* led editors Lepouras, Lykourentzou and Liapis (2020:263) to summarise that the special issues illustrated 'the broad potential of games used in cultural heritage sites'.

Whilst explorations of videogames as interpretative tools are becoming more common in practice (Zeiler and Thomas 2021:265), studies of the potential of specific affordances of the videogame medium to respond to contemporary museum interpretation theory and practice is currently under-represented in research. As the study of videogames continues to come into its own within museums studies, the argument of Witcomb (2007:37-38) for multimedia and digital interactives to be seen less as 'tools' and more as an integral part of new interpretative practice, as objects and creative responses in their own right, seems increasingly relevant.

1.5.2 The Growth of Related Fields

There is a growing body of study across related fields which are worth mentioning to further contextualise the research environment. The fields of historical game studies,

archaeogaming, and virtual heritage all touch upon the relationship between museums and games. In order to understand the breadth of research ongoing across these areas, one need look no further than the 'Present and Future of Games and History' symposium held at the University of Warwick which brought together practitioners and researchers to explore the intersections of games, history, museums and heritage (Hondsmerk 2020). To briefly summarise, historical game studies looks at the representation of history in videogames. Influential works in this area include Chapman's *Digital Games as History: How videogames represent the past and offer access to historical practice* (2016) and Kapell's *Playing with the Past: Digital Games and the Simulation of History* (2013). Archaeogaming examines archaeology and archaeological heritage in (and of) games. The term 'archaeogaming' has been attributed to Andrew Reinhard, author of *Archaeogaming: An Introduction to Archaeology in and of Video Games* (2018). Finally, researchers in the field of virtual heritage studies have examined how videogames can be used in cultural heritage, including the use of VR, augmented reality (hereafter AR), and mixed reality. Champion's books *Playing with the Past* (2011) and *Critical Gaming: Interactive History and Virtual Heritage* (2015) are prominent works in this area. Expanding academic interest in understanding videogames and their potential links to museums suggests the rich potential for further academic and practical exploration.

1.6 A Convergence of the Fields

Museums and videogames in both academia and practice are undergoing a continuing convergence. In practice, projects are using games in increasingly creative and thoughtful ways, although museums still tend to use videogames in a limited manner as either explicit educational tools or as entertainment for children and families (Beavis et al. 2021). This convergence has been accelerated by the pandemic which required museums to engage more with the digital, and resulted in a recognition that museums need to take a more considered and strategic approach to their digital programmes.[20] Academic interest in the intersection is also ongoing, and the variety of emerging fields and studies critically analysing museum and videogames highlight the potential of this convergence. Yet, it has been recognised that much of this work focuses on certain elements of design or examples of specific projects at the crossover of the fields. Within the current literature there are few studies that explore the wider complexities and possibilities at the intersection (Zeiler and

[20] See the AHRC 'Boundless Creativity' report (2021) and the report on the implications of COVID-19 in museums by Kidd et al. (2021).

Thomas 2021:265-267). This is where this research aims to contribute. Taking a broader perspective it explores the potential application of videogames as museum interpretation, utilising study of both theory and practice to identify relevant videogame affordances. In order to explore the wider picture, ideas which have previously been examined in isolation are brought together to consider how various aspects complement and respond to each other and contribute towards a fuller understanding of the potential of videogames in museums. To begin this work, Chapter Two undertakes a review of academic understanding of the concept of museum interpretation, in order to locate the research and to draw out key elements of interpretative theory and practice for further exploration in Part Two.

2. Museum Interpretation: Beyond the Label

2.1 The Concept of Museum Interpretation

Interpretation is a surprisingly difficult concept to pin down given how fundamental it is to the purpose and meaning of museums. Academic understandings of interpretation in a museum context have been defined, developed and reconsidered many times since the term was first introduced as a distinct part of museum practice. Numerous theoretical frameworks have been applied to deepen our understanding of what interpretation is, how it is most effectively used, and who is involved in undertaking it, which has resulted in a complex network of ideas. Therefore, there is not necessarily a consensus amongst academics as to the precise definition of museum interpretation and its various elements. Similarly, museum practitioners often have difficulty explaining what exactly interpretation is, including professionals for whom interpretation is part of their job title. When Juliette Fritsch (2007:237) asked a group of twelve museum professionals in interpretation-related roles to define what they meant when they talked about interpretation Fritsch found that they struggled, noting that 'participants seemed uncomfortable using the word [interpretation], as they felt it was impossible to define with a degree of self-assurance'. This perhaps speaks to a broader problem; a disconnect between academia and practice.

Whilst academic research into museum interpretation has led to many notable developments in understanding, these advances are rarely engaged with in depth outside of academia. As Silverman and O'Neill (2012:193-195) comment, the works on interpretation theory are often too 'jargon-filled' and difficult for practitioners to engage with. Theory, therefore, is not seen as a cornerstone of practice. There have been a few attempts to bridge this gap, with works such as Sam Ham's *Interpretation: Making a Difference on Purpose* (2013) building upon theory to deliver practical advice and support for those working in the sector. This is further complicated by the way interpretative needs and methods vary between institutions. Uzzell (1989:7) writes 'there can be no such thing as a standardised approach to interpretation'. The issue of recognising what 'interpretation' is also plagues museum studies. Considering how important interpretation is in contemporary museum practice, remarkably few works that explore elements of what we might describe broadly as interpretation explicitly label it as such. Assumptions about whether people will recognise the subject of study when it is not framed as interpretation results in the concept taking something of a back seat. This is echoed in practice, where interpretation is commonly identified as the ways in which the museum communicates

information and shares stories about its objects and collections to visitors.[21] Communication is itself a broad descriptor which encompasses many mediums and methods. In traditional museum practice, communication tends to refer to the most common and easily identifiable forms of interpretation – written labels and information panels. We are left, as Fritsch noted, with a sense of confusion in the sector and in academia as to what exactly interpretation is and what forms it takes. With no common agreement on the understanding of museum interpretation, we cannot take interpretation and its meaning(s) for granted.

Therefore, before we delve into the parallels and crossovers between videogames and museum interpretation, it is worth taking the time to contemplate the concept of interpretation. This is especially important as interpretation is acknowledged as a primary focus of this study. By returning to the origin of the concept and exploring how different definitions, theories, practices and methodologies have affected and changed how museum interpretation is variously understood and undertaken over time, we can more clearly establish the understanding of interpretation that this work follows. In light of the focus of this thesis and the museum sector's journey into the digital, or as some claim the 'post-digital' world,[22] the implications of a digital-focused and increasingly media-driven society on museum interpretative practice will also be explored. These areas of analysis also link to the investigation into how the videogame medium can fit within museum interpretation in both theory and practice, with the aim of bridging the gap between academia and the museum sector and providing a study that is of use to both.

2.2 The Foundations of Museum Interpretation

One of the most commonly cited and influential works in the study of museum

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[21] The Association for Heritage Interpretation defines interpretation as '… a communication process that shares interesting stories and experience's that help people make sense of, and understand more about, a site, collection or event'. Museum Galleries Scotland defines it as 'how we communicate our collections to our users'.

[22] A 2019 Accenture report (available at: https://www.accenture.com/us-en/insights/technology/technology-trends-2019) describes the current era as 'post-digital'. In a post-digital world, it is not that we will become less 'digital' as investment in digital technologies and strategies has already or will become standard and expected, but rather the question is about how companies will differentiate themselves. It is less about 'exploring emerging technologies' and more about how those technologies are implemented. The 'post-digital' age asks; how is each individual institution using digital technology in a way that sets them apart from others?
See also the definition by Cloud Geeni: https://cloudgeeni.co.uk/what-does-it-mean-to-be-post-digital/

interpretation is Freeman Tilden's *Interpreting Our Heritage*, originally published in 1957 and subsequently re-published across a number of editions. Much of the theory underpinning contemporary interpretative practice can be traced back to Tilden's writings, with many authors of later contributions to the field having drawn upon or acknowledged the influence of Tilden and, in particular, his six principles of interpretation, in forming their own understandings (Ablett and Dyer 2009; Ham 2013; Jimson 2015). Arguably the most remarkable thing about much of Tilden's work is its continued relevance. Whilst this suggests that Tilden was ahead of his time in his thinking and understanding of what the process of interpretation entails, it also perhaps hints at a level of stagnation, with traditional practices remaining the common custom through the years. This relative lack of challenge has been recognised by Waterton and Watson (2013:546) as a 'state of comfort' wherein the frameworks within which museum professionals work 'remain unchallenged and less productive than they might otherwise be'. In light of the changes in society and the museum sector is it now time to return to the foundations of interpretation theory and to reconsider them?

Before exploring contemporary understandings, let us first return to Tilden's original text to highlight areas which have influenced subsequent understandings, and to identify that which might invite critique and change.

> *'1. Any interpretation that does not somehow relate what is being displayed or described to something within the personality or experience of the visitor will be sterile…*
> *… 4. The chief aim of interpretation is not instruction, but provocation.'*
> Excerpts from Tilden's six principles of interpretation (Tilden 2008:34-35).

On initial reading it appears that Tilden recognised many foundational aspects of interpretation that the field of museum studies has gone on to develop and ground in theory. This is especially clear when we examine how Tilden's statements on visitor understanding often reflect recent studies into audience behaviour, rather than the more traditional 'pedagogy' wherein each visitor was presumed to arrive at the museum as a 'blank slate' who had the same interpretative experience (Hein 2006:7). 'He does not so much wish to be talked at as to be talked with', Tilden (2008:37) argues of the heritage visitor, suggesting that Tilden disagreed with this traditional view of the visitor as a passive consumer. Tilden continues, 'he is forever and finally translating your words as best he can into whatever he can refer to his own intimate knowledge and experience', introducing the idea that each visitor's interpretative experience is unique. This is due to the individual context and understandings each visitor brings to the museum, reflecting contemporary understandings

of how communication processes work and how we, as people, learn (Tilden 2008:41; Falk and Dierking 2016; Kothe 2016:94). The importance of this is further evidenced within Tilden's six principles, the first of which explains that unless the visitor is able to connect an element of their own experience to that which is being displayed through interpretation, the interpretative process will be 'sterile' (Tilden 2008:34). Moreover, Tilden makes it clear in his second principle that interpretation is not solely about information, although all interpretation involves information at some level. He argues that interpretation should be understood more as an art form which combines many elements and which aims to cause revelation or, as Tilden (2008:34-35) describes it, 'provocation'. This idea of 'provocation' – that interpretation should prompt a response of some sort from the visitor – has endured and appears to fit well within modern understandings of the interpretation process where the visitor is recognised as having an active role (Ham 2013:8). Taking these comments in isolation, it can certainly appear that Tilden had an understanding of the visitor that museum studies has only more recently examined in depth and adopted into practice. However, Tilden's work, and even the idea of 'provocation', is not without its problems.

Other elements of Tilden's writings make it clear that his vision has become outdated compared to our contemporary understandings of the nuances of interpretation and the respective roles of the visitor and museum. One area that has drawn comment is Tilden's conviction regarding presenting interpretation as a 'whole' or as single, linear narrative (Howard 2003:262-263). This is evidenced in Tilden's fifth principle, which emphasises the importance of interpreting as a 'whole' rather than a 'part', of revealing the 'truth' behind the object (Tilden 2008:33-35). In many ways this commitment to the 'whole' undermines his argument about the visitor role in interpretation. By refusing to present anything less than the 'whole' he denies the visitor the opportunity to contribute by adding to any interpretation their own brought knowledge and experiences. He also prevents the inclusion of different or differing narratives and voices, and instead reasserts the authority of the interpreter. Like Howard, Staiff (2014) picks up on the dichotomy between Tilden's assertion that visitors have unique, individual insights and his reinforcing of the role of the interpreter. 'Tilden assumes ignorance on the part of heritage visitors. Interpreters, like the priests of ancient religions, are conceptualised as being able to 'read the signs' for those without such a capacity' Staiff (2014:39). This contrasts with Staiff's understanding of interpretation as a cultural process that does not pursue 'whole', complete, or 'totalising' knowledge. The concept of the 'whole', it could be argued, conflicts with the goal of provocation.

When Tilden (2008:48-49) does discuss the possibility of multiple narratives he emphasises

the importance of authoritative voices arguing that, when an answer is not known, interpreters should turn to authoritative sources and only when sources of authoritative knowledge differ should they present both perspectives to their audience. This in turn presents problems as Tilden presumes neutrality. There is no consideration of the biases in interpretation, which could potentially result in important parts of the 'whole' story going unheard. Perhaps it is the context within which Tilden was writing that works against the broader museum sector here, for Tilden was writing exclusively about the interpretation of natural heritage as an employee of the U.S. National Park Service. Howard (2003) notes that this context is important when considering what Tilden's works might mean for contemporary interpretative practice. Whilst Howard (2003:263) makes an important point that the idea of presenting a single storyline was 'less applicable to the European scene, where it is almost impossible to describe any element of heritage, even in the natural sphere, without the dissonances being obvious' as areas of heritage such as museums or battlefield sites are 'necessarily more contentious' than the American wilderness, this view is too limited. As the U.S. National Park Service has since acknowledged, the interpretation of the National Parks as 'wilderness' fails to represent their whole history as it overlooks Native habitation of the lands, tribal sites, and histories, something they are now attempting to rectify.[23]

Despite presenting interpretation as an 'art', Tilden (2008:55) separates interpretative storytelling from practices such as poetry or dramatic performances, claiming that they are 'horribly out of place' in interpretation. This presents a rather limited view of interpretation and contrasts with how different types of interpretative media and artistic interventions are becoming increasingly common in museums (Poole 2018; Proctor 2015; Robins 2013). Therefore, despite the continued prevalence of Tilden's ideas in academia and practice there have been a growing number of studies that have, at least in part, challenged his conclusions. Notably, Staiff (2014) presents criticisms of Tilden and offers an alternative view of how museum interpretation can be done, and how the concept and processes of interpretation can be understood. Staiff considers a number of questions around museum interpretation and the ways it does and does not reflect changes in society. Staiff's main critique of Tilden lies in his definitions and principles. Turning first to the definition of 'heritage interpretation', Staiff (2014:37) asks whether interpretation in a heritage setting should be singled out from other forms of interpretation. By separating 'heritage interpretation' and

[23] A Smithsonian Voices article (available at: https://www.smithsonianmag.com/blogs/national-museum-american-indian/2020/08/25/natives-interpreting-national-parks/) explores how Native American voices are contributing to the interpretation of national parks.

making it 'special', Tilden distances heritage interpretation from wider discussions on interpretation as a way of representing, understanding, and making meaning about the world (Ablett and Dyer 2009:217-218; Staiff 2014:37). Many academics have since attempted to build upon and challenge Tilden's work in relation to these wider understandings.[24] The abstraction of museum interpretation into a field of its own, perhaps as part of establishing the fields of professional practice and study, may explain why academic advancement in the field has until recently failed to fully capitalise on developments in other areas of discourse such as learning and language theory. Staiff (2014:40-41) further criticises Tilden's description of 'art', 'science', 'narrative' and 'facts' as separate entities and his assertion that information cannot in itself be interpretation by pointing out that, if we accept interpretation as representation, information representing the object must also be interpretation. Equally, as previously mentioned, Tilden's view of information as separate from interpretation also fails to account for potential bias in the development of that information.

Ultimately, Staiff (2014:41) reaches a different conclusion to Tilden, arguing for a boarder understanding of interpretation as an act of creating a representation of that which is being interpreted. And Staiff is not alone in challenging Tilden's understandings. Further examples can be found in Adams's exploration of interpretation as affordance, and Gilson's study which examines interpretation as inspiration (Adams 2018; Gilson 2017). Indeed, as Gilson (2017:79) acknowledges, our current understanding of interpretation can lack clarity and is in need of wider reconceptualization (see also Staiff 2014:127; Waterton and Watson 2013:548,558). Having explored the foundations, let us turn to how contemporary understanding(s) of museum interpretation have been formed to draw out the different elements of interpretative theory and practice that shape the rest of this thesis.

2.3 The Evolution of Interpretation

In recent years academics have drawn upon various theories from communication studies, to cognitive psychology, to learning theory in order to develop our understanding of interpretation. Perhaps the foremost of these has been the introduction and development of the concept of 'meaning-making'. Silverman (1995:161-162), drawing upon postmodernism, constructivism, and literary theory positions interpretation as a 'meaning-making process', in which there is a negotiation of information between the museum and

[24] For a good overview of the various theoretic approaches taken, see Ablett and Dyer (2009).

the visitor - who becomes an active participant. Interpretation can thus be seen as a form of multi-way communicative language between object and visitor, visitor and label, or even between individual visitors. This has led to consideration of the various ways in which a visitor might actively participate in meaning-making.

Mason (2005:226) explores the complexities of visitor participation through a study of 'unintended communication' in interpretative processes. This can be understood as communication and meaning-making which goes beyond the exhibition's intended messages – in other words - interpretation which, due to its individualised nature, can arguably only occur outside the museum's control. This kind of unintended communication provides space for the visitor to respond to the museum's interpretation using their own personal knowledge, experiences, and context. As a result, the construction of meaning is recognised as subjective depending on the knowledge, memories and experience brought to the process by the individual visitor (Mason 2005; Silverman 1995:161,164). Meaning-making as part of interpretation is understood as an active personal or social interpretative process that occurs in the interpretative 'gap' between the visitor(s), interpretative products, and the object. Interpretative products are defined by Ham (2013:4) as 'any finished interpretative programme or device'. An information panel, or similar traditional and conventional forms of interpretation, fill the same role in this process as newer forms of interpretative product such as digital interactive displays or videogames. The interpretative 'gap' refers to the negotiation and translation of meanings drawn from the object, how it is described or explored in interpretative products, and personal knowledge and experience (Fraser and Coulson 2012:223; Lord 2006:5). In recognising meaning-making as part of interpretation, control over the interpretative outcome becomes removed from the museum and the balance of interpretative power shifts to include the visitor.

There is also an implication that meaning-making cannot occur without participation as visitors *choose* to engage in interpretation when they seek meaning. Rahaman (2018:216) therefore positions interpretation as a 'process' rather than a 'tool', in which understanding and learning evolves through the active participation and contribution of visitors who contextualise objects in relation to their personal context. This suggests that visitor participation in interpretation can be seen through tangible contribution. Mason (2005:231) expands upon this idea of contribution by critically examining the perceived difference between the producer (typically the museum) and the consumer (the visitor), noting that both visitors and museum professionals consume and produce meanings and values which make up the personal context from which they work and interpret. As such, the 'authoritative' information produced is not bias-free and can be seen as just one

contribution to a larger interpretative conversation (Mason 2005:231). Indeed, contemporary visitors may even expect to be able to contribute their own views, as it is not just the museum's understanding of interpretation that is changing. Visitor perceptions are also evolving. Kidd (2013:5) situates this attitude shift within a broader societal change in user expectations where the focus has moved to personalisation, customisation and authorship.

Interpretation as an individualised process of meaning-making is reinforced by the principles of constructivist theory, which Hooper-Greenhill draws upon in in her book *Museums and the Interpretation of Visual Culture* (2000) alongside theories of hermeneutics and visual culture. Hooper-Greenhill (2000:111) examines how objects are capable of evoking multiple meanings, and that meanings can be derived from interpretations that go beyond language. This builds upon Hall's constructivist theory of language, where meaning is found beyond the 'thing' and the traditional concept of language, and instead can be constructed from more abstract systems such as concepts and signs, or semiotics (Hall 1997:25; see also Staiff 2014:34). Meaning is not necessarily inherent in the objects themselves, but arises out of the connections and representations that we form in communication with them. Therefore, there is never a 'correct' way to interpret an object or text, as 'interpretation is not simply a matter of conveying an already transparent understanding to where there is none but also of unravelling misunderstanding, rectifying error and actively constituting a coherent meaning' (Ablett and Dyer 2009:216). Hooper-Greenhill (2000:116,124) further notes that through the process of interpretation visitors make sense not only of the object, but also the wider relationship between objects and the narratives and meanings associated with them. If we look beyond language then we open ourselves up to bodily interpretative possibilities where visitors use all their senses to interact with objects, which invites the development of more creative interpretative products beyond language and text-based labels, information panels, or exhibition guides (Hooper-Greenhill 2000:111). Furthermore, an embrace of visual culture also prevents the exclusion of that which does not so easily translate into language, such as natural heritage and intangible heritage.

Falk and Dierking (2016) explore how the constructivist model, and understandings of cognitive processes, impact upon the learning experience in museums. In constructivism, learning is understood as contextual, recognising that visitors come to interpretation with context constructed of previous knowledge, experience and interests. Similarly, Ablett and Dyer (2009:220), drawing upon hermeneutic theory, discuss various influences on how we interpret the world, including individual, communal, and cultural-based knowledge and

experience. Hooper-Greenhill (2000:139) describes this type of learning as a process that is both personal and social, which could be implemented through the integration of non-specialist visitor knowledge with the specialist knowledge of museum professionals. A suggestion that is further built upon by Falk, Dierking and Adams (2006:325) who comment that in the constructivist model, the meaning-making and interpretative process is visitor-led and the museum acts less as the 'authority' and more as a 'facilitator' (see also Bedford 2014:62). As museums begin to re-evaluate the visitors' role in the interpretative process, these theories and understandings can provide useful contributions to the development of contemporary interpretative practice. Yet, whilst these ideas have been influential, Hein's (1992, 1999) work into the practicalities of applying constructivist methods highlights the more practical difficulties faced by museums in building exhibits, experiences, and interactions that could cater to the needs of visitors of different backgrounds.

As a result of these changing understandings museums are increasingly incorporating multiple voices in interpretation and moving away from the singular 'truth' of the object. They are beginning to reflect what Gilson (2017:79) describes as the 'complex and contested' nature of history, and are moving closer to a recognition of how understanding of the past is constructed as a process of exploring, connecting, and interpreting evidence to reach an individual conclusion, which is then either accepted or rejected by the group. Historical 'evidence', and therefore interpretation, are not neutral as the individual biases of the producer of the evidence and interpreter have an impact upon the conclusion reached. Examined from this angle, interpretation becomes an on-going and open-ended process in which our understanding of meaning is ever-changing, influenced by the introduction of new voices and viewpoints into the interpretative process (Dorsett 2010:250; Hooper-Greenhill 2000:118). As such the visitor is invited to take on a critical role as part of the process of constructing meaning, by examining multiple narratives around an object and coming to an interpretative conclusion. Thereby, Howard's (2003:248) concern that the process of interpretation would remain a privilege of the network of scholars, is also averted. Once again, the problems arise out of the application of theory in practice, as in spite of new visual, semiotic, and multi-meaning understandings, textual language remains the key method of communication in museum exhibitions. As Silverman and O'Neill (2012:195) comment, museums continue to try and develop methods of catering to diverse audiences whilst still clinging on to the authoritative role of the institution, essentially undermining themselves. It begs the question first raised by Howard (2003); is little or no official interpretation a possible way forward?

In contrast to the traditional museum 'pedagogy', where visitors are seen as blank slates

ready to learn the museum's narrative (Hein 2006:7), modern interpretative theory built upon new theories and understandings thus encourages: the democratisation of museums away from the authority of the museum voice (Hein 2006; Staiff 2014); visitor participation in the interpretative process (Fraser and Coulson 2012; Kaplan 2013; Mason 2005); the inclusion of multiple perspectives (Hansen and Johnson 2013; Nielsen 2017), and a move towards including more experiential, affective interpretative techniques (Dorsett 2010; Hein, 2006).

2.4 Some Implications of Museums as Creators of Interpretative Media

Alongside these shifts in theory, we must also consider the implications of museum interpretation as media and museums as media producers. As Parry (2007:11) notes, museums are both full of media and themselves a 'medium', and therefore 'media define the museum'. Russo (2012:145) comments that, as 'the contemporary museum is a media space', many museums are moving towards a more experiential mode of working (see also Hein 2006). That museums produce media, or that museums spaces increasingly contain or could be considered media is being recognised in the sector. The implications of museums as media producers have yet to be fully explored. Kidd (2013:3) writes that 'museum professionals seldom take ownership of the political, philosophical and ideological implications of their roles as media 'producers''. Equally, changing academic understandings of the interpretative process, and the roles of the museum and visitor, have perhaps not been fully implemented in practice. This is especially true of new and emerging forms of interpretative media or 'product', which are not as well understood in terms of their interpretative potential. Kraemer's (2018:90) question 'what are the potentials of the museum and how can they be opened up for a new understanding through the creative use of media?' echoes this. Kidd (2014:9) outlines a number of implications that highlight the potential tension between advancements in understandings of interpretation, the visitor, and the museum's authoritative position in the online, digital environment in the production of interpretative media. This provokes questions such as: Who creates interpretative media? Where does the content come from? Who is involved in its production? And where does the authority lie in this process? which are applicable to new and emerging forms of interpretative media just as they are for museum labels and exhibition guidebooks. If the production of interpretative media is not considered in terms of these questions, museums may find that they are not able to take full advantage of the affordances of new and emerging forms of media. Museums may also find they remain authoritative in the production of interpretative media, undermining the potential of, in

particular, digital media for participatory visitor engagement.

The expectations of museum visitors in terms of the types of media and media experience that they want is also changing. Stogner (2009:386-388) highlights the impact of audience expectations of new media 'I want to be entertained / I want it now / I want it everywhere / I want it my way / I want to share it with others / I want to create something' (see also Kidd 2013:5). Many of these ideas echo developments in understanding of the interpretation process such as active visitor participation, personalisation, the democratisation of museums, and a shift towards experiential practice. Increasing demand for new, and particularly digital media forms in museums has received attention, especially considering that they often come from a younger visitor demographic (Jeffra et al. 2020; Kraemer 2018). This does not necessarily mean that audiences expect museums to use the latest technology, rather that they recognise that new media and technology have the potential to offer memorable, meaningful, and emotionally compelling experiences (Samis 2018:63). Equally, new media solutions will not suit all visitors, and the digital divide remains a barrier to wider take up of new technology (Stogner 2009:392). Therefore, flexibility and adaptability are increasingly being seen as important in satisfying the diverse needs of both museums and audiences.

The need to be flexible has meant museums have explored many different media forms of interpretation, many of which fall outside of the textual. These include interpretation through literature (Pamuk 2008, 2012), contemporary art (Robins and Baxter 2012), photography (Edwards and Sigrid 2014), music, film and theatre (Bennett 2013; Dalle Vache 2012; Jackson and Kidd 2011), and games (Beale 2011). Where traditionally museums have tended to shy away from practices that might be seen as primarily entertainment, new research into visitor motivations indicates that, for some, a desire to be entertained is what leads them to visit museums (Cotter et al. 2022:276). As a result, museums are increasingly embracing new media and art forms. Within exhibitions multiple interpretative approaches and forms of media are now commonly used to meet the varying motivations and needs of visitors. These can include a desire to be entertained, to learn, to participate and contribute to the interpretative conversation, and those who are searching for a combination of experiences.

Here it is worth briefly introducing the idea of what a transmedia approach to interpretation might offer in terms of addressing diverse visitor expectations, the digital divide, and how museums can make the most of each type of media. To summarise the concept of transmedia storytelling (lit. across media), which is explored further in Chapters Three and Four, relates to the process where elements of a story 'get dispersed systematically across multiple

delivery channels for the purpose of creating a unified and coordinated entertainment experience' (Jenkins 2007). In museums, the 'story' is often the museum's interpretation, which is delivered across multiple media platforms. In many ways, museums already work in a transmedia fashion, with exhibitions commonly containing different interpretative media that introduce fragments of story or information that together forms a broader interpretation. A transmedia approach moves away from the idea of adapting an element to multiple forms of media and instead encourages the use of each media form to its full potential (Jenkins 2003). Due to the use of different media, transmedia approaches provide multiple 'points of entry' where visitors may choose to engage with interpretation through the form of media that they are most comfortable with (Jenkins 2007). Therefore, as Kidd (2013:29) notes, transmedia approaches may be particularly suited to museum interpretative practice.

2.5 Some Implications of the Digital

Engagement with the changing digital environment has enabled the museum sector to translate ideas about interpretation emerging from theory into practice. Whilst the digital technology might provide insight and tools that allow us to undertake interpretation in new ways, this is not to suggest that the digital should supersede the physical, nor that it is the answer to all interpretative issues. Rather, it is to acknowledge that the digital is an increasingly prominent part of life and is something the majority of museums are engaging with in some form. The digital (or perhaps post-digital) world has had a significant impact on the expectations of visitors, especially younger generations, in regard to digital provision and how they learn and interact with the world. In this era, digital technologies and strategies have become the norm and it could be argued that a fundamental flaw of older understandings of interpretation (such as Tilden) is that they have been developed for a primarily physical world as opposed to one involving the digital dimensions of experience (Rahaman 2018:212). As a result, current digital interpretation methods often remain reminiscent of the traditional producer-consumer model of information transmission. The potential of the digital to provide, for example, flexible and user-centric forms of interpretation, Rahaman (2018) argues, is only beginning to be fully explored. The variety of digital interpretative techniques being developed in practice further highlights the need for continued research that enables the museum sector to use each different form of digital media to its fullest potential.

There is increasing interest in the potential of digital media interpretation to address some of the challenges faced by contemporary museums. Over the last few decades there has been

a growing interest in academia and practice in exploring the digital in museums, including the application of the digital in interpretation (Kidd 2013; Rahaman 2018; Staiff 2014). One aspect that is commonly discussed is the digital's participatory potential. Unlike traditional interpretation methods such as labels or exhibition guides, digital tools are often designed to explicitly implement participatory engagement (Jenkins 2013; King et al. 2016:85; Staiff 2014). The use of digital techniques can encourage visitors to become active in the interpretative process. Murphy (2016:121) argues that the way the interpretative process is undertaken is not radically changed by the use of a digital platform, but rather the way in which visitor participation is mediated changes, and the potential for engagement and conversation arises from that. The participatory nature of many digital initiatives has resulted in increased opportunities for visitors to contribute their voices and ideas to museum-led narratives (Proctor 2015; Staiff 2014:118). For example, in Dyson's (2007:197) case study of a digital trail produced for an audience of design students, Dyson found that the main positive interactions that arose were from the inclusion of an annotation tool that sparked conversation between students and between students and the museum. Using this tool students were able to add their own perspectives to the interpretation of the objects, and could then share their observations with the group, resulting in a richer interpretative experience (Dyson 2007:197).

Furthermore, the potential of the digital to enable visitors to personalise their museum experience to suit their individual needs has also been recognised (Proctor 2015:501). Parry (2007:107) comments that the rapid development of new technologies enables visitors to have the means to 'initiate and create, collect and interpret in their own time and space, on their own terms'. Thinking beyond digital technology installed by and situated in the museum, museums can also utilise something that an increasing number of visitors bring with them - their smart phones. Proctor (2015:510) invites us to consider how museums can capitalise on visitor interactions with their phones by creating apps or online tools which allow them to personalise their visit, saving, discussing, and sharing their insights with each other and the museum. Using these techniques, museums can actively shift away from an authoritative role, becoming part of a 'distributed network' of information sharing which is engaging, open-ended and relevant to the visitor (Proctor 2015:505). The digital can thus be seen as important to the ongoing democratisation of museums.

Indeed, even before many museums embraced the use of digital technology, visitors were already integrating the digital into their visiting experience. This is supported by Murphy's (2016) examination of forms of visitor participation which highlights how digital tools now

commonly available to visitors, such as smart phones, have led to an increase in self-directed participation. Actions such as taking photos, writing social media posts or blog posts, and more creative and engaged responses such as copying poses from statutes or paintings, Murphy (2016:118-123) argues, allow visitors to put a 'personal stamp' on their encounters and interpretative responses. Visitors can, and often do, find ways of making museum objects and collections relevant and relatable. Increased access to online information has in many ways cultivated a society that is information-hungry in which people will actively seek out information if they come across a gap in their own knowledge. In this search for knowledge, a new form of authoritative voice has emerged; the internet search engine. Yet, even online, museums retain their position as a source of trusted information against which other sources can be tested (Staiff 2014:121), although the museum is less the centre of authority and instead is one source of information amongst many. Alternatively, social media, websites, and other online communication methods have allowed museums to reach and engage both new and existing online audiences in conversations around their work and collections (King et al. 2016:85; Parry 2007:109).

This is not to say that the use of digital is without problems, nor that it's adoption by the museum sector has always resulted in positive outcomes. There are often limitations in the design of digital interpretation, particularly in utilising user-centred design (Liu 2020:2; Rahaman 2018:211). This is a skills gap that the sector has recognised, especially during the COVID-19 pandemic, leading to the development of training courses and information sharing on best practice in terms of digital technology.[25] Another concern is that museums are taking up digital technologies without fully considering how they will add, if they do at all, to the museum experience (Murphy 2018:64). Utilising digital technology effectively is important considering that a significant barrier to developing and using digital media is cost, in terms of both finance and labour. As King, Stark and Cooke (2016:94) comment, many projects that are used as case-studies of good practice in academic literature are simply beyond the reach of most institutions. This is especially true of new or more complex forms of media, such as VR and AR, 3D printing, and videogames. Although museums are becoming more aware of the possibilities offered by the digital, they often remain reactive in their use of new technology, responding more to demand for interactive experiences than leading exploration of what new and emerging media might have to offer (Henning 2007:29). As such, many museums are yet to fully embrace the potential of the digital. This

[25] This is evidenced in the focus of numerous sector conferences (such as the Museum Computer Group conference 'Museums+Tech 2020: Museums in a crisis') and the emergence of new organisations such as The Heritage Digital Academy.

study aims to provide insight into the potential of videogames and, in doing so, address some of the issues raised here, such as lack of knowledge about what different forms of media can offer museums. The outcomes will assist the sector in effectively utilising videogames as interpretative media that meaningfully add to the museum's work and enable them to innovatively engage visitors in the interpretative process.

2.6 Towards the Future of Interpretation: Videogames and Affordances

A recent reconceptualization of interpretation by Kathleen Adams (2018) utilises the idea of affordances. As outlined in the Introduction, the exploration of the affordances of the videogame medium in terms of current practices and understandings of museum interpretation forms a foundation of this research. Considering interpretation from perspective relevant to the developments detailed in this chapter, and that encompasses both a digital and media focus, Adams (2018:290) proposes that interpretative practice can be thought of as an examination and management of affordances. Following Gibson, Adams (2018:300) describes affordances as something that 'denote the possibility of action latent in a given environment or object', in this case, the environment is the contemporary museum. Affordances enable investigation of the relationship between the actual and the possible in a way that is not restricted to, or favours, one particular medium.

Taking an affordance-orientated and user-experience design approach to interpretation, Adams (2018:300,302) argues, positions the museum as an 'interface' between visitors and the museum's collections which facilitates and negotiates interpretative possibilities through different interpretative components and media. With the museum acting as a facilitator, interpretative communication becomes invitational rather than prescriptive and allows the user's 'habitual or improvisational responses' to become part of the interpretative process (Adams 2018:300). As such, approaching interpretative design with an 'affordance' mindset may result in exhibitions which utilise multiple interpretative media with which visitors are free to engage with selectively based upon interest, and within which there is room for visitors to contribute and add to the content based on their own knowledge, experience, or further research (Adams 2018:301-302). Indeed, it is evident that much of Adam's vision for affordance-based interpretation builds upon various aspects of the concept of interpretation as explored in this chapter:

> *'Thus, understanding museum interpretation as the management of "affordances" allows for digital media but does so within a broader context of museum communication and audience appropriation. It takes us beyond the transmission*

> *model of communication in its recognition of the constitutive role played by the visitor in the making of meaning. And, finally, it situates the museum within a broader context of communication in which digital media has become normative and operates in a manner that results in all media influenced by its structures and symbolic forms.'* (Adams 2018:302).

In conclusion, as the museum sector embraces new ways of understanding - of the visitor, of how we learn, of the impact of the digital - the way in which interpretation is viewed, understood, and practised has been and continues to be re-considered. Academic works, perhaps most notably Staiff (2014), have provided useful observations and commentary on how interpretation is theorised in the museum sector specifically, and more broadly in and across other fields. This research recognises the complexity of the concept and of the different theoretical basis upon which perceptions of interpretation are variously founded, and the value each brings to the sector's overall understandings of interpretation. Ideas from cognitive psychology, affect theory, language and learning theories, semiotics, and hermeneutics each add another layer of meaning to how museum interpretation is approached and undertaken. The museum interpretative process is understood in this research as an act or 'encounter' in the construction of meaning (Ham 2013:4), which can be undertaken individually and communally, engaging interpreters cognitively and emotionally, occurring both within and beyond information and language, where understandings are derived, discussed, connected and challenged. In this sense 'interpretation is always ongoing, incomplete and "partial"' (Ablett and Dyer 2009:217). As the implications of an increasingly digital and media-based society become more evident, they have influenced how interpretation is variously analysed and put into practice. Museums have been using and innovating with new media, and particularly digital media, for almost as long as the media formats have been around. However, the establishment of interpretative practices and academic understandings relating to these media remain underdeveloped compared to the foundational and long-standing practices of museum interpretation. This is especially the case where interest in new media develops quickly, such as with videogames. But, as Silverman and O'Neill (2012:200) observe, reliance on traditional 'best practice' is not what is needed in a changing world. Instead, the sector's potential to develop rests on its willingness to experiment with new forms of interpretation, both physical and digital, and in new ways, to reach and engage increasingly diverse audiences.

Therefore, Part Two of this thesis explores in depth three areas of interest relating first to the convergence of museum interpretation in practice and theory, and developments in the

study and design of videogames, and second to the theories and questions raised in this exploration of the evolving understandings of museum interpretation. The aim of Part Two is to critically examine the changing nature of interpretative practice in response to questions such as those surrounding the role of the visitor, and the adoption of emerging and new theories (such as affect theory), through an examination of the academic literature and interpretative techniques being employed in practice. Additionally, Part Two also examines how the field of game studies and the videogame industry are grappling with similar questions and concepts. By comparing the developments in both sectors Part Two will identify and highlight how the affordances of the videogame medium address the changing needs and challenges of contemporary museum interpretative practice. Part Two explores three areas of interpretative practice and videogames in which the intersection and relevance of these questions is particularly evident: the use of narrative and storytelling, the consideration of emotional and affective responses, and the implications of rhetoric.

Part Two

Breaking Down the Intersections

3. Theory, Terminology and their Intersections

To begin examination of the intersection of museum interpretation and videogames, it is important to first establish the key concepts, terminology, definitions and theories that support Chapters Four, Five, and Six. This will enable a more informed discussion and ensure that scholars and practitioners from each field understand the approach to each concept. This chapter also focusses on identifying commonalities and connections in how each field has shaped definitions and understandings of theory. It also provides context and background where the intersections diverge, such as with the inclusion of concepts specific to one field which may be unfamiliar to the other. Therefore, this chapter provides much of the intellectual framework that the following three chapters build upon, and explores the convergence of the sectors through critical comparison of the fields.

3.1 Narrative and Storytelling

3.1.1 Defining Narrative, Storytelling and the role of Cognitive Theory

What do we mean when we say 'narrative' and 'storytelling'? The terms narrative and story have often been used interchangeably (Bedford 2014:57), yet within academic works certain scholars have distinguished between the two terms, and identified their conceptual differences. Although the exact wording of definitions may vary, there is some common agreement on the distinction between narrative and story (Crang 1994; Lowe 2015; Nielsen 2017). Narrative, as understood within museum studies, is generally perceived as a structure or overlying form through which stories are told. Crang (1994:30), drawing on the work of Ricoeur, denotes narrative as the structure within which events in an otherwise chaotic and experiential world have order imposed upon them, so that we might make sense of them. In a similar vein, Nielsen (2017:445) describes narrative as 'a structure' that can be used in various types of engagements, such as emotional, social, imaginative or subjective. In game studies, the situation is more complex and scholars have yet to agree on a common definition of these terms (Koenitz 2018). One of the most common definitions is that narrative is a way of coherently presenting a series of events. Juul (2005:156-157) traces this definition back to the literary and film theories of Bordwell and Chatman. Other writers do, to some extent, ascribe to this definition. Holmes (2012:4) describes narrative as a 'representation of a series of events' suggesting a structural or sense-making role. Ulaş (2014:76) draws on Chatman's concept of narrative as a type of 'text organisation' that is then realised through a medium, stating that narrative is therefore defined as a sequencing that provides structure to a story. It is therefore possible to see that there are areas of

alignment between the fields of study.

Other definitions are more complex. Games scholars Egenfeldt-Nielsen, Smith and Tosca (2008:172) see narrative as 'a succession of events', but that 'narrative' is made up of three elements: story, which they see as the 'chronological order of events'; text, which is the way the events are represented either visually or verbally; and narration, or the 'act of telling or writing'. Narrative could therefore be understood as a culmination or combination of a number of different aspects. This mirrors Bedford's (2014:122) definition from museum studies, which perceives narrative as made up of two parts: the story, or events that happened and are being retold; and narrative discourse, the way in which the story is retold and the medium through which this retelling is done. Thus, if narrative is the organisational context or structure linking a series or sequence of events, storytelling is understood as the things contained within the narrative structure, and how they are conveyed to the audience. Bedford's definition draws out an important point; that narratives imply a story and the form, or medium, through which stories are told. On the whole these definitions are useful though I would add that narrative also, correctly or incorrectly, implies a completable series of events, especially in relation to the narratives of videogames, where players may expect a narrative conclusion. Juul (2005:122,208) raises another terminological issue in relation to our understanding of narrative and fiction, which are often confused. The term fiction is perhaps more relevant for videogames than museums, as imagined fictional worlds are arguably more present and obvious in videogames. Furthermore, Juul proposes that the term fiction is commonly confused with storytelling; fiction refers more broadly to an imagined world or setting, whilst story, as per Bedford, relates to a series of events that are narrated, or retold. Eskelinen (2012:230) notes that storytelling is only one way in which a fictional world might be evoked and therefore the two terms should not be interchangeable. As such, Egenfeldt-Nielsen et al. (2008:174) observe that the confusing of the terms narrative and fiction is often apparent with game designers who, when talking about narrative, are often instead referring to elements of the game which 'prompt the players into imagining fictional worlds' rather than what is academically understood as narrative. Issues like these further highlight why it is important to clarify definitions of terms and why we should be careful in their use.

In museums, stories are often based upon historical information, which has interesting implications as, it has been argued, such stories 'do not just tell a fixed past, but re-create pasts in the process of telling' (Crang 1994:42). As we often cannot know for certain the reality of past events, museums must retell them by extrapolating from – or interpreting - available evidence. Lowe (2015:45) thus explicitly links stories, the act of storytelling, and

the interpretative process, writing that 'stories are the interpretive tales we craft'. Telling stories can also be seen as a form of 'cognitive play', where cognitive acts of recognising patterns and developing new ways of thinking about people and things become connected (Bedford 2014:3). Indeed, cognitive theory can be usefully applied to narrative and storytelling in the sense that the way stories are created, shared, and understood relates to cognitive processes and how people process and comprehend information about the world. The recent constructivist shift in museum studies has encompassed many elements of cognitive theory, especially in relation to the process of meaning-making, and has impacted upon the sector's approach to narrative. Similar conclusions regarding cognitive theory and its role have been reached in game studies. For instance, Backe (2012:245) draws his understanding of narrative from Mieke Bal's work, where narrative is understood more for its capacity as a meaning-making tool and less for its organisational function. That we as people use narrative and storytelling as a way to help us understand and relate to the world is also a fairly commonly understood facet of what narratives do and how they function in society. We rely on narratives, stories and fictions 'to help us understand the world and what it means to be human' (Murray 1997:26), and it is through narratives and storytelling that we gain a feeling of control by imposing patterns and order to make sense of a chaotic world (Bruner 1990:68; Gee 2011:353; Ryan 2007:9). Whilst less of a definition of narrative and storytelling, these theories provide a useful insight into their purpose in society, allowing more informed consideration of the implications of their use in videogames and museum interpretation.

As such, going forward the term narrative is used in the context of a structural and interpretative form linking a series or sequences of events, organising which elements of the story are presented, and in what order. Storytelling, on the other hand, is the act of re-creating or telling past events within these narrative structures.

3.1.2 The Link Between Interpretation, Narrative and Storytelling

That narrative has a role to play in how we understand the world has been recognised (Abbott 2008; Spock 2015:386). In museums, which often aim to share knowledge and build our understanding of the past and present, the use of narrative and story is particularly appropriate for several reasons. First, narratives and stories are a commonly recognised form of communication. Storytelling, Peirce, Gidlow, Schombery and Woodall (2013:197) write, is a human universal which requires no specialist training to comprehend. As a skill, storytelling is learnt by most at a young age, as we use stories to make meaning (Bruner 1990:67-69). Bedford (2001:28), building upon Bruner, notes that as we carry the skill of

storytelling into adulthood, it becomes a 'primary instrument for making meaning'. Furthermore, as discussed in Chapter Two, meaning-making is understood as an interpretative process undertaken in the gap between object, interpretative tools and text, and the visitor. In a cognitive process, the visitor relates the museum's information or narrative to their own knowledge and experience, to develop a personalised meaning. The role of narrative and storytelling in individual meaning-making can also be found in learning theory. As Bedford (2014:62) comments, research has found that adults often undertake a process of 'imaginative restorying' as new experiences add another layer of meaning to their internal narrative about the world. The insinuation is that museum visitors have the ability to construct a personal interpretation, and thus the capacity to engage with museum narrative and stories in this manner. Indeed, Nielsen (2017:445-446) notes that visitors create stories which combine their experience with the museum narrative, and, Nielsen argues that 'the more museums interact with visitors, the more detailed and complex their stories become'. Schorch (2015:452) similarly found that a process of storytelling was being undertaken by visitors, arguing that through narrative meaning-making both museum and visitor are able to 'exert interpretive agency and become mutually entangled through narrative engagements'. As such, narrative and storytelling have the potential to be a powerful tool for museum interpretation.

There are other aspects of narrative and storytelling theory which align well with museum interpretation. There is the representative ability of storytelling, that when we take a story about an event and fit it into a wider narrative structure, be it a museum narrative or our own, it can come to represent larger concepts and ideas (Bedford 2001:29). Bedford (2001) using the example of her visit to an exhibition on the Holocaust, explains that encounters with the stories of people who rescued Holocaust victims and the choices they made became, for her, part of a broader personal narrative on the significance of everyday choices. A further interesting aspect of narrative is its link to ideas of memory and nostalgia. Abbott (2008:3) notes that narrative has often been linked with our capacity for memory, as the development of memory and narrative abilities occur in children at around the same time - leading some to 'propose that memory itself is dependent on the capacity for narrative'. The relationship between narrative and memory is further explored by Kidd (2012:75) who, comments that when we articulate memory, 'we render those memories narrative'. Museums themselves can be seen as places that construct institutional, social, and collective memory through narrative choices they make about their collections and interpretation (Devine 2014; Heumann Gurian 1999), an idea that will be explored further in Chapter Six. Equally, the sharing of memories through storytelling can enable visitors to build a collective memory, placing the burden of memory not upon one person, but upon a broader

group. Yet, this sharing can also lead to conflict and debate if a contribution contradicts the experience and story of another, or the narrative the museum wants to construct (Kidd 2012:75). This is not necessarily a bad thing, as Kidd also points out, and it draws parallels with the way we construct understanding in museums both individually and socially. It is such contradictions and debates that invite marginalised and often unheard voices to tell their stories, allowing 'official' narratives to be questioned and a more comprehensive and inclusive interpretation to be developed.

A final conceptual understanding that is significant for this study is the idea that narrative *is* interpretation. Bruner (1986:11), a cognitive psychologist, identified two schools of thought; a logico-scientific mode and a narrative mode, the latter of which he describes as subjective and interpretative in nature. This suggests that there is a fundamental link between interpretation and narrative. Indeed, in museum studies Schorch is particularly explicit regarding this connection, quoting Bruner's assertion that meaning-making through narrative *is* interpretation and additionally commenting that 'we act to make meaning, or interpret, through narrative' (Schorch 2015:442). Within the wider literature there have been different ways of viewing this idea of narrative as interpretation. Jimson (2015:538) describes interpretation as the creative translation of meaning, and narrative structures as enabling meaning-making, arguing that narratives are therefore 'always present, even if the exhibition does not have an explicit storyline'. For constructivist thinker Hooper-Greenhill (2000:114), narrative as interpretation relates to meaning-making in the sense that narratives are constructed by the person undertaking the process of interpretation, and may or may not align with the museum's narrative. In a similar vein, Baker, Istvandity and Nowak (2016:370-377) and by extension Bal, upon whose work they draw, view narrative as an ongoing process of the production of meaning which emerges from the visitor's interpretative journey through exhibitions; supported by their findings that museum exhibition designers often emphasise the provision of opportunities for visitors to consider their individual interpretations and stories. The other point of view is that the museum narrative is itself a form of interpretation, which builds upon the definitions previously discussed. Bedford (2014:57) links narrative and story directly with interpretation as a process, arguing that 'story actually doesn't exist without an interpretative, a narrative discourse about it'. Taking this perspective, the way we choose to present a story is in itself an interpretation of that which we are telling the story about. Thus, interpretation cannot happen without narrative and narrative is a fundamental part of how interpretation takes place. Though we must be careful to remember that whilst the two concepts are linked, they are not interchangeable.

3.1.3 Transmedia Storytelling

Theories of transmedia storytelling are also useful to consider in relation to museums and videogames. As mentioned in Chapter Two, transmedia storytelling as a concept is often attributed to Henry Jenkins. Jenkins (2007) describes transmedia storytelling as a process where 'integral elements of a fiction get dispersed systematically across multiple delivery channels for the purpose of creating a unified and coordinated entertainment experience', where each part stands as a story on its own, but also adds to a larger narrative (see also Kidd 2013:23; McErlean 2018). As such, in transmedia storytelling instead of adapting a single story to multiple forms of media, each medium approaches narrative differently, enabling media producers to use each form to its fullest storytelling potential (Jenkins 2008:98). With stories spread across many platforms and media, these narratives provide multiple 'points of entry' where audiences may choose to engage with the broader storyworld through the media that they are most comfortable with (Jenkins 2007). By taking a transmedia approach, then, institutions can potentially reach new audiences by engaging them through a familiar media format such as, for instance, videogames. Transmedia storytelling also reflects a broader shift in culture around how media is produced and distributed. Jenkins (2008) describes this shift as the development of convergence culture, where ideas flow across mediums. Yet, this type of storytelling also requires action on the part of the audience. As Kidd (2013:23) notes, transmedia storytelling implies that there is a 'user' involved in calling forth and constructing the broader narrative from its various parts. This has interesting implications for how certain museum narratives and interpretative techniques might be read as transmedia.

Kidd (2013:23,29) argues that transmedia approaches may be particularly suited to museums, as the transmedia method of presenting narratives in fragmented, connected parts reflects how museum narratives are often 'multiple, incongruous, and overlapping, far from ready-made, complete or perfect'. Considering interpretation more broadly, Peirce et al. (2013:198-199) suggest that the inclusion of different perspectives and ideas across interpretative media allows better exploration of the fragmented past, through which visitors might be encouraged to find gaps in knowledge and act as critical interrogators. Indeed, many museums are already using transmedia methods, though they may not recognise it as such, in exhibitions where narrative information is spread across different media such as object labels, gallery guides, audio tours etc., which use different storytelling approaches (Kidd 2013:27; Mateos-Rusillo and Gifreu-Castells 2018:302,310). This echoes Weibel and Latour's (2007:94) depiction of museum exhibitions as assemblages, places that bring together different elements. In current interpretative practice, transmedia

storytelling is also relevant in that it requires participation on the part of the visitor to engage with and connect different story elements, and focuses on the 'communication experience', frequently drawing on 'emotion... universal themes, personal connection and relevance' (Rutledge 2011; Kidd 2013:23). As such, a number of parallels between transmedia storytelling and contemporary interpretative practices become clear. Discussion of transmedia storytelling is also found in game studies where videogames are recognised as a medium through which transmedia stories can be told and, due to the affordances of the medium such as active player involvement, be told effectively (Eskelinen 2012:237; Mukherjee 2015:7; Zalot 2018:291). It is therefore important to keep the concept of transmedia storytelling in mind as both museums and videogames can, and have, implemented elements of the approach. It is also important to remember that museum videogames are only one medium through which fragments of a larger museum narrative might be encountered. Finally, as Jenkins suggests and this thesis argues, museums must learn how to make the most of each individual medium – such as videogames - to ensure they are effectively utilising its interpretative potential.

3.1.4 The Complex History of Narrative in Game Studies

Turning to game studies, it is important to acknowledge the history of the field and its impact on approaches to researching videogame narratives and storytelling. The predominant ludology vs. narratology 'debate' has been relayed and discussed a great many times in game studies, so I will not delve into too much detail here beyond establishing the basic arguments involved, summarising its resolution(s), and providing a little of my own perspective as a scholar for whom discussion of narratives and stories in videogames is relevant to my research.

At its most simple level the debate, and I use the term 'debate' with caution here, arose out of a period where the field of study was beginning to become established. During this time disagreement over the definition of narrative and the extent to which narrative theory and concepts should be applied to videogames was voiced by a small number of scholars. Carlquist (2002:17) writing at the height of the debate, recorded that the disagreement was regarding the compatibility of gameplay conventions and storytelling. However, others summarise the debate rather differently. Egenfeldt-Nielsen et al. (2008:195) claim that there was no inherent opposition to literary approaches examining games, but rather that the self-styled ludologists felt that on an ontological level, games should not be studied through theories derived from narrative studies. At face value this assertion makes sense, and indeed such studies have made useful contributions towards the legitimisation of the

academic study of videogames and of the distinct properties of the medium. The issue arises out of the either/or attitude that ludologists apparently developed towards narrative and games. Egenfeldt-Nielsen et al. (2008:195-197) go on to comment that the ludologist position was often read, either correctly or incorrectly, as a complete disregard for narrative, which led literary theorists to criticise ludologists for reducing stories to adornments or additions. Yet these same scholars who criticised the analysis of narrative in games were often examining aspects of game narrative themselves. Vossen (2018:227-228) therefore suggests that the issue was less with the use of narrative theory, and more to do with who was doing it and from what field. It is certainly interesting to re-read Eskelinen and Aarseth's essays in *First Person* in light of this observation. Eskelinen (2004:36,40-42) calls literary scholars 'would-be-colonizers' and yet, later in the article, analyses time in games using narrative theories. Equally, Aarseth (2004:45,51) opens his article on narrativity and games with the assertion that 'one side argues that computer games are media for telling stories, while the opposing side claims that stories and games are different structures that are in effect doing opposite things', then goes on to describe adventure games as 'story-game hybrids'.

On the other hand, narratologists (and it is worth acknowledging that this label was rarely applied by these theorists to themselves) such as Murray and Ryan, originally argued that videogames had value as a narrative form, had the capacity to tell stories and tell them differently, and could be analysed using narrative theory. For example, Murray (1997:142) stated that games can be read as a 'kind of abstract storytelling that resembles the world of common experience but compresses it in order to heighten interest'. Ryan (2007:13) similarly accepted that certain games were entirely abstract, but that games which invited the player to take part in make-believe and role-playing were a form of narrative. In such cases videogame goals were made desirable not through rules, but rather through narrative context (Ryan 2007:13). What is important to recognise here is that those who were seen as 'narratologists' were not suggesting that games could *only* be analysed through narrative or literary theory, merely that it was one possible way to examine videogames. To further confuse the debate, it often seemed as though both 'sides' were misinterpreting the other. Indeed, Jenkins (2006:119-121) wrote a list of points upon which both sides might agree, which included the assertion that not all games needed stories but that they could have story elements, and that videogames as a medium would tell stories differently to other mediums. Eskelinen (2012:215) also commented that all the major ludologists agreed that narrative and story elements may be included in games the problem, he suggested, was that narratologists did not seem to understand the ludologist position.

Since the height of the ludology vs. narratology debate, the arguments have been resolved for the most part. Egenfeldt-Nielsen et al. (2008:195) comment that most ludologists have since reiterated that stories are not unimportant, merely that they are not what makes games distinctive. As such, most modern game scholars exploring narrative and storytelling position games as a distinct medium for the characteristics that set them apart, namely their procedural and rule-based nature. The other consideration that has arisen in more recent explorations is the idea that the wider relationship between narrative and medium has been misunderstood. As touched upon in our exploration of definitions narrative is not confined to a single medium, meaning that it cannot be argued that narrative *is* a videogame any more than a book *is* narrative, or a film *is* narrative (Wesp 2014, see also Ryan 2007:13). In retrospect, this appears to be less a debate and more an attempt to define what was considered acceptable under the banner of 'game studies' as the field asserted itself. Different perspectives and ways of approaching elements of games, such as literary analysis, were dismissed, simply because they made 'connections between games and other cultural forms' (Murray 2005). Yet, videogames do not exist in a vacuum and as game studies has matured, these perspectives have found their way back in.

3.1.5 The Relationship Between Gameplay, Game Rules and Narrative

One issue that arose during early attempts to explore narrative in videogames was the apparent incompatibility between the concepts of narrative and gameplay. Indeed, Crawford (2005:51) saw the idea of plot and interactivity as incompatible as there was an inherent clash between free will and determinism. Picucci (2014:101) also noted that 'undertaking an academic study on video games as storytelling platforms depends on how flexible or narrow a narrative definition one is willing to embrace', as some of the more restrictive definitions conflicted with basic game rules and mechanics. Whilst there are undoubtedly some elements of videogames and narratives which initially appear to be in conflict, recent academic work has moved away from a binary position arguing that, in general, the concepts are not fundamentally opposed.

Juul (2005:163), for example, came to the conclusion that rules and narratives could complement each other, as fictional narratives in games could be used to help players understand the game by providing context for goals, objectives and rules. The player's navigation of game rules and goals is often made both logical and acceptable through narrative framing (Carlquist 2002:10). Backe (2012:253) takes this idea further by arguing that the 'ludic structure of setting a challenge and achieving a goal correlates to a narrative cardinal function', in this case by providing a 'resolution'. Game and narrative are therefore

compatible as they both utilise elements such as characters, places, and events, and also in terms of their structures and how they connect these elements in order to build understanding of the whole (Backe 2012:244). Furthermore, recognising that as technology has improved more complex storytelling methods have emerged in videogames, some have reconsidered the position of narrative. Mukherjee (2015) writes that, in story-based games, the computer often modifies elements in response to the changing narrative that the player is building. For these games there are three elements at work: the game engine, the story engine, and the player, which feed into each other with none more important than another. Story, game, and rules therefore become intrinsically linked. Interestingly, Mukherjee theorises videogames as assemblages, in the manner of Derrida and Deleuze, built of many elements that are flexible, interchangeable and have multiple functions with the game structure (Mukherjee 2015:8-10,13). We must be careful, however, of painting all games with the same brush, as different genres will use, or not use, narrative and story in ways that make applying this sort of framework to games as a whole very difficult. As Ulaş (2014:86) notes, it is always possible to add narrative to, or remove story elements from, a videogame, but if you treat the game rules and gameplay in a similar fashion you will end up with something that is not a game. To summarise the key takeaways from game studies, then, videogames themselves are a unique medium, but they are one through which narratives can be expressed and stories told. Depending on the specific game, the story may be expressed through various elements, such as game mechanics, rules, goals, aesthetic elements, worldbuilding and incorporated narrative storylines. As each game is different, it is difficult to talk about videogames in a general sense, and therefore the focus of Chapters Four, Five and Six will be to explore characteristics that reflect museum interpretative practice in relation to particular games and game genres, in order to identify the potential affordances of videogames as a whole.

3.2 Emotion and Affect

3.2.1 Terminology: Defining Emotion and Affect

As with narrative and storytelling, it would be worth defining what is meant by the terms 'affect' and 'emotion'. When we hear the terms 'emotional' and 'affective' we may think that they refer to the same thing. However, in academia the concepts are more complex than they appear. Within museum studies the nature of these concepts has often proved difficult to define, and Munro (2015:45) is correct to note they have sometimes been used interchangeably. It is commonly acknowledged that there are links between emotion and affect as concepts. Mulcahy and Witcomb (2018:214) remark that the terms are mutually

implicated, 'each term shapes and informs [the other] and leads to forms of thinking'. Similarly, game studies scholars have also negotiated varying definitions of affect and emotion within academic literature, leading to the identification of emotion and affect as distinct, if linked, concepts (Nacke and Lindley 2010:5). Despite this interrelation there are understood to be differences between the concepts and it is important to recognise these nuances. For instance, the understandings of affect and emotion within game studies have been drawn from a wide range of fields including: film and media studies (Calleja et al. 2016; Frome 2006; Perron 2005); the work of philosopher and social theorist, Brian Massumi (Nørgård 2016; Veale 2015); and the field of psychology (Anable 2018). From this disparity of sources, a number of common understandings have emerged.

In terms of the difference between the concepts Jagoda (2018:202), a key scholar of this area in game studies, summarises emotion as 'subjective and personal content that can be fixed via psychological categories', whilst affect is 'an experience of intensity that is nonconscious and relational'. Nørgård (2016:96) and Veale (2015:3) both draw on Massumi's writings, seeing emotion as a contextual and cognitive label for affective experiences, which, in turn, are continuous, situational processes. Several authors within museum studies have also drawn their understandings of emotion and affect from the work of Massumi (Baker 2015; Gregory and Witcomb 2007; Waterton 2014). In the foreword to *A Thousand Plateaus: Capitalism and Schizophrenia* (Deleuze et al. 1987), affect is described by Massumi as the 'passage from one experiential state of the body to another', which reflects the ability of the body to affect and be affected. Massumi traces the distinction between affect and emotion back to another philosopher, Spinoza. Spinoza's work emphasises the different natures of affect and emotion, with affect relating primarily to the body, an autonomic reaction, and emotion viewed as a subjective fixing of an experience into a socio-linguistic form by equating said experience with such terms as 'sadness' and 'joy' (Massumi 1995:88-89). As such, through this process of translation emotion becomes a personal experience, whilst affective responses are open to being shared and are more difficult to predict or control. Museum studies scholars Wetherell, Smith and Campbell (2018:1) similarly describe affect as relating to the 'embodied state and the initial registering of events in bodies and minds', whilst emotion 'refers to the processing and packaging of affect in familiar cultural categories'. Munro (2015:45) further concludes that emotion relates primarily to a mental process, whilst affect involves the body. Thus, studies of affect in museum studies tend to explore sensorial and embodied engagements (Blackman 2016; Witcomb 2013). The potential of affect to be shared is also further emphasised in museum studies. Waterton (2014:827), and Mulcahy and Witcomb (2018:226), discuss affect as 'not confined to the individual body or people', and as 'closely

intertwined with social norms and shared meanings' respectively. The social implications of affect as sharable and transferable experiences are relevant to consider in terms of museums where visitors often attend in groups. Finally, Crouch (2015:181) highlights another important point regarding emotion and affect in museums, noting that affect can occur not only in or between people, but also in things, or objects. These ideas have implications for considering how we connect to and effectively interpret museum objects, which will be further examined in Chapter Five.

Moving forward, affect and emotion, whilst related, are understood as distinct from each other. Affect is bodily. It is our initial, bodily experience, a pre-cognitive response that can be shared. Emotion relates at least in part to the mind and mental processes. It is the individual and personal recognition of affective experiences which, by translating affect into a cognitive framework of emotion, prompts action.

3.2.2 An Exploration of Emotion, Affect and Cognitive Theory

As established, emotion is linked to mental processes, translating affective experiences into a personal, subjective, and socially defined label. In museum studies, the link between emotion and cognition has been touched upon by a number of authors. Smith and Campbell (2016:448) explore the balance between emotion and cognitive rationality in the process of reasoning, acknowledging the 'importance of emotions to cognition'. Taking this a step further, Watson (2015:384) argues that thinking and feeling, and therefore emotion and cognition, are intertwined, with emotion influencing how we think and reason. Yet, as Wetherell et al. (2018:1) note, the application of theory relating to emotion within museum studies is still in its early stages. Within game studies, understandings of cognitive theory are particularly well developed with the emergence of subsets of theory that explicitly explore the relationship between cognition and emotion (Isbister and Bianchi-Berthouze 2016:235; Järvinen 2008:85; Schrier 2016:39). One subset is the concept of the appraisal process, which has influenced the views of several scholars (Frome 2006; Järvinen 2008; Perron 2005, 2016). In this theory ongoing cognitive evaluations – or appraisals - of an individual's situation are understood as forming a part of how we make sense of everyday life. This is not dissimilar to the understanding of meaning-making within museum interpretation. These situational appraisals are compared to our individual goals and plans, and from this an emotional response arises that differs depending on how each individual appraises, and applies meaning to, a particular situation (Perron 2005:4-5). These emotions may be complex, depending on the subject matter and personal experiences, and as such Perron (2005:4-5) lists several different appraisal structures that an individual might draw

upon in order to understand: how both positive and negative emotions might arise in relation to situations; unexpected emotions such as surprise; and the impact of personal desires and concerns on evoking responses such as joy or disgust.[26] The emotional responses that result from this appraisal process influence the resulting actions we take (Perron 2005:4-5), indicating that we have an active role in both recognising and acting upon these responses. Appraisal theory therefore enables examination of how emotional responses to a situation differ between people, but also how an individual's response to the same situation could change over time – for instance as a result of a change in goals and desires, or to the appraisal structures used. These ideas have interesting implications for museum interpretation as a process that might lead people to respond differently to an object, or individually make new meanings, as a result of an emotional response.

Furthermore, studies of emotional responses to art and fiction in comparison to real-life situations also impact upon understandings of emotional responses to both videogames and museums. Questions about whether videogames are capable of provoking genuine emotional and affective responses have received scrutiny, particularly regarding representations of violence and their effect (Anable 2018), but also in relation to the study of videogame emotions more broadly.[27] Cognitive theorists in game studies have used various methods to explore how people respond to fictional events, causing some debate in the field. Frome's (2006) summary is especially useful here. He argues that two key theories: 'illusory theory', which suggests there we must in some way believe that the fictional situation is real to respond emotionally, and 'pretend theory', in which both the fictional situation and emotional responses to it are seen as non-real; are both flawed as they rely on the central premise that 'real emotions can only be generated by beliefs' (Frome 2006:13). Frome instead draws upon Carroll's thought theory, which posits that emotional responses can arise just from the thought of a situation. He acknowledges that there are issues with it, as the thought of winning the lottery does not evoke the joy really winning the lottery would, and instead uses Carroll's theory to suggest that emotional responses to representational media – in this case videogames - are genuine, and occur through a system of multi-level appraisal where 'different mental systems evaluate [the situation or representation] in different ways' (Frome 2006:14-15). This 'hybrid illusion theory', as Frome (2006:17) describes it, could also be applied to objects and interpretative media in museums which

[26] For a comprehensive overview of appraisal theory and appraisal structures see Perron (2005), particularly pages 4-5.

[27] There are ongoing discussions regarding videogames and violence. A recent study explores how videogames change children's perception of guns (Betuel 2019).

are often used to represent a broader 'real thing' such as societies and cultures, providing a new perspective on how people connect past and present. In this, Tan's writing from a humanities perspective is also relevant. Tan (2004:123) argues that there are different types of emotional response: 'a-emotions', or artifact emotions, arise from an appraisal of the artwork *as* an artwork (for instance, this is a well-executed painting), whilst 'r-emotions' arise from the themes and content of the artwork (for instance, the subject makes me sad). In terms of museum interpretation, this theory highlights the possible complexity and multi-layered nature of people's cognitive and emotional responses to museum objects.

There are numerous wider connections between elements of cognitive theories and the emotional and affective characteristics of the videogame medium. First, videogames rely upon active participation of players as without the player the game cannot progress. Once a player interacts with a videogame they become engaged in a process of situational appraisal and responsive action (Jagoda 2018:223; Nacke et al. 2016:106). Building on these understandings, videogames as a medium have rich potential for the prompting of emotional and affective responses as, through active participation, the player has engaged in cognitive processes and thus the possibility of response on an emotional level. Another key element of videogames is player choice and agency (Isbister 2016:2). Choice and agency imply that players may have differing responses depending on how they appraise their choices and whether the outcomes align or clash with personal goals. Many videogames also incorporate fictional worlds, storylines, and characters to provide narrative context for the player's goals and actions. As such, Frome's framework of multi-level appraisal can be applied, allowing emotional responses to the game's narrative, characters, settings, and representations to be recognised as legitimate, genuine emotional responses. Videogames are also increasingly being considered and accepted as works of art.[28] We must therefore consider that players may have affective and emotional responses in line with the concept of artifact emotions, arising from their appraisal of a videogame as a work of art. Finally, videogames as a medium are goal-orientated. In most cases, these goals are set by the game designers and, consequently, there are in-game obstacles to overcome in order to achieve these goals. In certain games, such as sandbox games *The Sims* (Maxis 2000) and *Minecraft* (Mojang 2011), it is instead the player that sets goals based on the game's mechanical affordances and what individual players want to achieve. Goals are also an important element of the cognitive appraisal process, influencing decision-making and action. Thus, the 'higher in the (subjective player's) hierarchy a goal is the more emotion is attached to it'

[28] This is another ongoing discussion. The decision by the MoMA to collect videogames prompted considerable debate (Antonelli 2013).

(Calleja 2011:30). Videogame designers commonly aim to invest players in their game's goals by building strong emotional or affective ties, making it more likely that the game will maintain a player's interest. Yet, as Järvinen (2008:86) notes, it is not just the game goal itself that has potential to evoke emotion, but also the journey the player takes in order to achieve that goal. Videogame elements including game design, narrative elements, and game mechanics, can all create potential opportunities for emotional engagement. An interpretative museum videogame could therefore offer many avenues for evoking and exploring emotional responses.

3.2.3 The Relationship Between Cognition, Emotion and Affect

As cognitive theory has generally focussed more on emotion, what about affect? Considered until recently an underdeveloped area of study (Baker 2015:64; Golding 2013:82; Smith and Campbell 2016:444), affect has seen a growth in attention in museum studies following a wider 'affective turn' in the humanities (Lemmings and Brooks 2014). As a result, many writers have explored the links between affect, emotion, cognition, and what they mean for understandings of meaning-making and interpretative processes. Until very recently there was also little work that focused explicitly and solely on affect in game studies (Anable 2018). Theories of affect may have taken longer to become integrated into game studies because videogames themselves are perhaps less explicitly and obviously suited to affect than they are emotion. It has also been acknowledged that affect is difficult to pin down as a distinct concept (Waterton 2014:827). This does not mean that affect has not been examined in game studies and the possibilities for embodied, affective responses to videogames are becoming clearer as technology develops. Consoles such as the Nintendo Wii and Nintendo Switch include motion controls, allowing for the physical enactment of virtual movements. Equally, VR games build immersive environments that are navigated using physical movement. Such technologies provide plentiful opportunities to consider affect in relation to videogames. There is also scope to study affect in videogames that do not explicitly utilise motion, as physical interactions with game controls can take a number of forms, and game controllers increasingly provide physical, haptic feedback such as vibrations. Furthermore, as we shall see, changing understandings of how videogames are played and interacted with has also opened new avenues for exploration.

A key work on affect in game studies is Anable's *Playing with Feelings: Videogames and Affect* (2018). The understanding of affect theory in this book draws upon the work of psychologist Silvan Tomkins, who argues that affect is related to how we experience our environment in a bodily manner, that these responses are simple and discrete, and therefore commonly

shared and easily communicated (Anable 2018). This certainly has some similarities with museum studies, where affect is theorised as a bodily experience that can be communicated between people (Crouch 2015:181; Waterton 2014:827-828). Yet, importantly, Anable (2018:18-19) highlights how Tomkins relates affect to cognition by exploring the translation of sensory information to an 'emotional texture', indicating that the systems are mutually dependent and that affect cannot be truly separated from cognition (see also Shinkle 2005:3). Light and Watson (2016:160), in museums studies, have also commented on the dualism between affect and cognition. Our experience of affect, therefore, is not just a biological reaction, but something that can be influenced by cognitive structures and through communication and connectedness with others. These ideas have been explored further in museum studies. Schorch, Waterton and Watson (2016:95) discuss the difficulties of attempting to separate research into meaning-making and affect, expressing their desire for a 'theory of affect that encompasses the subject and subjective responses expressed inseparably as emotion, cognition and the construction of meaning'.

Explorations into this relationship further draw out the connection between affect, meaning-making and interpretation. Although attempts to isolate affect as a concept have provided valuable contributions to our understanding of what affect is and how it works, it is perhaps best understood in the context of a larger process. Waterton (2014:828) argues that 'a visitor's capacity to be affected by heritage is qualified by the experiences inevitably and already encoded in their person, as well as their responses to its already circulating representations' (see also Smith and Campbell 2016:445). Much as with interpretation, affective responses are dependent upon a person's personal context. As a result, affective responses will differ, and how, or indeed if, they are shared will depend on the individual (Waterton 2014:829). This echoes Blackman's (2016) personal observations regarding her experience of the subjectivity of affect. Her study found that affective responses to museum exhibitions differed between visitors and that her own responses were 'entangled with [Blackman's personal] experience of the suggestive potential of the objects' (Blackman 2016:46). Watson (2015:284) similarly notes that emotional and cognitive forms of thought can occur simultaneously to the extent that thinking and feeling become intertwined. In terms of museum interpretation and meaning-making, there is a growing recognition that it is a process of both 'body and mind' and that affect can add to existing cognitivist and constructivist understandings (Mulcahy and Witcomb 2018:217). Having established connections between affect, emotion, cognition and the meaning-making process, returning to Smith and Campbell (2016:448) it is important to consider these ideas in balance. To ignore the cognitive is to risk over-looking a part of the affect-emotion process and vice-versa. As museums continue to examine the impact of affect and emotion within the sector,

we must keep in mind not only the role that affect and emotion have in the creation of meaning, but also the role of the cognitive, rationality and thought, so as to ensure that all elements are considered in the design of interpretation.

Returning briefly to game studies, Anable (2018:120) also draws out the often-overlooked relation between affect and aesthetics of sensation and feeling. If affective possibilities of videogames can arise from factors that 'exceed both representation and mechanics', aesthetics can be used as a method of 'identifying an affective relationship that is created between and across the games' images, sounds, mechanics, hardware, algorithms, and players' (Anable 2018:122). Seen this way, affect encompasses a vast array of interactions between the different parts that make up the game and, vitally, the ways they interact with the player. Aesthetic strategies are also used in museums in order to evoke affect. Witcomb (2013, 2015) explores how physical, spatial and sensory elements of exhibitions can create spaces that encourage exploration and reflection upon affective responses. Indeed, for museums the aesthetic power of objects is often the primary manner in which visitors connect and interpret, as explored further in Chapter Five. Finally, Shinkle (2005:6) comments on how theories of affect may lead scholars to rethink boundaries between the body, technology, and the environment. This observation is particularly poignant for this research in light of the videogame industry becoming increasingly interested in exploring the potential of movement and bodily response, and museum interpretative practice embracing new multi-media and embodied, experiential experiences.

3.3 Rhetoric

3.3.1 Terminology: Rhetoric, Procedural

Before delving into the concept of procedural rhetoric itself, it is worth establishing a common ground for understandings of 'procedural' and 'rhetoric'. This is especially the case considering that these concepts may be either unfamiliar to those in museum studies, or known to have been utilised in different ways depending on the context or chosen definition of the term. Turning first to rhetoric. Rhetoric as a concept has been explored in both game studies and museum studies. Working in game studies, Bogost (2007:2-3,125) identifies two common understandings of rhetoric: the classical model, which involved a persuasive form or aim; and the contemporary model, which relates more to expression and the ability to convey ideas effectively, though he tends more to using the classical understanding of rhetoric in his work. Lafrenz Samuels's (2015:11-12) work on rhetoric in museums also draws upon this classical understanding, set out by Aristotle as 'the faculty of observing in

a given case the available means of persuasion'. However, Lafrenz Samuels (2015:11-12) reads this less as an argument for rhetoric specifically as persuasion, and rather that rhetoric is a broader form of reasoning - or logos - which works alongside pathos, or appeals to emotion, and ethos, building trust in the character of the speaker. Therefore, it could be argued that persuasive rhetoric is most effective when used alongside other elements of argument-making and comprehension. Additionally, Weiser (2017:8) also works from this perspective of persuasion, although she takes it slightly further by arguing that '…rhetoric is the way the world is manipulated around us for the purpose of persuading ourselves and others that something matters and that we should respond to it'. Indeed, the idea that rhetoric implies meaning is built upon by Dickinson, Blair and Ott (2010:3) who consider rhetoric to be a set of theoretical stances which 'offer ways of understanding, evaluating, and intervening in a broad range of human activities' (see also Matheson 2015:465,474). Working from a museum perspective, they apply this definition of rhetoric in order to discuss what makes certain objects, discourses, events, and practices meaningful - and by extension, significant. In terms of museums, where establishing the significance and meaning of objects is often at the forefront of museum interpretation, rhetoric arising from the physical presence of the object itself is also at work.

Kenneth Burke is referenced as a key author on rhetoric in both museum studies and game studies. For Bogost (2007:20-21), Burke's perspectives on rhetoric resulted in a new theory that broadened understanding of rhetoric to include the nonverbal, symbolic, and visual. Consequently, this enabled the examination of the capability of these forms of rhetoric to build identification between people and concepts (Daniel-Wariya 2019:395; King 2010). The expansion of rhetoric to symbolic or visual languages is clearly applicable in videogames, which often rely on visual and symbolic cues to indicate how to progress. Yet it can also be seen as of use to museums where material and visual rhetoric is at work both in the objects themselves, and in the way they are displayed and interpreted. Indeed, within museum studies, Weiser (2017:1) also draws upon Burke, highlighting his view of rhetoric as a way to transcend what she sees as the increasing dichotomy of opinion and language on a broad range of topics in a divided world. Through the use of rhetorical language, whether textual, verbal or symbolic, areas of identification with different viewpoints can be discovered. Moreover, King (2010) comments that whilst the successful application of rhetoric may be constrained depending on the context within which it is used, the identification that it encourages with other viewpoints often leads to recognition of the limitations of our understanding, allowing us to make room for other perspectives to enter into our worldview. As such, we return once again to the persuasive power of rhetoric. For the purposes of this study, the classical understanding of rhetoric as a persuasive form of

expression is useful, alongside the recognition that rhetoric exists in both verbal, visual, and symbolic languages as theorised by Burke. Finally, a common theme across the works on rhetoric has been the suggestion that rhetorical languages require or demand a response, for persuasion cannot work without it; be that response identification with another on a common topic, an imbuing or acknowledgement of meaning, or a reconsideration of our own perspective when faced with a persuasive rhetoric of other perspectives.

Second is the term 'procedural'. Procedures are generally understood as the established way to go about doing something. Procedure is therefore assumed to be fixed and authoritarian, with procedures following a predetermined set of instructions (Bogost 2007:3). Procedurality is a way of creating, explaining, or understanding processes, and processes define the way things work. In computer science and game studies, procedure takes on a slightly different meaning. When used in a computing context, a procedure consists of the instructions given to the computer, which the computer executes in order to create content (Fernández-Vara 2019:153). As such, computational procedurality 'places a greater emphasis on the expressive capacity afforded by the rules of execution' or, in other words, the procedure undertaken by the computer invokes an interpretation of the world that is shaped by either the author of the code, or by the way users interact with it (Bogost 2007:5). The flexibility behind the creation of procedure and processes in computer science is what allows procedure to be used effectively for persuasive purposes. It has been recognised that computers, and by extension, digital artifacts, are procedural in nature (Murray 1997:71). Interestingly, as Reid (2010) argues, non-digital artifacts can also be procedural - reading a book is a procedure in itself, a process that requires the reader to follow certain rules of behaviour, but, as Reid acknowledges, these procedures have become regularised and we are less conscious of the choices we make when we interact with this media. This is not the case with videogames, where choice is at the forefront of the medium and players are, perhaps as a result of the emphasis on choice, much more conscious of the procedures and the ways in which they can interact with the game, even if the choices are more limited. Thereby, this makes active and engaged interaction with any rhetorical elements in videogames more likely.

3.3.2 The Theory of Procedural Rhetoric

Procedural rhetoric is a term and concept originating in game studies, first coined by Ian Bogost in his works *Persuasive Games* (2007), and *The Rhetoric of Videogames* (2008). Procedural rhetoric, put simply, is the act of using processes persuasively, by creating process- or rule-based arguments (Bogost 2007; Wardrip-Fruin 2009:218). When

processes have the ability to influence us, they can result in changes in attitudes, based on what they represent and how they choose to represent it (Bogost 2007:340; Ferrara 2012:198). Indeed, as Fernández-Vara (2019:150) notes, 'what is simulated or not, and what is considered positive or negative in the rule set, can also express an ideology', or build an ideological statement. As videogames run on processes or rule sets - instructions given to a computer - this makes them especially good platforms for procedural rhetoric. The other key element of procedural rhetoric in relation to the computing medium is the participatory nature of the platform and how it impacts the ways in which the rhetorical argument is engaged with. Whilst procedural rhetoric is most commonly used in conjunction with narrative and affective elements of game design to build a stronger overall case or argument, it has been found that procedural rhetoric on its own is capable of having a persuasive impact on players (Jacobs et al. 2021). As Ferrara (2012:201) notes, within a procedural medium such as a videogame, 'meaning is communicated through participation'. Certainly, Bogost (2007:2-3) sees procedural rhetoric as a process that involves both the recipient and the creator making and unpacking arguments together through a cycle of feedback and input.

Therefore, procedural rhetoric can be used to teach different perspectives about how things work through participation, in which the recipient 'reads' the processes, interacts and responds to them, and then engages with the feedback of that interaction in a critical manner (Bogost 2007:260). This creates an opportunity for the recipient to explore a particular model of how something works by actively engaging with its behaviours and processes (Wardrip-Fruin 2009:218). Many of these elements of procedural rhetoric can also be found in the checklist that Fernández-Vara (2019) developed in order to understand whether or not a particular computer-based game utilises this rhetorical form. She recommends analysing what the game punishes or rewards, what it includes or excludes, if either of these suggest an ideological stance, and whether the game presents social or ethical issues that will allow the player to easily identify and engage with the game's topic or story (Fernández-Vara 2019:150). Frasca (2007:25) further highlights that the use of procedural rhetoric in videogames is most apparent when the content addresses real-world issues or events about which we already have an ideological bias, as this is where the persuasive elements are most likely to be interacted with in a critical manner. Videogames, therefore, are an especially interesting medium for exploring and utilising rhetoric and persuasion, and how rhetoric can shape understandings and interpretations.

3.4 From Theory to Practice

Across this exploration of theory and terminology in relation to the areas identified in Chapter Two, we have seen that there are in many cases remarkable similarity between the approaches of the different fields of study. Commonalities include which theories and authors museums studies and game studies scholars draw upon to define and understand the related terms and concepts. Equally, where the fields differ, it is often still possible to identify links between how concepts have been variously explored. Not only do these areas of convergence suggest that these fields have considerable potential when explored in parallel, it has also allowed the identification of themes which will be explored further in Chapters Four, Five and Six. These include but are not limited to: the connection and interplay between cognition and affect, where the link between how we interpret and make meaning implicates the negotiation and consideration of both knowledge and feeling; the importance of choice and participation which underlies interpretation and videogames; and the role of critical thinking in the process of building understanding. Moving on, the following three chapters explore narrative and storytelling, emotion and affect, and rhetoric in both museum studies and practice, and game studies and the videogame sector. The chapters take each of these concepts to examine in depth how theory relates to practice, how they are implemented in practice, which techniques are used and their effectiveness, and thus the broader implications for our understanding of museum interpretation, videogames, the visitor/player, and how they interact. Chapters Four, Five and Six will maintain the interdisciplinary approach established in this chapter, bringing together the fields to explore the potential at the intersection, and to identify and highlight the affordances of videogames which correspond to and build upon current museum interpretative practice.

4. Narrative and Storytelling in the Museum and the Videogame

4.1 Narrative and Storytelling in Museums

'Narratives are always present.' (Jimson 2015:538).

Narrative and storytelling techniques are important to museum work and, as established in Chapter Three, museum interpretative practice (Bedford 2001; Tilden 2008). Narratives are used to build coherent exhibition experiences, and stories help visitors interpret objects and their relevance. Academic research has detailed numerous ways in which different narrative and storytelling methods can contribute to the work of the museum sector. As the digital becomes more prominent, our understandings of narrative and storytelling are expanding to explore new media and the possibilities they present. In practice, museums are increasingly experimenting with interactive and digital platforms for storytelling (Copplestone and Dunne 2017; Kidd 2013). Alongside this, developing understandings of interpretation and the role of the visitor have also shaped the ways in which museums approach the construction of narrative and story. This chapter examines changes and adaptations in museum's use of narrative and storytelling in order to identify how videogame affordances might provide new ways to engage visitors with museum narratives, storytelling and interpretation.

4.1.1 Narrative Approaches in Museums: Textual, Visual, Verbal, Spatial

In academia there has been considerable research into the advantages and disadvantages of various narrative forms used in museums. Traditionally, museums have relied primarily upon textual methods, with interpretation provided through written guides, object labels, and information panels. Yet, as new media and technology become popular and accessible museums have recognised their potential for storytelling, reflected in exhibitions which experiment with telling stories through different, and digital, narrative forms, or take a transmedia storytelling approach. Due to this interest in the digital, narrative approaches which privilege visual and verbal storytelling techniques have gained attention. However, Hourston Hanks (2012:21) notes that whilst museums have been experimenting with and implementing an increasing variety of visual and verbal narrative forms such as audio tours and film installations, text-based storytelling has not been used as creatively. The potential of such textual and written narrative forms has perhaps been overlooked in light of the adoption of new media which emphasise the visual and verbal, which is understandable in

a world in which the visual is increasingly predominant, but this is not to say that the use of textual forms has not developed at all. One notable example of an experimental use of a textual narrative form is found at the Museum of Innocence in Istanbul, created by Turkish novelist Orhan Pamuk, which displays objects collected in Istanbul that represent upper-class life in the city from the 1970s to the early 2000s. What is particularly interesting is that the idea for the Museum developed alongside a novel, *The Museum of Innocence* (Pamuk 2008), which uses the objects displayed in the Museum within its narrative telling a fictional story of love across social classes. The novel acts as an interpretative tool, with the display cases in the Museum numbered in relation to the relevant chapter of the novel. Nevertheless, creative explorations of textual forms using techniques such as novels and poetry remain less common in museums. One reason for this, Spock (2015) argues, is that visual forms of storytelling provide a more attractive and compelling experience. Spock (2015:385-386) suggests that museum-goers 'tend to rely on the visual sense of things above all else', resorting to textual displays only if they are unable to complete the process of meaning-making from visual impressions alone; which seems to contradict his earlier finding that whilst visual elements are generally remembered better than the textual, a combination of both is most effective in facilitating interpretation.

Therefore, it is important to consider the possibilities and limitations of different narrative forms, as well as the links between them in terms of how they contribute to visitor engagement and interpretation. For instance, Bedford (2001:96) explores how visual methods can be effective narrative tools using the example of the United States Holocaust Memorial Museum, where visual narratives are used alongside textual interpretation to tell a story of unfathomable scale and terrible human cost. This is achieved through installations such as the *Tower of Faces* [Fig 4.1], a tall, narrow room covered from floor to ceiling with photographs of Holocaust victims and their families. Similarly, whilst Williams (2013:239) recently noted that the use of certain forms of narrative such as film for museum interpretation were relatively rare, this is arguably no longer the case. As access to technology and resources have improved, museum engagement with new media forms of narrative has increased, and have subsequently become the focus of academic studies exploring their various benefits, limitations, and connections with each other (Beale 2011; Dalle Vacche 2012; Kidd 2013; Proctor 2015; Stogner 2011). As Spock (2015:385) comments, narrative in museums tends to be most effective when the story and accompanying information is presented through more than one narrative form working in tandem. This technique can be seen in museums using a transmedia storytelling method, where elements of the narrative are expressed through many different media and narrative forms (Jenkins 2007).

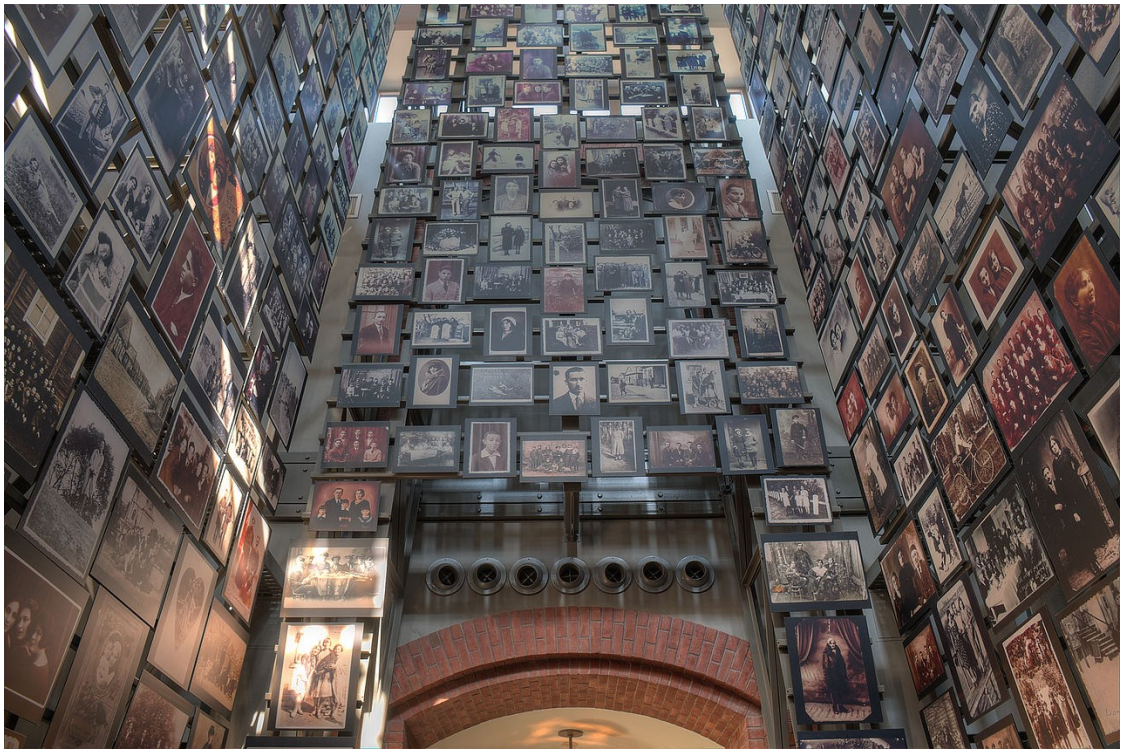

Fig 4.1: The *Tower of Faces* at the U.S. Holocaust Memorial Museum
Image © Dsdugan. Source: Wikimedia Commons. Licensed under: CC0 1.0.

Fig 4.2: Inside the *Opera: Passion, Power and Politics* Exhibition.
Image @ Duncan Grewcock.

The V&A's *Opera: Passion, Power and Politics* exhibition is a good example of a transmedia approach, utilising live performances, written texts, audio recordings, a free online course, and a series of short talks [Fig 4.2].[29] Each media form contribute stories that form part of a wider narrative of opera. This is interesting to consider in terms of videogames, which commonly combine different narrative forms to tell stories. The ability to combine forms, Williams (2013:239) argues, is a sophisticated form of communication, and worth exploring in terms of its interpretative potential. Museum visitors are also becoming more familiar with and adept at interpreting these new media types, Williams (2013:239) comments as, unlike museum labels, visitors will frequently interact with them outside of the museum space.

Another narrative form that is perhaps less considered is the museum space itself. Albano (2007:24), drawing upon the work of Lyotard, notes that physical exhibition spaces are often designed to reflect the exhibition's narrative and interpretative elements, commenting that they should be considered 'three-dimensional narrative[s]', such as with the *Tower of Faces*. The exhibition space, then, can be seen as a self-contained, artificial narrative where temporal and spatial narrative dimensions are at play (Albano 2007:24). Hourston Hanks (2012) further explores this idea by breaking down the architectural and spatial design of a Holocaust Exhibition, where the use of grids was used to emphasise the exhibition's narrative. In the parts of the exhibition which explored the fracturing of normal life in Germany during the pre-war years, the rigid grid design of the space was broken with diagonals and inclines to represent disorder. Then, when the visitor enters the section which covers the Holocaust 'the grid reasserts its authority… the structure is strictly geometric', reflecting the tight and restrictive structure of the Nazi regime (Hourston Hanks 2012:26-27). The impact of exhibition design upon both narrative and interpretation is more broadly relevant when considering museums. Bedford (2014:122) suggests that exhibitions as a narrative form are fairly unique in that they combine a mix of elements not usually found elsewhere, that is, the combination of objects, media, and three-dimensional space. Weibel and Latour (2007:94) make a similar point, noting that museum exhibitions are an 'artificial assemblage of objects, installations, people, and arguments'. Indeed, to return briefly to a discussion from Chapter One, the narrative form most similar to the museum exhibition is arguably the videogame, which often utilises many of these elements to build digital representations. This has interesting implications for how we study the role of each interpretative exhibition element in constructing the overall narrative in a manner

[29] The *Opera: Passion, Power and Politics* exhibition and its various media and stories can be explored at: https://www.vam.ac.uk/exhibitions/opera

that is unique to the sector, and in considering how videogames might be utilised most effectively by museums.

4.1.2 Narrative Approaches in Museums: Linear, Non-Linear, and Multiple

Exhibitions have traditionally been constructed using chronological and/or linear narratives. Described by Mordhorst (2002:1-3) as the 'additive narrative', this type of narrative was seen as a neutral and organised approach in which the influence of both author and visitor was entirely absent. Whilst it is still common for exhibitions to follow a chronological and/or linear narrative as the method does have its merits, the linear approach has been increasingly criticised by museums and academics. For instance, taking a linear approach does not guarantee that visitors will understand or navigate the narrative in the intended manner. Harrasser (2015:377) notes that visitors in museums rarely make what Stuart Hall describes as 'linear' or hegemonic readings, where the interpreter follows and accepts the intended reading of the narrative. Furthermore, as Edwards, Francis and Slack (2007:156) highlight from a study by Serrell, visitors do not always navigate exhibitions in a manner that aligns with a linear narrative, and instead may be guided by their interests, impulses, or the influence of fellow visitors, disrupting their engagement with the intended narrative. As Hetherington (1997) notes, museum spaces and exhibitions can be 'read' in terms of how they are narratively designed, yet these are narratives that visitors cannot fully engage with as they are disrupted by the many possible ways they can be navigated.

The implications of a chronological and/or linear approach to narrative and interpretation reach beyond how visitors engage with them. It has been argued that the use of linear approaches can result in museums creating narratives that have a neat conclusion, as the need for an endpoint is part of the linear narrative form. Yet, as Crang (1994:39) points out, this is problematic in that it suggests that the narrative presented cannot be added to, changed, or challenged. Ellsworth (2005:103-108) therefore argues in favour of museums and exhibitions without narrative closure, on the basis that their incomplete nature provides space for visitors to find different ways to relate to and interpret the story, and ensures that neither the museum nor the visitor has the 'last word'. Fraser and Coulson (2012:227) also note that, by presenting museum narratives as 'complete', we limit the extent to which visitors feel they can contribute to or challenge the dialogue. They also suggest that in linear storytelling typically only one point of view is presented and the museum voice becomes 'unassailable', restricting the interpretative or meaning-making capacity of the visitor. Linear narratives may also, by adhering to a chronological or linear

structure, encourage the view that there is only one correct way to interpret the object or story being presented (Mordhorst 2002:3,14). Therefore, whilst useful in terms of organising objects and stories into a commonly recognised and perhaps more easily navigable structure, linear approaches have a number of limitations. Furthermore, Spock (2015:393) suggests that a linear narrative approach to exhibitions is not beneficial as the spatial elements cannot be translated effectively into linear form, like chapters of a book. Spock instead proposes that exhibitions and interpretation should be organised in a non-linear fashion using sections and subsections which do not necessarily lead on from each other.

In response to these criticisms of linear narratives, museums are experimenting with narratives that are instead structured around ideas, themes, and experiences (Morgan 2013:160). Vergo (1994:151) argues that this type of narrative structure is capable of approaching a single topic or subject from a number of different perspectives. It could therefore be described as comparable to transmedia storytelling, in the sense that the story is presented in fragments, providing numerous entry points that must be actively connected by visitors to construct and interpret the narrative. Witcomb (2015:338) explicitly compares this style of narrative to videogames, in which narrative is often the 'end product', the result of players seeking, probing, and constructing stories in a non-sequential manner. Using the example of a painting, Vergo (1994:151) suggests that rather than providing a single narrative of the artwork's creation, an exhibition could explore many topics such as painting techniques, the subject of the painting, and the artist's background, creating a modular narrative. Exhibitions using this approach could potentially engage a broader range of visitors by providing different narrative perspectives from which the object or topic could be interpreted. Moreover, exploring topics and themes in ways not dictated by chronology or linearity might help promote critical thinking, as visitors are able to consider an object in relation to various narrative meanings, some of which they might not have otherwise considered. Bedford (2014:121) suggests that this may be particularly beneficial as the way that visitors interact with and interpret narratives is changing in the digital age. When searching the internet, ideas and stories are rarely encountered in a completely linear or sequential manner, but are rather revealed by exploring interconnected themes and information. Growing familiarity with this method of narrative construction means that many visitors are developing interpretative skills which emphasise identifying links between topics, ideas and personal experience, placing visitors in a strong position to effectively engage with a non-linear exhibition. As such, Bedford (2014:121) suggests, visitors are becoming more comfortable with and interested in exploring exhibition narratives that better reflect how they interact with information and stories outside of the

museum space. Building upon this idea, Fraser and Coulson (2012:230) argue that open-ended or fragmented stories encourage visitors to 'lean in and pay attention', to fully engage in the interpretative process in a way that linear narratives might not facilitate as well. A move away from linear storytelling, then, can enable museums to explore narrative approaches which might better suit the exhibition as a form, and provide visitors with more opportunities to actively engage with the process of interpretation.

Museums have also begun to incorporate new and previously unheard voices into their narratives, utilising a polyvocal approach in which multiple narrative perspectives are incorporated into the overall narrative structure. A growing recognition that objects themselves are capable of carrying multiple meanings, which can be interpreted from different perspectives, has also contributed to this approach (Hooper-Greenhill 2000:111; Vergo 1994:150). The significance of introducing multiple narrative perspectives is emphasised by Rahaman (2018:209), who argues that the 'perceived value' of an object or story will not be the same for every visitor, a variation that linear narratives may fail to accommodate. By providing different narrative perspectives, it becomes more likely that visitors will be able to find a way to relate the narratives to their own experiences, and simultaneously encounter viewpoints which provoke them to reconsider their views and preconceptions. As well as this, the drive for museums to become more diverse and inclusive has resulted in the emergence of previously unheard stories and hidden histories, such as stories from previously marginalised groups including the LGBTQ+ community and ethnic minorities. This broadening of narrative voices, argues former director of National Museums Liverpool David Fleming (2017), empowers museums to develop into democratic institutions that fully serve the whole public. Indeed, it was upon this philosophy that the Museum of Liverpool developed the Sankofa project, which aims to collect stories and memories from Liverpool's Black communities, who form a significant part of Liverpool's heritage but who have historically been underrepresented in the Museum.[30] Following this, Hansen and Johnson (2013:91) and Mordhorst (2002:11) express that through the inclusion of multiple, and especially contradicting stories, museums can reveal different perspectives on the past rather than 'campaigning for a single point of view', thereby encouraging dialogue and furthering the 'democratisation' of museums. Hansen and Johnson's (2013:86) audience research in Swedish and UK museums found that visitors are increasingly likely to expect multiple voices and perspectives within museum narratives, and to expect that museums will explore more complex narratives such as the 'notion of

[30] The Sankofa project at the National Museums Liverpool can be found at: https://www.liverpoolmuseums.org.uk/collections/sankofa

human values'. This reflects both the ability of non-linear narrative approaches to represent complex objects and topics, and the shift in perspective in the museum sector where museums are increasingly seen as spaces where dialogue can take place. How, then, can museums best develop and tell non-linear narratives which incorporate multiple perspectives and stories? Studies by Chu and Mazalek (2019) and Copplestone and Dunne (2017) exploring interpretation through an interactive digital table and online game respectively, suggest that digital media might be particularly suited for effectively achieving this. Although the potential for these kinds of digital tools, and especially videogames, to provide new approaches to museum narrative and interpretation is only just beginning to be explored.

For example, *Father and Son* (2017) is a mobile game co-produced by the Naples Archaeological Museum and game company TuoMuseo. The game tells an interactive story about the Museum and its collections from several perspectives across different time periods. The player follows the story of Michael, an artist, who is exploring his father's work as an archaeologist following his death. The player is able to jump between the present-day story and the stories of various historical characters relating to objects in the Museum. Each of these stories are told using first-person language and cover different viewpoints, such as a sculptor caught between duty and personal values in a restoration of the Farnese Hercules statue, and a father attempting to flee Pompeii with his family on the eve of the eruption of Mount Vesuvius. The stories provide unique, and perhaps new perspectives for players to consider in regard to the collection of the Naples Archaeological Museum, and art and

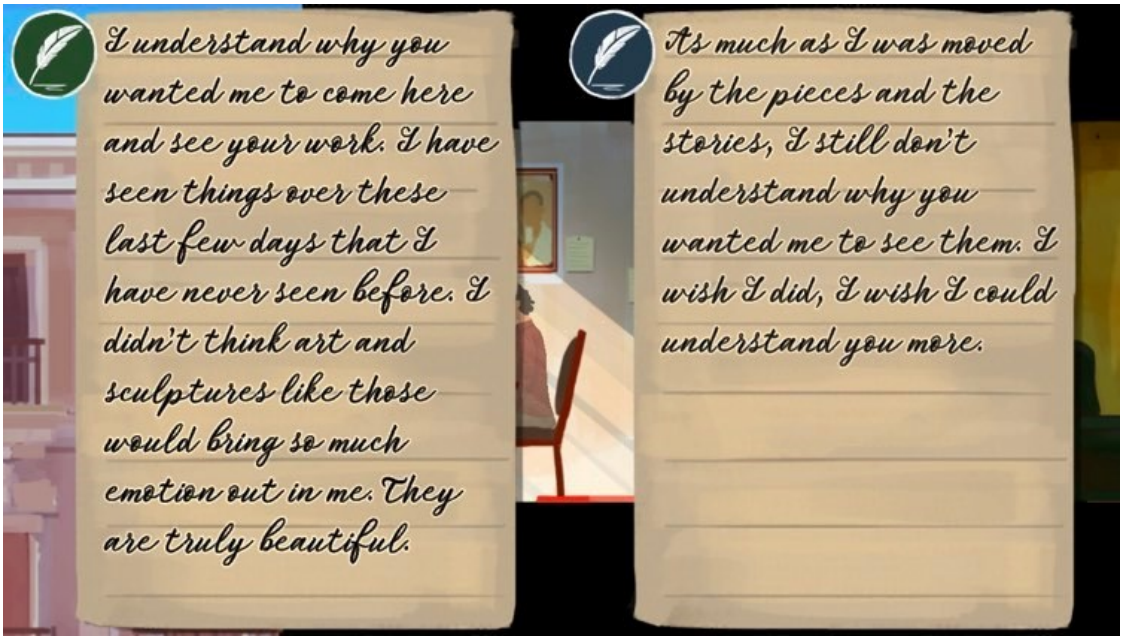

Fig 4.3: Different narrative options in *Father and Son*.
Images © Tuo Museo.

history more broadly. Using themes such as loss, love, legacy and beauty, the game aims to help connect players to objects by revealing the possible stories behind them. The final section of the game asks players to write a letter from Michael to his late father, providing options that enable players to begin articulating their own interpretation of the experience, and of how they personally perceive museums, their collections and objects, and their legacy [Fig 4.3].

4.1.3 First-Person Perspectives: Connecting Visitors with Museum Stories

Whilst the narrative approaches and methods already explored can encourage engagement in interpretation in various ways, helping visitors connect with and relate to narratives can prove difficult. As museums experiment with narrative structures that privilege new voices, they have increasingly recognised the need to move away from the authoritative museum voice (Baker et al. 2016:372). Part of this is the shift away from the third person voice, which is usually anonymous. Instead, museums are beginning to use first-person narration to both lift up new voices, and connect visitors with stories, especially on an emotional level. The links between emotion, empathy and first-person narrative, explored further in Chapter Five, are particularly useful in terms of museum interpretation, as they can connect visitors with the 'other', with that beyond the visitor's personal knowledge and experience (Schorch 2015:448; Watson 2015). First-person perspectives can humanise a narrative, moving the story from an abstract voice to an individual voice, reminding us that such stories are told by and happened to real people. In his study of an exhibition of Aboriginal culture at The Museum of New Zealand Te Papa Tongarewa (hereafter Te Papa Tongarewa), Schorch (2015:441,448) found that when visitors encountered first-person storytelling that formed a 'human-to-human encounter', either through an Aboriginal interpreter in the Museum, or through video recordings of personal testimony, visitors found it easier to relate to and engage with the stories and narratives. As such, first-person narrative approaches are frequently used to tell personal stories (Leow and Ch'ng 2021). For instance, the Museum of Broken Relationships is unusual in the sense that it is crowd-sourced, relying on visitors sharing personal stories of the end of relationships – a topic closely tied to emotional experiences. These submitted stories are nearly always narrated through the individual's first-person perspective. For the Museum, encouraging contributions of first-person accounts aligns with the Museum's goal to act as a place of community where visitors can

remember, share, and relate to the experiences of others.[31]

Hourston Hanks (2012:29) notes how first-person narrative conventions can be adapted to provide a 'bottom-up' effect, setting up a kind of secret relationship between visitor and object which mirrors the way a reader has direct access to 'the intimate thoughts and feelings of the individual [literature] protagonist'. Chu and Mazalek (2019:8-9) further comment that when visitors are able to place themselves into another's shoes, they tend to experience the narrative in a way that promotes empathy. The potential of using first-person narratives to help relate visitors to others through direct access to an individual's story is evidenced in the Empathy Museum's roaming exhibition *A Mile in My Shoes*.[32] In the exhibition, visitors are invited to put on a pair of shoes and an accompanying set of headphones, literally and metaphorically placing themselves in another's shoes as they walk and listen to the voice of the shoe's owner telling their own story. The first-person accounts in the exhibition share intimate details about personal lives. The choice to use headphones, creating a separation and almost secretive environment from the experience of other visitors adds to the construction of personal connection, where visitors are made aware that, at that point in time, they alone are privileged with hearing that story. In this way, a narrative and emotional link is created between visitor and object.

These examples show that there are many ways to incorporate elements of the first-person perspective into museums, and reflect a move from the impersonal to the personal. Yet, as Bedford (2014:105) recognises, the use of the first-person voice in museums is less common than the third person. Bedford (2014:106) contrasts this with a study undertaken by Judy Rand at the USS Constitution Museum, which found that the Museum's visitors preferred exhibition labels written in the first-person by a 'margin of almost two to one', which suggests that museums should perhaps be more open to taking a first-person approach. However, Jimson (2015:542) makes the important addition that when dealing with the first-person 'the identity of the narrator should always be visible and clear' to provide context. I would argue that this move away from the anonymous author should be true of all narrative in museums, regardless of whether it is the voice of a curator, a community group, or an external subject expert, as providing context for the perspective through which the information is presented can aid visitors in making an informed interpretation of the narratives and stories they encounter. This is especially true as authorship of museum

[31] The Museum of Broken Relationships can be explored at: https://brokenships.com/share
[32] *A Mile in My Shoes* at the Empathy Museum can be explored at: https://www.empathymuseum.com/a-mile-in-my-shoes/

narratives becomes more complex and varied.

4.1.4 Authorship and Narrative

An underlying theme throughout this chapter has been the question of authorship in museum narratives, and who has the opportunity, and power, to tell stories in museums. One common aspect to changes in museum approaches towards narrative has been an increased emphasis on community-focused and co-produced storytelling. This is not to diminish the role of museum staff, but rather recognises that their decisions have an impact on the shape and limitations of an exhibition's narrative. It is also to recognise the museum's voices within an exhibition are often hidden ones that are not formally acknowledged as 'authors' of museum narratives. In many ways, of course, the work of museum staff is fundamental to the construction of narrative. For instance, the choice to include or exclude certain objects from an exhibition, and how they are displayed and interpreted, has the potential to change their meaning in the eyes of the visitor. Albano (2007:20) comments that within biographical exhibitions this is particularly relevant, for 'the narrative functions ascribed to objects and their biographical relevance are at stake', as through narrative objects might be inscribed with a specific and restrictive meaning. For example, a pair of glasses linked to a historical figure can become a tool for finding meaning not about the object, but rather the person they relate to (Albano 2007:20). As Peirce et al. (2013:201) comment, 'stories can be persuasive and dangerous' - an idea explored in Chapter Six - and that we must make it clear that museum narratives are open to challenge and debate, not a truth to be 'blindly accepted'. Baker et al. (2016:375) expand upon this point, writing that museums author an object's meaning through the choices made in curation and interpretation. These issues raise questions in regard to the authoritative voice. Fraser and Coulson (2012:223-227) suggest that by becoming more transparent about the process of narrative construction, and making explicit the incomplete and sometimes contradictory nature of museum narratives due to staff choice or a lack of knowledge or evidence, museums can 'construct understanding through dialogue' with visitors. Lowe's (2015) examination of adaptive interpretation at a historic house is a good example of this. The approach to interpreting a hidden passageway emphasised the contradictory narratives around it, with the passageway having been considered at various points in time to be part of the original house, an underground railroad, a priest hole, or a later addition for the entertainment of tourists (Lowe 2015:53). The willingness to be open about the complex nature of narratives can make explicit how museum-authored narratives can adapt, change, or be completely wrong. In taking more collaborative, transparent approaches, institutions

can begin to bring visitors into a position of authorship alongside the museum.

Consequently, there is a perception that the authority of museum authorship can be challenged through various narrative and interpretative approaches. Watson (2013:274) states that in museums 'the viewer is free to disagree with the curatorial interpretation as well as to accept it'. However, I would ask, does the visitor always know this? Even when visitors disagree with the narrative of an exhibition, they might not feel able to openly criticise the museum's narrative authority, which can prove problematic. As Kidd (2014:1) writes of museums that deal with difficult, contentious, or minority histories, by putting forward certain narratives museums ask visitors to 'locate themselves and their communities within (or perhaps in opposition to) politically charged and ideologically loaded displays', and to 'accept the authoritative and legitimised version of the events of their lives'. Therefore, it is important that museums make it clear that their narratives can be challenged. This has previously been achieved by inviting contributions from people outside of the museum who are comfortable challenging the accepted museum narrative.

This was the case with the 1992 *Mining the Museum* intervention by artist Fred Wilson at the Maryland Historical Society in Baltimore. At the time the Museum had a predominately white-focused narrative that mostly overlooked stories of slavery and racism. Through

Fig 4.4: Slave shackles in the metalwork display as part of *Mining the Museum*.
Image © Maryland Center for History and Culture.

Mining the Museum, Wilson 'unsettled the museum's comfortably white, upper-class narrative' by strategically adding objects to displays (Houston 2017). A case on metalwork, which before Wilson's intervention had displayed examples of elegant jugs and cups, now included a pair of slave shackles, bringing those overlooked and uncomfortable stories into stark relief [Fig 4.4]. More recently at the Museum of Archaeology and Anthropology in Cambridge, a group of PhD researchers from different ethnic backgrounds were invited to run a series of guided tours. Entitled *Untold Histories*, they were advertised with the tagline 'we'll tell you what the labels won't'. The tours, as part of the Museum's decolonisation work, were explicitly critical of the established narratives in the Museum; 'objects on display were often collected during periods of conflict…. we wanted to make this explicit by highlighting specific objects and telling their stories' (Mishra et al. 2019). These examples provide insight into how museums and other voices of authority can influence, build upon, and subvert the museum narrative, but this does not capture the full potential of community-focused storytelling.

4.1.5 Visitors as Authors of Narrative and Story

We have already touched upon ideas of collaboration, empowering visitors to become part of the construction of museum narrative, and explored museums, such as the Empathy Museum and the Museum of Broken Relationships, that base exhibitions on visitor stories. Yet, as Kidd (2012:81) states, how an institution 'uses, acknowledges, incorporates, or even challenges an individual's contribution' to the narrative dialogue is important when it comes to ascribing 'value'. Is, for example, a visitor's contribution made visible in the same way that the museum's narrative is? How does the museum display, share, and make these stories available, and does it incorporate them into the broader narrative? Furthermore, as Kidd (2012:81) asks, are these contributions temporary or do they have a life beyond the event or exhibition?

One approach that aims to address these questions is co-production. Detailed by Derby Museums in their *Human Centred Design and Co-production Handbook* (2016), this approach is based on working *with* communities and visitors, rather than *for* them. A method to facilitate this, used by Derby Museums and the National Justice Museum, is the development of co-productive 'Project Labs'. These are spaces designed to enable visitors to contribute thoughts and ideas, and participate actively in exhibition development. Whilst still museum-led, this approach has resulted in exhibitions which include or are built upon visitor narratives, stories, and interests, as evidenced in Derby Museum's blog of the co-productive process behind their exhibition *Notice Nature Feel Joy* (2015) where visitor responses

shaped which themes were explored and which objects were included.[33] In this way, the visitor becomes part of the museum narrative.

Co-productive design can also provide an avenue through which different narratives and stories can emerge whilst an exhibition is ongoing, and even after it has finished. For example, the National Justice Museum's recent exhibitions *Constraint / Restraint* (2020) and *Young People and Protest* (2022) both provided opportunities in the exhibition spaces for visitors to contribute stories as part of an ongoing construction of narrative. In *Young People and Protest* for example, clipboards on the exhibition walls invite visitors to share their thoughts about protest [Fig 4.5]. Equally, in regard to Kidd's concerns about the longevity

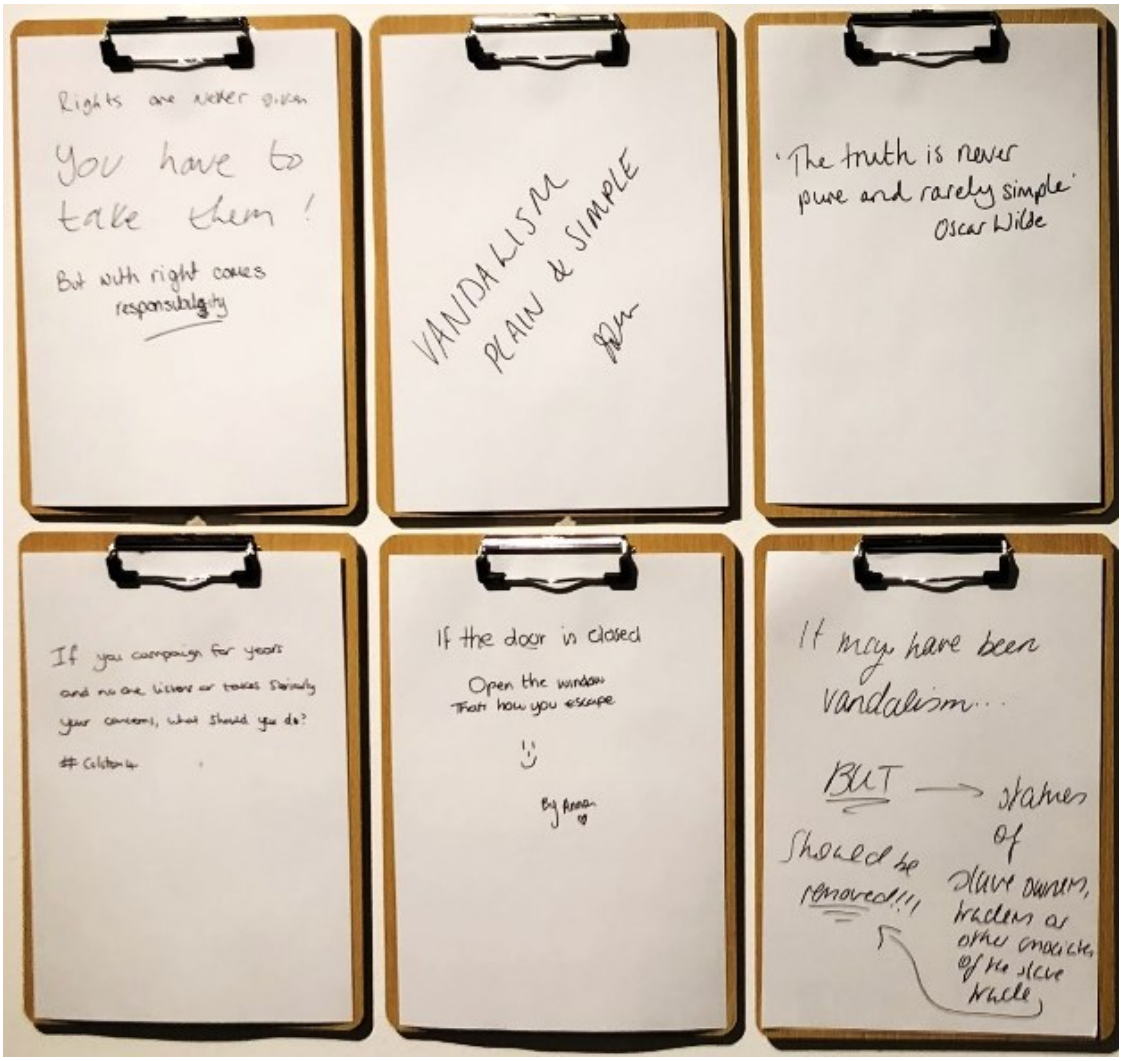

Fig 4.5: Clipboards in the *Young People and Protest* exhibition at the National Justice Museum. Image by the author.

[33] Derby Museum's blog on the co-production process behind *Notice Nature Feel Joy* can be found at: https://dmnature.tumblr.com/page/6

of visitor contributions after the end of an exhibition *Constraint / Restraint*, which originally ran from February to May 2020, remains available online with visitor contributions maintained in the form of the digitised gallery guide. Additionally, the Museum has also subsequently published a number of visitor-contributed responses to COVID-19 lockdowns in a book entitled *Letters of Constraint* (2022), thereby giving the stories shared by visitors a life beyond the exhibition. When the co-productive nature of an exhibition is made explicit and transparent, visitors are able to observe and contribute to exhibition development and engage with the stories of both the museum and other visitors, further demystifying the role of different authors in exhibition narratives, stories, and interpretation (Williams 2013:242-243). As such, museums can equip visitors with a deeper understanding of the processes behind an exhibition, how museum narratives can encompass different perspectives but still be incomplete, the narrative forms through which stories are told, and how the interpretative process is undertaken. Equally, co-production provides a more visible and accessible structure through which visitors can actively participate in building museum narratives.

What, then, of exhibitions that have not taken a co-productive approach during development or which are already open to visitors? Baker et al. (2016:378) highlight the broader potential of a technique which is used in co-production: the provision of places within an exhibition where visitors can contribute their own stories and have their contributions acknowledged and valued. I would suggest that it would be possible to take this further and develop dialogue between museum and visitor by using these spaces as places where the museum can also respond tangibly to visitor contributions. In such a dialogue, narrative authority would, as Baker et al. (2016:378) comment, pass between museum and visitor. This could be achieved in the physical space by using answer cards or other forms of response, or alternatively and as we are increasingly seeing, through an online space. Digital media have the potential to provide platforms for building dialogue, and there are several tools already available that are well suited, such as social media platforms. Yet, the dialogue between the visitor and the museum is only one part of the visitor's engagement with the museum narrative. Just as museums encourage visitors to share their stories with the museum, so too are visitors sharing stories with each other. Nielsen (2017:450-451) notes that storytelling is often a collaborative venture where sharing stories is a natural part of the process. Duncan and McCauley (2012:290-291) also comment that storytelling can work in combination with emotion and affect, as explored fully in Chapter Five, allowing communication 'at a profound level'. Indeed, in many ways, visitors have always shared stories. Museum visits are often undertaken in social groups where visitors will share insights and stories with others in their group. Furthermore, it is

not just within the museum building that such collaborative storytelling is possible. Bedford (2014:121) is right to point out that online spaces provide opportunities not just for debate between museums and visitors, but also between visitors, with the same tools working well for both purposes. For example, the use of commenting tools on social media sites allows visitors to share ideas with both the museum and each other, thereby building layers of narrative meaning. Museums are already in a good position to instigate more collaborative storytelling, and can encourage the sharing and building of stories by putting structures in place that ensure visitors have spaces for and are encouraged to engage in storytelling.

As an example, in 2018 a group of researchers from the IT University of Copenhagen and collaborating institutions presented a paper at the Museums and the Web conference on the development of a mobile game for the National Gallery of Denmark called *Word by Word* (Wray et al. 2018). *Word by Word* is interesting as it embodies many of the elements of narrative and storytelling discussed in this chapter. The app was designed to provide a method through which Museum visitors could collaboratively construct a story with each other and the Museum, presenting their unique interpretations of the artworks on display. In *Word by Word*, visitors are invited to choose a story theme, for which the app provides the first artwork and sentence, after which, the narrative direction is dictated by the visitor, who must find artworks in the Museum that inspire them to continue the story, taking photos and writing sentences to share with their collaborative partners. The ability to continue the story moves between the visitors until a set number of sentences and artworks have been included. Upon completion, visitors can then share their story, along with an emoji representing how they felt about it, to a in-app virtual gallery – the 'Hall of Stories' – or social media, where it can be read by other visitors. In their evaluation of *Word by Word* the researchers commented on how the collaborative storytelling structure enabled by the game, and the combinations of prompts, themes, and artworks, encouraged many visitors to 'look at artworks in a different way, allowing [visitors] to interpret and characterise the subject matter within the paintings…' (Wray et al. 2018). The potential of *Word by Word* to enable visitor interpretation through narrative and storytelling highlights the ability of museum videogames to tell stories with multiple forms of narrative and media, to tell them collaboratively, bringing visitors into the construction of narrative and interpretation as an active participant, and in a way that allows for multiple voices.

4.2 Narrative and Storytelling in Videogames

'What defines a video game story is the player's ability to change it.' (Holmes 2012:1).

There has been growing interest in academia and industry in the capacity of videogames to tell stories. With the technologies that facilitate the creation and design of videogames becoming ever-more sophisticated, the potential of diverse narrative approaches has been explored. Emphasis on examining elements unique to videogames has resulted in numerous academic studies which explore the impact of these properties on narrative design (Egenfeldt-Nielsen et al. 2008; Pearce 2002; Ryan 2007). Equally, the videogame industry's use of materials, such as game manuals, that provide narrative context indicates the significance of narrative to the medium (Lucas 2015:91). This is especially true of many recent videogames where story forms a substantial part of the design, content, and marketing, evidenced in advertisements which focus on narrative and characters over gameplay mechanics and experience.[34] Furthermore, Lebowitz and Klug (2011:273) have found that narrative and storytelling are an important factor in player's decisions to purchase a game, often being rated as more important by players than gameplay mechanics and features. Yet, academic research within game studies has generally approached these topics with caution due, in part, to the debates discussed in Chapter Three (Koenitz 2018:3). As such, this section will focus primarily on different approaches in practice to building narrative and storytelling into videogames, and highlighting elements which set videogames apart from other media, identifying affordances which align with changing and emerging approaches to narrative and storytelling in museum interpretation.

4.2.1 Different Narrative Forms: Linear, Non-Linear and Multiple

Let us begin with one of the distinctive properties of videogames, their digital format, and its implications. Murray's (1997) study of hypertext narratives – narratives in digital form – explores how digital texts are compiled and constructed differently to traditional texts, as they involve elements arising from their digital environment such as procedural, participatory, and spatial capabilities. As such, when it comes to analysing videogame approaches to narrative, a number of different areas of study have emerged. The subject of linearity, non-linearity, and other narrative structures is well established, and there are ongoing discussions and debates about which structures take best advantage of the unique

[34] For some recent examples of story-focused trailers for games see:
Assassin's Creed: Revelations – E3 Trailer Extended Cut (2011), available at: https://www.youtube.com/watch?v=753327AMNIM; The Last of Us – Story Trailer (2012), available at: https://www.youtube.com/watch?v=W01L70IGBgE; God of War – Story Trailer (2018), available at: https://www.youtube.com/watch?v=K0u_kAWLJOA; A Plague Tale: Innocence – Official Story Trailer (2019), available at: https://www.youtube.com/watch?v=H4FOb16Nenk

affordances of videogames. Murray (1997:55-56), for instance, argues that stories written in hypertext often subvert the traditional linear narrative structures as they can 'have more than one entry point, many internal branches, and no clear ending'. Indeed, the digital nature of videogames can predispose them to accommodating multi-linear or non-linear approaches to narrative, with suitability varying depending on narrative and genre. The ability of videogames to explore more complex narrative structures has often been commented upon, as we shall explore momentarily, yet it is important to note that videogames are equally capable of providing a linear narrative experience, indicating the flexibility and potential of the medium. Picucci (2014:105) identifies four primary narrative structures that can be found across the videogame medium which evidence the breadth of possibilities: 'pre-established narrative', a generally linear approach where the overarching narrative is scripted and cannot be influenced by the player; 'discovery narrative', where narrative elements are pre-established but player choice may influence how they are uncovered and interpreted; 'sandbox narrative', wherein narrative is commonly minimal and/or non-linear; and finally 'computer-generated narrative', where there are pre-established story elements but the narrative itself arises out of the way the player interacts with the game – an idea discussed in this chapter in terms of emergent gameplay.

Pre-Established Narratives

Discussions of linear narrative structures in videogames have often proved complex. In game studies, linear approaches are recognised as utilising narrative events predetermined by an author, creating a set chronological progression and narrative endpoint which the player cannot change (Backe 2012:248; Murray 1997:137; Picucci 2014:106). This, scholars have argued, conflicts with the interactive nature of videogames, where the impact of the player upon the construction of the narrative and story must always be considered (Calleja 2013; Egenfeldt-Nielsen et al. 2008:199). A linear approach therefore limits the capacity of videogames to engage players with the narrative, and risks impacting negatively upon the gameplay experience as a whole (Holmes 2012:21; Lizardi 2014). This is not to say that a linear approach is not possible, or that a videogame with linear narrative structures cannot work effectively. Certain genres of videogame in fact tend towards more linear storytelling techniques, such as single-player action-adventure games including the critically-acclaimed *The Last of Us* (2013), *Half-Life 2* (2004) and *A Plague Tale: Innocence* (2019). These videogames have overarching narratives which follow predetermined plots to set endpoints which the player cannot change, although they may be able to influence narrative progression between primary story events. Interestingly, research by Lebowitz and Klug (2011:275) found that players were most interested in videogames which used a primarily

linear narrative structure, whilst stories in which player choice was especially prominent scored fairly low amongst respondents. This suggests that there is a place for linear narrative structures in videogames, and that players have an appetite for both narrative and story generally, and linear narrative approaches.

Lebowitz and Klug (2011:283) also highlight how linear storytelling techniques can enable game designers to create narratives that can be universally experienced, as they have more control over pacing, characters, and plot progression. Carlquist (2002:43) expands upon this idea, arguing that it is through linear stories that designers can explore narrative ideas in a 'psychological depth' that a more non-linear approach wouldn't allow. Gilbert (2019:110) also emphasises this point, commenting that the relative depth of linear narratives results in narrative experiences that are more interesting or impactful for the player. Importantly, taking a linear approach to narrative does not mean that you cannot also take advantage of the affordances of the distinctive elements of videogames - such as interactivity. These distinctive elements, including player interaction and choice, can be incorporated within a linear narrative structure in the spaces between narrative elements, where players navigate from one part of the story to another, and in a way that is perhaps more easily incorporated than in a physical museum exhibition. Furthermore, Ulaş (2014:86) notes that many videogames which initially appear to have non-linear or multi-linear narratives still contain linear structures. In such games, the main narrative is still linear and quests are completed in a set order, whilst non-linear opportunities are found in additional or 'side' quests, which may be completed in any order, or not at all. In this way, the overarching narrative of the game remains linear even if the gameplay experience on the whole is not. For example, *Horizon Zero Dawn* (2017) is a game with a linear main storyline, and the events along this storyline lead on from each other in a specific order. However, the player is free to complete these events in whichever manner they choose, or to undertake side quests from the surrounding game world at any point. This leads to players dipping in and out of the main storyline depending on their interests, but ultimately the order in which that main narrative is approached remains unchanged. Equally, Wolf (2001) argues that linearity does not necessarily work against interactivity, and that player choice can be brought into a linear story. He comments that certain narrative approaches such as branching structures provide opportunities for player choice and for each playthrough to be narratively different, whilst key narrative moments still occur in order and result in a linear outcome (Wolf 2001:109). For the player, the result is still a linear story, but it is one of many possible stories. Indeed, arguably, there is always an element of linearity at play in videogames for, as Crawford (2005:57) comments, the path the player takes in the construction of the narrative creates 'a linear sequences of events – a storyline'

of their progression through the game.

Discovery Narratives

In order to take advantage of the affordances of the medium, many games use a non-linear narrative approach. In fact, Carlquist (2002:34) argues that 'all computer games are multilinear' in the sense that no two players will 'read' a game's narrative in the same way. One approach is narratives that contain elements of linearity but provide players with opportunities to shape the story through the use of 'branching' paths to present multiple narrative possibilities. In a branching narrative, player choices determine which future story elements they encounter and how they play out, allowing active participation in the construction of narrative (Carlquist 2002:43). Egenfeldt-Nielsen et al. (2008:188) note that the capacity of videogame narratives to be 'perpetually unfolding, constantly weaving back… full of false starts and re-starts, as the player contributes to the story's creation with each action' is one of the most remarkable features of the medium. In practice, narrative approaches that contain different possibilities and choices commonly have more than one ending, or different ways that the ending can play out. For example, *Deus Ex: Human Revolution* (2011), like many games with branching narratives, has a small number of possible endings depending on the player's choices. Other videogames, of which *Nier: Automata* (2017) is a good example, have considerably more. Wolf (2001:107) comments that games with numerous narrative outcomes encourage re-playability, with players returning in order to discover how different choices impact the narrative. *Nier: Automata*'s twenty-six possible endings represent the various degrees to which the player can affect the story, with many of the endings only unlocked once the player has already completed the game.[35] As such, players will often invest considerable time into branching narrative games to uncover the interplay between different narrative paths and better understand the full breadth of the story. Building on this, Lucas (2015:95, quoting Finn 2000) suggests that games should therefore aim to 'resist narrative closure'.

Equally, it is important to indicate to players the inclusion of different narrative paths. Lizardi (2014) notes that in *BioShock* (2007) the multiple endings tie narratively to player's choices, with the final monologue of the game explicitly referencing that the way the player treated the 'Little Sister' characters influenced the outcome. As encounters with these characters occur throughout *Bioshock*, to achieve a different outcome the game must be restarted, encouraging players to replay to fully explore its narrative possibilities. In a sense

[35] A guide to *Nier: Automata*'s endings and how they are achieved is available at: https://www.ign.com/wikis/nier-automata/All_Endings

then, the journey of the player through a narrative with many possible paths requires the player to 'assemble a world in pieces into a coherent whole' (Ulaş 2014:83). This reflects how museums taking a non-linear approach to exhibition design often present the narrative in different pieces, involving the visitor in actively constructing a full narrative understanding.

Sandbox Narratives

Completely non-linear narratives within games are still relatively rare. Backe (2012:248) argues that it is nearly impossible to create a truly non-linear game as even non-linear games have, 'a skeletal structure of narrative [which] exists in the form of predetermined key points of the story', to maintain narrative coherence. Thon (2016:15) further notes the potential issues regarding narrative comprehension and a player's ability to understand and interpret non-linear games. Non-linearity in videogames more commonly arises from spaces of player agency, in how players travel between predetermined points, and in choices that determine changes to narrative paths (Backe 2012:248). Yet, utilising the philosophical concept of rhizomes from the writings of Deleuze, which explore the possibility of non-hierarchical entry and exit points, Ulaş (2014) discusses how non-linearity could be incorporated into game narratives. In such non-linear narratives all elements of the game are accessible from the start, removing the need to guide progression through a series of narrative events. 'The beginning and end are not a spatial starting and exit point' but instead points in the story, the 'beginning' becomes the point in the game where the player knows nothing about the game environment and the 'end' where the player has built a story and achieved narrative closure (Ulaş 2014:88). Therefore, a truly non-linear game would be shaped by characters and events which do not form a story by themselves, but which give the player space to enact a 'potentially limitless chain of events' with no inherent coherence beyond that of the player's interpretation of them (Backe 2012:252). *Minecraft* (2011) and similar sandbox-style games are often considered non-linear. They frequently place an emphasis on creativity and exploration, providing players with tools to affect the game world. In these games, players are introduced to the game world and mechanics (the entry point) but are given few, if any, narrative goals or clear endpoints. Players are instead encouraged to use the tools provided to creatively and imaginatively build a narrative of their own. Indeed, many *Minecraft* players have created role-playing (or RPG) servers that bring players together to collaboratively create a story.[36] The absence of a clear linear narrative, then, does not mean that games and their players

[36] The various Minecraft RPG servers can be explored at: https://minecraft.buzz/category/rpg

are not capable of storytelling. As Lucas (2015:92) argues, a nonlinear narrative approach in games 'has great storytelling capacity and potential', in part because the number of story possibilities is, as Backe noted, potentially limitless.

4.2.2 Narrative Forms: Text, Visual, Audio, Spatial

Videogames have been described as 'inter-media' in the sense that they can simulate and combine elements of many other media forms (Thoss and Fuchs 2019). With the exception of sub-genres such as text-based adventure games, videogames are a primarily audio-visual medium with spatial dimensions (Ensslin 2014:26,36; Chang 2011:60). They tend, therefore, to be focused less on language and text when it comes to telling stories, though text remains an important aspect of many games. Instead, narratives in games are often told by using various media elements and fragments to construct stories which coexist within a wider, fictional world – not dissimilar to a transmedia approach but within a single medium. In this sense, players encounter 'explicit narrative content' in different forms within videogames. Videogames are able to employ techniques utilising several different media forms such as moving image and audio as part of gameplay, depending on how different parts of the narrative might be most effectively imparted to the player. These narrative fragments might take the form of artefact descriptions, character dialogue, written diary entries, or audio logs, to provide a few examples, all of which contribute to shaping the game's broader narrative (Domsch 2019:113, Gibbons 2011). Using the example of *Bioshock,* Fernández-Vara explores how the story of Rapture - the underwater fictional setting of the game - is told through 'remains' [Fig 4.6], with graffiti on the wall providing backstory and audio recordings unveiling character motivations (Fernández-Vara 2011). Yet, similar to the museum exhibition, the videogame also has a spatial dimension that must be considered. As Jenkins (2006:121) notes, 'game designers don't simply tell stories: they design worlds and sculpt spaces'. Indeed, Murray (1997:71-83) identified the spatial as one of the features that sets digital environments apart from other forms of media. As such, Jenkins (2006) argues, the concept of environmental storytelling, wherein the design and navigation of spatial elements becomes part of the storytelling method - commonly found in theme parks - can be applied to videogames. In environmental storytelling, the 'narrative shapes the space, and navigating it constructs the narrative sequence' (Fernández-Vara 2011).

Fig 4.6: A wall with graffiti in *Bioshock* – combining visual and textual forms of narrative. This piece of graffiti hints at a major narrative of the game.

Equally interesting is the interconnected nature of different narrative elements in many videogames, such as *Bioshock*. Whilst transmedia storytelling concerns the dissemination of an overarching narrative across different pieces of media (Jenkins 2003), when applied to a single medium – videogames – it is possible to see how stories can be disseminated across different narrative elements. Though the term transmedia may not be appropriate in this case, perhaps 'inter-media' would better suit, attempts to define this type of storytelling in games as environmental storytelling (Domsch 2019; Jenkins 2006), or indexical storytelling (Fernández-Vara 2011), nevertheless deal with elements of the theory, even if they do not explicitly name it. For instance, it is implied that distribution of videogame narratives across different elements means that the player must actively connect and interpret the various narrative pieces in order to understand the whole (Fernández-Vara 2011; Green 2017:52; Ulaş 2014:87). If various narrative elements are spread across the game environment to be discovered this also introduces an element of non-linearity, as it cannot be guaranteed that players will choose to engage with them, engage in the same order, or even find them all (Domsch 2019:113; Holmes 2012:55). As such, Green (2017:40) argues, these various elements 'serve as points of entry… into the story proper'. There is also the use of storyworlds. A storyworld acts as a container for different elements of story, a shared universe in which different characters, objects, events and stories co-exist (Ryan 2015:5). Domsch (2019:113) explicitly uses the term to describe environmental storytelling approaches in videogames, in which many mini-narratives - the elements of narrative spread across the videogame environment - contribute to the construction of both the storyworld itself and to the stories it tells. Therefore, videogames are capable of utilising many different forms of media as part of their narrative construction, spanning the textual, audio, visual, and spatial. As players uncover these different elements, the stories they encounter and the narrative they construct with the game are therefore not pre-determined, and their interpretation of the narrative will be shaped by the way they discover and connect mini-narratives.

4.2.3 Avatars and Actors: Connecting Players with the Narrative

Before we consider the potential impact of the player on videogame narratives, it is worth exploring the concept of the player-character and its implications in connecting players to stories. Characters are a main device for player agency, making consideration of player/character interaction important in understanding narratives in videogames (Schröter 2016:32; Green 2017:38). There is also always an aspect of the first-person at work, in the sense that the player controls and acts through an avatar or character, either

visible or invisible (Chu and Mazalek 2019:8, quoting Ryan). In our exploration of museums, we explored how a first-person perspective can help visitors connect with the 'other'. In videogames this is taken a step further as players are asked, to some extent, to *embody* the 'other'. As Bogost (2011:18) states, one of the unique properties of videogames is their ability to put us in someone else's shoes. The story of the 'other' and the player become intertwined. Unlike other forms of media such as film, what happens in a videogame happens on some level to the player, we are at the 'centre of the action' (Kidd 2013:103, quoting Rose 2011). Indeed, as Giddings and Kennedy's (2008) experience of playing *Lego Star Wars* (2005) shows, when we discuss what happens to a character or avatar in a videogame, we often talk about it in the first-person. This was something 'I' did, it happened to 'me'.

Many studies have drawn upon theories of identification or projection to talk about the complex and variable connection between players and characters/avatars. In this, as in many things, it is difficult to talk about the videogame medium as a whole, as the approach each game takes differs greatly and has varying implications for how players engage and connect with the story (Papale 2014). For instance, *The Elder Scrolls V: Skyrim* (2011) allows players to design the physical appearance of their avatar - the character they play as. Maxwell Pringle (2015:3) notes that, when given the opportunity, players will often put considerable effort into creating an avatar that is a representation of themselves, evidencing the link between player and player-character. Indeed, many games are designed with player-characters that are less clearly defined to provide space for different players to inhabit them. This, Pearce (2002:117) argues, allows 'the player to project his or her own character' onto the character/avatar. On the other hand, *The Last of Us* (2013) asks players to connect to the story through clearly defined and fully realised characters. Poole (2002:85) argues that pre-constructed characters potentially inhibit the ability of the player to project themselves into the role. This is especially true when the motivations and morals of the player do not align with the character, requiring the player to negotiate the space between themselves and the character. As such, players may attempt, successfully or unsuccessfully, to ascribe their meanings and interpretations of the story and characters onto the game (Sicart 2013:12). Giddings and Kennedy make a useful point, that the link between the player and character is influenced not just through the embodiment of a role, but also in how the player's actions are translated into the game, and the broader interactions between the game and the player (Giddings and Kennedy 2008:25-26). Returning to our example of *The Last of Us*, the final section of the game often caused a sense of dissonance, as the character of Joel makes narrative choices that players did not necessarily agree with, and the game did not allow players to take action to prevent or

change the narrative outcome. As game reviewer and commentator Scott Clarke (2013) notes 'Joel's decisions and goals no longer aligned with [his] own', making obvious the disconnect between player and character, 'you may be playing as Joel but you are not Joel'. Yet, if players are able to 'shift their self-perceptions to [align with] avatar characters' they can also create 'strong bonds of identification and shared values' (Hart 2017, quoting Klimmt). This is where separating the concepts of identification and projection can become useful. Identification, Papale (2014:4) argues, requires players to 'assimilate and adopt' the traits of the characters, whilst projection enables players to project their own personality and values into the avatar. It is therefore possible for players, by embodying a character role through identification or projection, to form a deeper and more personal connection with the story. Furthermore, these different types of player/character interaction have implications beyond the connection with narrative, influencing other videogame affordances such as emotional engagement and the potential for empathy, which will be explored in detail in Chapter Five.

4.2.4 Authorship: The Relationship Between Videogame, Player and Narrative

Throughout our study the interactive nature of videogames and the impact of the player upon videogame narratives has been touched upon, but not fully explored. Green (2017:36) comments that a defining feature of videogame narratives is 'that they must be played'. Without the player, the videogame narrative cannot be realised. Whilst a film at a cinema will not stop playing if its viewers get up and walk out, and a book's contents remain the same upon each reading, the videogame's interactivity means that the player becomes an integral element of telling and progressing the story. Holmes (2012:1) writes that 'what defines a videogame story is the player's ability to change it'. Similarly, Gee (2007:84) argues that meanings in videogames 'are always actively assembled (or changed) by the player in an act of mutual creation'. Within videogames, the narrative is always to a greater or lesser extent influenced and shaped by the player's actions. Game narratives thus operate on two levels: the elements of narrative within the game which are authored by the game's developers, and the ways in which the player acts out and interprets those elements (Calleja 2013). The story in videogames is thus found at the 'interplay between the code and its users' (Carlquist 2002:10, quoting Rouse 2001). In many ways, when we play videogames we are actively engaging in a form of interpretation. Returning to Egenfeldt-Nielsen et al. (2008:188), the interaction between game and player can be seen as one of the 'remarkable features' of narration within the medium, where videogames stories are 'perpetually unfolding', depending on how the player interacts with and takes action in the game. In

other words, players are actively involved in a process of interpretation, in revealing and constructing the narrative and making meaning. Salen and Zimmerman (2003:82) describe this act as the 'space of possibility', the spaces between the game design and the player where possible actions and meaning emerge through play. Sicart, with phrasing remarkably reminiscent of Fraser and Coulson in regard to museum interpretation, states that 'there is a player, a system, and a gap between the player and system where interpretation takes place' (Sicart 2013:36; Fraser and Coulson 2012:223). There are clear parallels here with museum interpretation, and in particular the idea that there is a 'gap' between elements where the process of interpretation takes place.

Furthermore, as Thon (2016:16) notes, the representation of events in videogame narratives is not predetermined in the way it is in other media. Unlike a film or a book, the narrative of a videogame changes each time it is replayed, even within the experience of a single player. Mukherjee summarises this concept using Barthes's terminology. For him, a game narrative is scriptable (or writerly) allowing for more reconfigurations and for multiple readings, rather than 'lisible' (readerly), which is more designed for single readings (Mukherjee 2015:106). Whilst narrative events within videogames can be authored and static 'the reader's progression through the text is not' (Backe 2012:248). Acknowledgements of the ludic properties of videogames and their effect on storytelling highlights how videogame narratives are unique compared to other media. Indeed, the ways in which players internalise and interpret narrative information is an important aspect of how narratives, both generally and in terms of videogames specifically, are constructed. There is a concept in literary theory used by many game scholars, that the meaning of any given text is not so much incorporated into the text itself as it is into the way the text is negotiated and interpreted (Fish 1980, see also Juul 2005:193). Studies of hermeneutics attempt to determine the dominant aspects in a text that privilege certain interpretations. However, in terms of videogames, Kucklich (2006:91) found that hermeneutic interaction emerges from play as each individual player interprets the signs within the game to create meaning. The idea that the reader plays a part in understanding the meaning of the text also draws upon 'reader-response' in literary theory in which, as Murray (1997:110) explains, the reader is seen as an active rather than passive audience. The meaning of a videogame narrative, therefore, will be interpreted differently by each person depending on their 'experiences, memories, and cultural vocabulary' and will result in a different 'reading' of the narrative with each playthrough (Ulaş 2014:78, see also Egenfeldt-Nielsen et al. 2008:172; Thon 2016:21). As such, there are clear connections between the way players interpret videogame narratives and the way visitors engage with narratives in museums as in both cases the player/visitor is seen as the author of meanings that they have derived

from the narrative and stories they have encountered. This further suggests that videogames may be particularly suited for museum interpretation.

Beyond the interpretation of narrative, the player has another important role. In videogames where elements of multilinearity are at play the player, in 'reading' the narrative, also becomes an active author in its construction. Linking back to the idea of videogame narratives being presented in fragments, Backe (2012:248) sees players as agents of narrative cohesion, creating a logic that links seemingly disparate parts of the text together (see also Egenfeldt-Nielsen et al. 2008:187). Moreover, Pearce (2002:116) argues that a player's involvement in connecting pieces of a narrative, as opposed to having it all laid out for them, is something that results in a sense of achievement when they are then able to predict future consequences or narrative twists based on the story knowledge that they have been able to construct. This filling in of narrative gaps was theorised by Marie Laure-Ryan as the principle of minimal departure. Ryan (1991) understands the process of reading a videogame narrative as an imaginative one, in which the reader fills in the gaps of the narrative by relating them to the closest possible real-life experience. This concept also relates to understandings in theory of the purpose of narrative as a way of making sense of the world. Adhering to this idea that the player will try to fill in gaps in videogame narratives resolves the issue of incoherent worlds that Juul highlighted. Interestingly, Thon (2016:19) comments that players will not just fill in gaps but will outright ignore elements of narrative that do not make sense in the overall story world they are constructing in order to maintain coherence, suggesting that players are aware of their role in building narrative. Yet, as Murray (1997:74) has noted, videogames are responsive to the player, providing feedback based on player's actions. Mukherjee (2015) takes this concept of feedback and applies it to the way game narratives are read. He concludes that whilst players 'read' the text of the game, the game simultaneously 'reads' and responds to the player's actions (Mukherjee 2015:48). Thus, the reading of narrative is undertaken differently in videogames because of the interactive and procedural nature of the medium, and in the sense that the reading goes both ways.

Discussion of the role of the player in the progression of games and narratives brings us back to the question of authorship. If the narrative cannot progress without the player taking action, and many scholars see game narrative as arising from this interaction, then where does the balance of videogame authorship lie? Carlquist (2002:18) suggests that, ultimately, the writer or game designer is still primarily the author of the narrative, as the player is only able to build upon the story as pre-envisioned by the designers. This argument, however, is not as compelling for non-linear games where narrative is minimal.

Instead, Poole (2004:57) highlights that authorship in videogames, as digital programs, is defined more by how they limit or restrict possible actions. Ultimately, the player can only take actions that the game allows, and the only way to circumvent this is to change the code or to take advantage of glitches. However, returning to Carlquist's point that the narrative options available to the player have usually been scripted into the game, as previously discussed this does not mean that the player cannot also have authorship through interpretation and construction.

This is also where the concept of emergent gameplay becomes useful. Emergent gameplay is understood as the ways in which players interact with games that fall outside of the interaction expected by the game's designers (Salen and Zimmerman 2003). Even within games that follow linear narrative traditions, it is possible that the player might contribute to the narrative in unexpected ways by exploiting the affordances of the tools available to them. In this sense, the assertion by Egenfeldt-Nielsen et al. (2008:182) that the player is only 'solving' a pre-created story rather than actively 'creating' it can be challenged, as players often act outside of the bounds of the expected. Another critique comes from the assumption that the only narrative that arises from gameplay is the one that the game designers have written. The individuality and impact of the player, making every play through unique, is often forgotten (Zalot 2018:301). For Wolf (2001:109), the narrative experience that comes from playing a game is not one that arises from the in-game goals, obstacles, choices and rules provided to the player, but from the 'player's own passage through the narrative maze of branching storylines and events'. The process that leads the player to make certain choices, building upon their understanding of the characters and narrative, and their internal moral and conscious decision making, means that for each player the narrative they construct through navigating the game will be unique. It is this, Wolf (2001:107) argues, that is one of the main contributors to the re-playability of videogames, the narrative outcome is capable of changing based on how the player approaches it, resulting in a unique experience. As such, both the player and the videogame engage in narrative construction together and, to varying extents, the player becomes a co-author of the different layers of narrative experience in videogames.

4.3 Conclusions: Narrative and Storytelling Affordances

In summary, this chapter has explored how narrative and storytelling have been employed in practice in various ways by museums and videogames, and it has further identified the role of narrative and storytelling in the interpretative process, as well as how museum approaches to telling stories are changing in response to new voices and ideas. The potential

of different narrative forms has been examined, in terms of both how narratives are structured, as well as the forms through which stories are told. As museums increasingly move away from linear, chronological narrative structures in order to provide space for multiple perspectives, approaches which take a non-linear or multivocal approach are becoming more common - enabling visitors to become more active in the construction and interpretation of museum narratives as they navigate the many different possible stories around an object or topic. Equally, museums have also engaged and experimented with different narrative forms, such as visual, audio, and spatial methods of storytelling, reducing the traditional emphasis on textural forms such as object labels and information panels as the medium for providing narrative interpretation. The use of first-person storytelling in particular has been highlighted, acknowledging that museums often find it difficult to engage and connect visitors with the stories they tell, especially when they are stories that tackle ideas and situations which fall outside of the visitor's frame of reference. Therefore, the capacity of a first-person storytelling approach to help visitors relate with the 'other' has been discussed, along with the potential issues with the approach that invite caution from museums, such as the need to provide context and clear identification of authorship to ensure potential bias is understood and made clear. Indeed, as a result of these approaches the balance of authorship and narrative power has been considered, with the development of approaches such as the co-productive method bringing visitors more fully into the interpretative process, providing spaces for visitors to act as voices of authority in the construction of narratives and interpretations around objects and topics.

Videogames are unique as a medium through which narratives can be told, and this chapter has identified how the affordances of the medium in terms of narrative and storytelling approaches reflect many of the recent changes in museum practice. We have seen how videogames are capable of telling linear, non-linear, and multi-linear stories, as well as how, even in the most linear videogame narratives, the player is always implicated in the progression and construction of the narrative. Furthermore, as a multimedia medium, videogames frequently utilise a variety of different narrative forms in the telling of their stories, including textual, visual, audio and spatial elements – indeed, the spatial dimensions of videogames are often identified as one of the foundations of the medium. The potential for videogames to tell multiple stories has also been examined, both through the use of narrative structures such as branching narratives, and through the use of scattered narrative elements, which, depending on how players engage with them, can result in new interpretations of the story emerging with each playthrough. The role of the player is especially important in terms of videogame narratives and stories, with the way players are asked to embody a character or avatar that can, in many cases, represent the 'other',

requiring players to engage with different narrative perspectives. Finally, in the exploration of the relationship between the player, the videogame's authors and developers, and narrative, we have also seen how players are always active participants in building a cohesive narrative whole by piecing together the different narrative elements of videogames. In a mirror of museum co-productive practice, the authorship of videogame narratives is thus to some extent shared with, constructed with, or even subverted by, the player.

Having discussed the concepts of narrative and storytelling, Chapter Five builds upon these ideas to explore how emotion and affect are utilised in museum interpretation and videogames.

5. Emotion and Affect in the Museum and the Videogame

5.1 Emotion and Affect in Museum Interpretation

'To provoke an emotional response is not soft or weak. It is what it is to be human.' (Uzzell 1989:46).

As established in Chapter Three, recently there has been a significant turn towards the study of affect and emotion within museum studies. In part, this can be attributed to a wider shift in the humanities and social sciences, with Lemmings and Brooks (2014:3) commenting on the development of 'a range of concepts and frameworks broadly related to the study of human emotions'. Yet, it has been noted that museum studies have been slower to take part in this broader turn than other fields of study, in spite of recognition of the important role of emotion within the sector (Golding 2013; Waterton 2014; Wetherell et al. 2018). As a result, whilst there are new voices emerging as interest increases, this area of research has been led primarily by a small group of writers. Cameron (2003:16) suggests the hesitancy in embracing the study of emotion and affect is due to an ongoing fear of controversy within the museums sector, and the preoccupation with the common perception of museums as trustworthy institutions for learning and information, which tends to 'demand a separation of emotion from a topic in order to engage rational thinking'. Equally, the emphasis that studies of emotion and affect place upon experiential, non-textual, and non-visual forms of meaning-making, such as the study of the spatial and embodied experiences, can challenge traditional exhibition practices and our understanding of how visitors engage with museums (Blackman 2016; Munro 2015). However, as explored in Chapter Two, understandings of museum interpretation and visitor roles have developed and changed to the point that contemporary understandings often align with many ideas discussed in the study of affect and emotion. As such, the study of emotion and affect is an area that is continuing to grow in both academic research and practice. In this chapter, we will explore research into emotion and affect in different aspects of museum studies and museum practice, before examining how game studies and videogame affordances complement or provide avenues for further exploration around these emerging ideas.

5.1.1 The Affective and Emotional Power of the Museum Object

Within the museum sector there are two primary cultural resources around which the field operates: objects and spaces. In museums, objects form the basis of collections, exhibitions,

interpretation, stories and narratives, and visitor interaction. Yet, objects also have emotional and affective potential. Objects, Hooper-Greenhill (2000:109-111) argues in her exploration of visual culture in museums, 'have the capacity to carry meanings', to symbolise ideas and help people connect to personal experiences of the past and present, and as such have an emotional power. Research into the capacity of museum objects to tell their own stories has acknowledged that objects carry symbolic and semantic meanings that go beyond language, and that objects themselves have the ability to 'articulate pasts, identities, [and] events' (Tolia-Kelly et al. 2016:3, see also Maroević 2013:24). However, the ability of museum objects to engage at an emotional and affective level is frequently restricted by the frameworks within which they are placed. By positioning objects within interpretative narratives, Baker (2015:64) argues, we limit the agency of the object to represent alternative meanings, and diminish its ability to affect visitors that interact with objects in ways beyond the rational and anticipated.

This tension is clearly articulated in Cruickshanks's examination of the *Pompeii Live* event at the British Museum in 2013. Drawing upon the work of Kirschenblatt-Gimblett, Cruickshanks (2017:446) describes objects as 'actors' and the Museum label and interpretation as their 'scripts', suggesting that the Museum holds a level of control over the object's ability to speak. Interactions become ones of certainty that the object 'is', as opposed to there being space for the object to become 'this, and…' in response to diverse encounters (Tolia-Kelly et al. 2016:4). Therefore, if we wish to further facilitate engagement with objects that encompass affective and emotional dimensions, we must create space for objects to tell stories beyond the limitations of the museum's frameworks. Perhaps, as Howard (2003:244) commented, reducing museum-authored interpretation might be a way to encourage such encounters as visitors are then more explicitly positioned as interpreters. In this way, visitors are provoked to fulfil the role of the 'critical museum visitor' as described by Lindauer (2006:204), visitors who critically question, debate, and challenge the objects and interpretation presented. The rise of techniques that enable more visitor participation in interpretation, as previously discussed, may be an additional indication that museums are recognising the ability of objects to hold multiple meanings, and that emotion and affect have a role to play in the development of these various meanings. Indeed, Blackman (2016:47) comments on the emotional suggestibility of objects, noting that often museums do not know which objects are suggestive for different visitors, nor how they are suggestive, until they are interacted with in a manner that results in emotional transformation or response. Consequently, if museums do not provide openings for objects to be variously imagined and interacted with by visitors at this level, and exhibit their transformative capacity, then they are likely diminishing the ability of

objects to evoke affective and emotional responses. This potential emotional and affective power of objects adds another layer to considerations of how to design effective interpretation, and once again raises questions around interpretative authorship and authority.

It is also important to consider that museum objects are, by their very nature, perceived differently to other objects. When we take an object and place it in a museum environment it becomes privileged. As Maroević (2013:25) argues, the moment we place an object in a museum it 'becomes a document of [the] reality from which it was selected'. In other words, it comes to represent something. Understood like this, the importance of enabling objects to express meaning(s) only becomes more paramount, because they have something to say about the world and our relationship with it. The elevation of the object in the museum does, however, have its problems. For one, many visitors have a pre-conceived view that the museum object is interacted with in certain ways, which do not typically extend to senses such as touch (Dudley 2010:9). When we encounter a museum object, we may wish to discern its meaning and significance, often by learning about it and its place as part of a broader narrative, an interaction that does not necessarily involve emotional or affective engagement. Yet the connection between objects, how they are represented through interpretation, and emotion and affect, has been the subject of academic study (Gregory and Witcomb 2007:263; Smith 2015:477). Visitor behaviours are also changing in ways that challenge these preconceived methods of engagement. As Staiff (2014:15) recalls of his own experience as a museum visitor, what he felt mattered was not the museum's interpretation but 'the "purity" of the moment... the feeling of exaltation'. Following this, a particularly interesting avenue for the exploration of the potential emotional and affective power of objects lies in the idea of the 'everyday' (Yarker 2016:237). When an object that is considered mundane is raised to museum status, it can have incredible affective power to change people's perceptions of that object.

This is evidenced by a study of the Museum of Everyday Life in Glover, Vermont. Levine (2015:369) notes how the Museum employs the notion of affect in relation to everyday things by bringing humble objects, such as a toothbrush or a matchstick [Fig 5.1], into focus. Through the careful and thoughtful presentation of everyday objects, the Museum creates an evocative environment in which perceptions of, and emotional and affective attachments to, these items are challenged. The objects break out of traditional narratives, and tell various stories of the different ways they have been used, revealing the complex and layered relationships we have with them. Interestingly, the Museum also draws heavily upon different sensory elements as a method through which to encourage visitors to engage,

Fig 5.1: A matchstick roller coaster at the Museum of Everyday Life.
Image © Val D'Aquila Source: Flickr. Licenced under CC BY-NC-SA 2.0.

often playfully, with the affective potential of the objects on display. Unusually, at the Museum of Everyday Life everything is graspable and visitors are frequently encouraged to hold, wear, and move objects (Levine 2015:380). Indeed, the emotional and affective elements of interpretation are present throughout the Museum experience, such as in a survey that explicitly asked visitors to consider and translate their affective responses to the displays with the provocation 'The Exhibit made me feel…' (Levine 2015:381). As such, through the use of diverse narratives, emotional and affective language and provocations, and sensorial experience, the Museum of Everyday Life empowers its visitors to connect with and interpret its objects through an emotional and affective lens.

5.1.2 Space and Embodied Experiences

There are many ways historic and contemporary museum spaces are utilised which can have an impact on their affective possibilities. The design of an exhibition, interpretative media, and the wider physical environment can change the ways and extents to which visitors are willing and able to respond in an emotional or affective manner. As Schorch et al. (2016:95-96) note, the museum's spatial affordances and exhibition design can have as much impact on encounters between visitors and objects as narratives and interpretation. The importance of this is further signified by Gregory and Witcomb (2007:265) who assert

that form, content, and space all have a role to play in the development of narrative and understanding. Yet, Henning (2007:44) notes that the aesthetic potential of museum media is often overlooked, and Watson (2015:283) similarly comments that consideration of emotion and affect is not commonly a priority in decisions around exhibition design. In spite of this, the potential for the inclusion of emotional and affective design is clear in many elements of exhibitions and interpretation. For example, consideration of how exhibition spaces engage different bodily and sensory elements could provide avenues for examining affective possibilities. Indeed, Witcomb (2013:256) identifies the 'material, aesthetic and spatial qualities' of an exhibition as being important for embodied and sensorial meaning-making. Immersive design and technology have also been identified as having the potential to increase both cognitive and emotional engagement by engaging different senses (Stogner 2011:191). Recent exhibitions by art collective teamLab engage visitors through touch [Fig 5.2]. A fully interactive digital experience, the art in these exhibitions is projected onto walls, ceilings, floors, and moves between rooms fluidly. Visitor movement through the space changes the artwork itself - it responds to their presence, making visitors themselves part of the art and encouraging embodied interaction. As museums continue to experiment with more experiential approaches to interpretation, it is possible to see how embodied interaction with museum spaces provide opportunities for emotional and affective responses.

Fig 5.2: *Planets* (2018) by teamLab. The movement of colourful koi fish on the floor is influenced by how people move throughout the space.

One example of a museum engaging with emotional and affective possibilities is the National Justice Museum in Nottingham. Many exhibitions in the Museum encourage bodily or sensory engagement through writing, touching, listening, and moving. A particularly striking example can be found in the capital punishment exhibition, where the trapdoors used in executions are displayed on the floor under a sheet of glass. Visitors are invited to engage bodily by standing in the place of past prisoners over the trapdoors and reflect upon their meaning and history, an act that, from personal experience, can be uncomfortable and challenging, and in my case was also accompanied by an irrational fear of falling [Fig 5.3]. The Museum, which often deals with difficult topics due to its focus on the history of the justice system, is also increasingly utilising reflective spaces and activities in exhibitions, enabling visitors to share their thoughts and responses. A further example of a museum designed with affect and emotion in mind is Te Papa Tongarewa. Schorch et al. (2016) examined the role of space in developing affective encounters with Māori culture and history - specifically the use of a Māori meeting house as a space which visitors could enter and explore in a sensory and embodied manner. In the context of the Museum's wider approach to exhibition design which emphasised reflection, openness, and building a felt-presence of the Māori people, they found that the emotional and affective experience of the meeting house often impacted how visitors interpreted and related to Māori culture more than the factual information they encountered, suggesting the affective and interpretative potential of the space. Furthermore, as Witcomb (2015:337) comments and as evidenced in

Fig 5.3: Embodied and affective interpretation at the National Justice Museum.
Image by the author.

Fig 5.4: A reflective space in between exhibition rooms in the National Justice Museum. Image by the author.

the National Justice Museum [Fig 5.4], spaces of reflection that offer space outside of the flow of exhibitions can be valuable for facilitating reflection upon the exhibition content. Such spaces allow moments of pause which encourage visitors to consider their experiences, and work through and express emotion as part of the interpretative process, as discussed in Chapter Three. Intentional design of museum and exhibition spaces can therefore create emotional and affective opportunities as part of visitor encounter and meaning-making.

Within the sector it is often historical spaces themselves that are the focal point of a visit. Museums based at, in, or on heritage sites such as castles, historic prisons, ships etc., lend themselves well to the study of affective and emotional potential through embodied experiences (Waterton 2014:824). Such spaces are often engaged with by 'walking, talking, listening and touching', bodily movements which inform an individual's sense and meaning-making regarding that space and which fall outside of traditional methods of engagement with museum objects (Kidd 2019:54-55). Due to their embodied and sensory nature, these forms of engagement can increase opportunities for the museum visitor to experience affect through the active use and positioning of the body. Indeed, Tolia-Kelly, Waterton and Watson (2016:3) comment that embodied 'presencing' in geological and environmental heritage experiences is 'core to understanding identity, difference, and alterity'. Bodily and sensory experiences are further examined by Light and Watson (2016) in relation to castle

ruins. The physicality of the castle ruin is discussed in terms of its potential to evoke affective experiences, with dark rooms and corners suggesting past inhabitants, and corridors leading into the unknown encouraging movement and investigation. It is interesting that engagements with castle ruins frequently include an element of play, which is itself linked to emotion as explored in Chapter One, with visitors undertaking adventure through exploration to uncover the unknown (Light and Watson 2016:167). As a particular example, the castle 'tower' and the many ways in which it could provoke emotional responses is highlighted - the controlled danger of height that can lead to thrill or fear, the accomplishment of reaching the top, and the view from the top that can provoke a sense of 'awe, wonder and delight' often vocalised with a 'wow' (Light and Watson 2016:168). Finally, Light and Watson also discuss another intriguing idea, that such museum sites can be seen as spaces of assemblage that simultaneously represent their historical use and stories, and the various ways in which they as spaces have been perceived over the years. In the case of the castle, individual pre-conceptions of the 'castle ruin' therefore act as pre-existing affective understandings that visitors can engage with, share, and which shape their interpretation of the space (Light and Watson 2016:156). This ties into observations made by Yarker (2016) in her examination of a Grade II-listed council estate, and the interactions between the estate and its former residents. Yarker (2016:20) notes that places have the ability to bring together both the tangible and the intangible; the tangible in the existing space, and the intangible through that which has been lost and the memories and nostalgia evoked. Museum spaces can have a complex impact on affective and emotional experiences as part of the interpretation process. These experiences build upon previous interactions with similar spaces, how the body and senses are used to interact with the space, the design or aesthetic elements of the space, and the possibilities they either do or do not provide for reflection on the emotional and affective impact of the space.

5.1.3 The Implications of Emotion and Affect for Interpretation

Interpretative Design

Let us now consider the broader implications of affect and emotion for museum interpretation. It is not uncommon to hear museums described as spaces of encounter, or as spaces where ideas can be freely discussed and debated (McKernan and McLeod 2018; Munro 2015; Smith and Campbell 2016). Interestingly, McKernan and McLeod (2018:57) and Lord (2006:5) use Foucault's concept of heterotopias, or 'other' spaces, to explore museums as spaces that stand both within and separate from society. McKernan and McLeod (2018:58) argue that positioning the museum as a 'other' space allows for the

exploration of dominant discourses in society in which different voices that might challenge the accepted norm are made visible, rendering 'dissent a less transgressive act'. Indeed, this discussion of the museum as a 'safe' space has implications for emotional and affective responses. If visitors perceive the museum to be a safe space, they may be more open to engagement with emotional or affective elements as part of their meaning-making. Equally, the idea of the 'safe' museum could also be seen as encouraging visitors to become more open to being affected and to express emotional reactions outside of the accepted societal norms in comparison to other public spaces (Smith and Campbell 2016:445). However, museums that deal with difficult or controversial topics may encounter responses that challenge and pose questions about interpretative design choices from an emotional and affective perspective – such as how to approach a topic that may prove traumatic for certain visitors. As such, museums that deal with difficult issues such as colonialism, slavery, racism, or genocide are often at the forefront of emotional and affective interpretative design, a few examples of which we will now examine.

One such example is Museums Victoria, which presented an exhibition exploring Australia's colonial history and its present-day impact in collaboration with Aboriginal leaders (Witcomb 2015). The exhibition presented a challenge to the traditional narrative by highlighting the damage colonisation caused to the Aboriginal people and, importantly, was held during ongoing reconciliation processes between the Australian government and Aboriginal peoples. By positioning Aboriginal voices at the forefront of the exhibition, the Museum acknowledged that Aboriginal stories and experiences had previously been under-represented and needed to be heard. The interpretative design of the exhibition reflected the recognition of the emotional and affective possibilities of the story being told, and its potential impact on various visitors. The exhibition was built around a series of circular spaces and 'rest spaces' which created a labyrinth-like path through a normally linear space. This provided opportunity for reflection, but also required visitors to engage cognitively and affectively with the space in order to navigate and unravel the overall narrative (Witcomb 2015:337). The aesthetic design elements built upon this, utilising contrasts such as darkness and light to create specific atmospheres and moods (Witcomb 2015:324). Furthermore, the primary interpretative methods in the exhibition were videos and projections which included first-person Aboriginal testimonies discussing personal memories and feelings (Witcomb 2015:337). The resulting exhibition, by utilising first-person Aboriginal stories, was able to create a sense of community, recognition and nostalgia amongst Aboriginal visitors, whilst also building empathic connections between Aboriginal storytellers and non-Aboriginal visitors (Witcomb 2015:337).

Openness towards the use of emotional language in interpretation is also worth discussing. Paver (2017:404) notes in her exploration of German museums that it was rare to find the verb 'to feel' used in interpretative text, and that the use of first-person perspectives was equally rare. Yet, museums have increasingly been utilising personal stories, and recognising their importance as a form of affective interpretation in which emotional language is more likely to be accepted (McKernan and McLeod 2018; Witcomb 2015). Nonetheless, we must be careful not to ascribe specific emotions to historical people. Whilst in the case of Museums Victoria the use of personal stories which discussed emotions worked as the stories shared were the experiences of contemporary Aboriginal people, to describe a historical figure in terms of emotion without evidence raises ethical questions and risks increasing scepticism towards engaging with affect and emotion (Paver 2017:404). When used appropriately, personal, first-person accounts have immense emotional, affective, and empathetic potential.

Empathy

The question of empathy is an interesting one. Rahaman (2018:211-212) identifies empathy as one of four key standards in his framework for digital heritage interpretation. Yet, many authors have grappled with the place and success of empathy in museums. Witcomb (2013:267) suggests that the ability of the visitor to empathise with objects, stories, or people is an important part of how visitors develop a fuller understanding of the 'other'. This is also recognised by Peirce et al. (2013:197) who comment that the evocation of empathy in storytelling can help people become more receptive to the story content. As such, creating space for affective and emotional encounters that might result in empathic engagement can aid in providing a fuller and more rounded interpretative experience. Hein (2006:14) further suggests that empathy is especially important in memorial museums, as connecting emotionally with the subject matter in order to acknowledge its importance and relevance is part of how memorial museums tell their stories. Attempts to define the nature of empathy and the museum ability to evoke it have also prompted discussion. For instance, Kidd (2019:57) writes that attempting to encourage visitor empathy is an inexact art as the personal context of each visitor impacts upon their emotional and affective engagement. Equally, engaging visitors empathetically without also engaging their critical thinking, thereby linking the emotional and affective with the cognitive, can also be problematic as evidenced in Markham's 2019 study of the District Six Museum. The Museum situated itself as a place where residents of District Six in Cape Town, South Africa, including those who had been forcibly removed during the area's tumultuous history, could regain a sense of community after years of displacement and racial divides. It did so by encouraging empathy

and by refusing to engage explicitly with racial classification. Yet, Markham (2019:34) found that the outcomes of empathic engagement were varied and, depending on the visitor's knowledge of the history of the area, could result in misinterpretation of images by the use of a specifically racial lens, which went against the aims of the Museum. As Markham (2019:37) explained, 'in the absence of a conscripted interpretive framework, a decisive pedagogical moment is lost, and international visitors in particular lose out on the opportunity to engage critically with discourses of race'. It is therefore important to recognise the link between empathy, cognition and critical thinking, as part of a wider process of interpretation.

In a study of *Ngā Mōrehu* (The Survivors) an interactive digital game at Te Papa Tongarewa, Kidd explores the concept of 'affective empathy', or the 'capacity to respond with appropriate emotion to another's mental state' (Kidd 2015:416). *Ngā Mōrehu* positions players in the role of a Māori child growing up in the early twentieth-century in order to discuss the prejudices faced by the Māori people. Affective potentials are realised in the game using various techniques, many of which parallel discussions in this, and previous, chapters. *Ngā Mōrehu* requires players to actively participate in the narrative in order to progress, thereby engaging the player in interpreting the game and its subject. The choices made by the player have consequences for the player-character, resulting in various narrative encounters with different types of discrimination relating to issues such as family life, education, and war. Depending on the player's past experience, the narrative consequences have the potential to evoke numerous affective states. As the game's choices are based on real injustices and prejudices faced by the Māori people, the game sometimes ignores player choices in order to maintain realism. As such, the player either becomes implicated in the prejudice their character faces, or is encouraged to become open to 'other-oriented feeling' and empathic engagement (Kidd 2015:421-422). The museum videogame, therefore, can be designed with its ability to draw out emotional and affective responses in mind, and the opportunities for these can be brought out through the game mechanics, design, and the ways in which the player is implicated and involved in navigating the game's challenges, as discussed later in this chapter.

Critical Inquiry

Challenging established narratives and intended meanings is an important part of critical inquiry of the past, which Witcomb summarises as 'a form of practicing history that reads against the grain, which looks for the gaps in the historical record', and is 'alert to complexities, tensions, and occlusions' (Witcomb 2013:256; Blackman 2016:36). Cameron (2003:13-14) notes that 'history is a changing body of knowledge', but that it is frequently

approached in a way that presents a 'master narrative'. Museums must be open to updating or adding to their existing interpretation to reflect changes in knowledge and attitudes. One method used to achieve this, as explored in Chapter Four, is the inclusion of multiple narratives, yet there is also an emotional and affective consideration regarding this method. Whilst use of multiple narrative voices may enhance the affective capabilities of objects by providing several perspectives, the potential of the method goes beyond this. Witcomb (2015:323) writes that juxtaposition is a powerful affective tool as it encourages the consideration of viewpoints and stories that are different from our own. Consequently, in telling multiple or conflicting stories, museums can further enable affective encounters across cultures through objects and interpretation. One striking example of this is Greenough, a historic colonial settlement run by the National Trust of Australia. Greenough's approach to interpretation is interesting. The site uses empty spaces and confrontational interpretation which is designed to evoke emotions such as shock and surprise, to tell a story that contradicts traditional narratives, encouraging people to think critically about the colonial history of settlement. In Greenough's general store, for example, a map is spread across two walls, the edges wrapping onto the ceiling and floor. It is accompanied by interpretative text encouraging visitors to consider what the map stands for, the contrast between how the land was used and navigated by coloniser and colonised (Gregory and Witcomb 2007:272). Gregory and Witcomb (2007:272) highlight the use of evocative interpretative objects, including a bar of soap packaged as 'Sarah's Conservation Soap... Sanitises before public display' and barbed wire wrapped and labelled 'Settler's Own ideal for disrupting nomadic lifestyles and keeping people out', which encourage visitors to adopt a more critical perspective. Witcomb (2013:261-262) argues that this affectively charged design helped visitors to shift from a cognitive knowledge that colonisation happened, to an affective understanding of how Aboriginal culture has been erased and overwritten, provoking an emotional and empathic response as both visitor and Museum confront and recast their roles in the construction of their nation's history.

Emotion and affect are an important part of the interpretative process alongside cognition, storytelling, and critical thinking. Emotional and affective design can create opportunities that enable visitors to build a deeper interpretative understanding, and sometimes an empathetic understanding, of the 'other' that goes beyond the cognitive. Interpretative design can also be intentionally confrontational in order to challenge existing or traditional narratives. In these cases, the use of emotionally and affectively evocative methods and tools aim to provoke responses which encourage reflection on both subject matter and the individual visitor's feelings and preconceptions.

5.1.4 Personal and Social Contexts

Research into the museum experience has identified how various elements of museum visitation impact upon how visitors engage with objects, topics, and the interpretative process. Falk and Dierking (2016:26-27) explore three contextual frameworks in relation to the museum experience; personal, socio-cultural, and physical. Personal and social aspects of museum experiences, along with different facets of engagements, can influence emotional responses (Packer and Ballantyne 2016:128,137). As explored in Chapters Two and Three, research into the visitor's role in interpretation has led to recognition that the visitor is an active participant in the process. Just as the cognitive elements and personal knowledge that visitors engage with during interpretation are no longer seen as universal but rather dependant on individual experience and interests, affective and emotional knowledge is also recognised as unique to each visitor. Drawing on personal experience, Blackman (2016:45-46) explores the personal nature of affective and emotional response in museums, noting that whilst she was moved to tears by an exhibition due to her own knowledge and history of the objects and stories, other visitors were not so affected. Therefore, it is important to re-emphasise that an individual's personal context mediates affective and emotional responses, impacts upon their willingness and openness to affective encounters, and influences which objects or stories spark such responses. Crouch (2015:177) similarly notes that 'our response to heritage often reflects our own circumstances', as different visitors depending on their personal, or even cultural, contexts may find that their emotional responses to an exhibition differ. Waterton and Watson (2015:829) also comment that the potential of individuals to experience affect differs as 'different bodies, differently imagined, will have certain affective responses already mapped onto them, defined by social expectations and structures of feelings…'. The social context of a museum experience is therefore a significant factor in emotional and affective engagement, as responses can be diverse depending on who, if anyone, visitors share their experience with. Many museum visits are undertaken as part of social groups, such as with family and friends, or even strangers in the case of public museum tours, which may result in individuals mediating or managing their emotional and affective responses in order to meet social expectations (Smith and Campbell 2016:455). As such, neither affect nor emotion can be taken as something that is predictable or universal within a museum experience.

It is possible for individual visitors to experience an array of often complex emotions at any one time. This is especially clear in the study of visitors to exhibitions that deal with controversial or difficult subjects (Smith and Campbell 2016:444). Indeed, in Smith's (2011)

examination of eight exhibitions exploring Britain's role in the slave trade for the bicentenary of the 1807 Abolition of the Slave Trade Act, Smith noted visitors often experienced a variety of emotions as each individual worked through their personal encounter with the subject matter. Particularly interesting were responses by self-identifying White British visitors who, during interviews about the exhibition, discussed feelings of guilt and shame, and their attempts to negotiate these responses. In this negotiation, Smith observed, visitors frequently attempted to distance themselves from their country's complicity. The failure or success of this process sometimes resulted in further emotional responses such as anger, frustration or disengagement. The responses to the exhibitions that Smith documented, further highlight the connection between affect, emotion and cognition in interpretation. As Smith notes, these visitors attempted to mediate their affective experiences using cognitive and emotional methods, such as by refusing to engage critically or empathetically in order to distance themselves from a sense of responsibility, or by falling back on knowledge of Britain's role in the abolition of slavery to downplay the aspects of the exhibitions that challenged this narrative (Smith 2011). Emotional and affective experiences can arise and change throughout a museum visit through ongoing interactions and encounters between the exhibition and a visitor's personal and social context. The relationship between meaning-making and affective and cognitive processes is therefore complex, with affect often having an impact, either positive or negative, upon the construction of individual visitors' internal narratives and interpretations (Wetherell et al. 2018:10). As we have seen, affective and emotional responses can be multifaceted, difficult to negotiate, and either positive or negative depending on the individual, making designing for emotion and affect a difficult task.

These complexities are evident in *Utah Climate Challenge* (2017). *Utah Climate Challenge* is a cooperative videogame at The Natural History Museum of Utah, in which players must work together to design a city of the future. Designed to be played by up to five people across six rounds, players are given a limited series of options for progressing the city, each of which have effects on climate change that could aid or hinder successful development. The game is located in a physical gallery as part of a wider climate change exhibition. Due to its collaborative, multiplayer design, potential personal and social emotional and affective responses to the game, such as a sense of collective responsibility, and their impact upon interpretation were considered during the development process. As Preloaded, the developer of *Utah Climate Challenge* explains on their website, 'players will soon realise they need to work together – as they must in real life – for any hope of saving Utah'. In *Utah Climate Challenge* the implications of the social context are especially relevant as players must work together to excel, which could lead to a variety of emotional responses

depending on how effectively each player negotiates their personal context, communicates ideas, and engages with the game's mechanics in relation to the group. The space and context within which the game is positioned is also important. As the game is physically played in an exhibition space, it is likely that there will be observers watching the game and its players. How these observers respond to the game, be it supportive or in a manner that creates pressure or stress, adds another layer of emotional and affective consideration. As such, the space and contexts of the game are notable in terms of which emotional and affective responses they imply and provide space for.

5.1.5 Designing for Emotion and Affect: Co-Production and Participatory Practice

In museum practice the emerging recognition of the role of visitors in interpretation has resulted in the growth of participatory opportunities and co-productive design, with many museums now involving visitors in the planning process of new exhibitions (Simon 2010).[37] Whilst the aims of co-productive practices are varied, co-production has the potential to further facilitate affective and emotional engagement. As Smith and Campbell (2016:445-449) argue, 'affective responses do not just happen spontaneously and uncontrollably' but rely upon the visitor's relationship and engagement with the exhibition. Crouch (2015:186) makes a similar point when he claims that in the negotiation of feeling and meaning, both the heritage and the visitor participate. Indeed, research has found that visitors appreciate having a say about the topics that museums cover, and that they want museums to provide more opportunities for them to do so (Cameron 2003:21). In order to facilitate this, museums must be willing to give control over to the community, and embrace the idea that visitors will have unexpected emotional and affective responses and may express opinions that are controversial or challenging to the museum narrative. Nonetheless, as Cameron (2003) points out, the benefits of facilitating participation have the potential to outweigh these problems, as the opinions and emotional responses shared can contribute to interpretation through the creation of information, understanding, and meaning-making. Indeed, the National Justice Museum's recent co-produced exhibition *Constraint / Restraint* is a good example of this in action.[38] Opened in February 2020, the physical exhibition was forced to close early due to a COVID-19 lockdown. The physical exhibition was designed for visitor participation, with spaces to write down thoughts, or express them using a megaphone, but these did not translate well to an online environment. However, during this

[37] See also Derby Museums (2016).
[38] The *Constraint / Restraint* exhibition can be explored online at: https://v21artspace.com/constraint-restraint

period the Museum launched a new co-productive project, 'Letters of Constraint', which encouraged visitors to share their experiences of lockdown. The letters, submitted by individuals from a variety of backgrounds and age groups, told stories of diverse experiences, often utilising emotionally evocative language to help express personal responses to and understandings of an unusual situation. A collection of these letters was published in 2022, evidencing the differing responses and interpretations of that initial lockdown period in a manner that does not shy away from emotional and affective elements.

> *'Dear other,*
> *I am lost. Please take my hand.'* (Letters of Constraint 2022:8).

Additionally, Waterton and Watson (2015:824) comment on the importance of participatory and inclusive practices in designing spaces for bodily movement and affective engagement. By embracing participatory practices that incorporate embodied movement as part of interpretation, museums can further develop opportunities for affective experiences. Indeed, some spaces are already primed for participation. For example, in their examination of the castle ruin, Light and Watson (2016:168) comment that the action of exploring the castle in order to uncover new areas, and the relative lack of interpretative information or staff, can result in the task of meaning-making falling wholly upon the visitor. Finally, although there is now a general understanding that emotions play an important role in the visiting experience, there have been relatively few attempts in practice to explicitly highlight emotional responses or to provide spaces for their expression. Whilst many museum visitors experience affective and emotional reactions, unless they are provided opportunities to express these responses through, for instance, co-productive techniques, they tend to remain hidden. Academic studies therefore, have tended to rely upon in-depth interviews in order to understand the complexities and breadth of responses as it is otherwise difficult to record and measure emotion (Cameron 2003:16). By creating opportunities for visitors to more openly discuss and share their affective and emotional responses in conversation with each other and the museum, we not only build further professional understanding of effective interpretative design which encompasses emotion and affect, but also opportunities to further develop academic study of affect and emotion in the museum.

5.2 Emotion and Affect in Videogames

'To play a game is to make an emotional gamble.' (Juul 2013:14).

Just as with museum studies, in game studies interest has been growing in exploring how

videogames can evoke emotional responses. In part, this is because it has been recognised that there are often emotional and affective motivations for engaging with videogames, such as a desire to relax, have fun, or to experience feelings in relation to challenge (Lazzaro 2004:1). In fact, Nacke, Wehre, Stahlke and Noguiera (2016:106) describe the act of playing games as 'an affective activity that can provide strong emotional experiences'. There are several aspects of the videogame medium that are particularly relevant in considering their potential emotional and affective impact compared to other types of media. Mirroring museum studies, scholars researching videogames have increasingly engaged with emotion and affect, resulting in literature that more fully explores the varied ways in which videogames can evoke such responses. These span from studies on the emotions elicited from: gameplay and game mechanics (Calleja et al. 2016; Jagoda 2018, Järvinen 2008; Juul 2013); the interaction between player and game narrative (Fahlenbrach 2016; Schrier 2016; Veale 2015) and affective and emotional possibilities in player engagements with physical and digital game environments (Frome 2007; Isbister 2016). The diverse possibilities evidenced in these studies highlight the rich potential of emotion and affect in relation to videogames. The focus of the following section, therefore, will be to identify specific emotional and affective affordances of videogames which align with ideas relating to museum interpretation.

5.2.1 Emotion and Affect at work in Videogames

It could be argued that emotion is intrinsic to videogames. Part of the appeal of videogames is the opportunity they provide to experience specific emotional responses. Indeed, videogames are commonly considered 'fun' to play, implicating the importance of their emotional and affective elements, but where does this idea of 'fun' come from? Lazarro (2004:3-5) suggests two possibilities: that players find overcoming challenges 'fun'; and that videogames provide a rich source of stimuli, immersion and curiosity. Let us explore this idea of challenge first. Some of the key pillars of the medium, as discussed in Chapter Three, are that videogames have goals, and that videogames require players to overcome challenges in order to achieve these goals. As a result, gameplay emotions are ones that relate to competition, either against other players or the game itself, and videogames are perhaps more similar to sport than to media such as film, with which videogames are commonly compared. Frome (2006:19) identifies videogame emotions as being prompted by 'winning, losing, accomplishment, and frustration' (see also Calleja et al. 2016:47; Jagoda 2018:207). Building upon this, a number of authors in game studies reference the psychologist Csikszentmihalyi and his concept of 'flow theory' in relation to videogames

(Isbister 2016:40; McGonigal 2012:24; Poole 2004:168). Flow theory explores the relationship between challenge and skill which, when well-balanced in a state of 'flow', can result in an emotionally positive experience. Videogames are especially good at facilitating flow, pushing players to the extent of their abilities to provide consistent challenge that matches the player's abilities and skills as they grow. Successfully overcoming challenges to complete a videogame can result in feelings of enjoyment and achievement, making emotion inherent to the gameplay experience (Frome 2006:19; Lazzaro 2004:3). Furthermore, McGonigal (2012:27) utilises flow theory to discuss the autotelic nature of videogames in that when we play, we are self-motivated and self-rewarding. Engaging in videogames, McGonigal argues, provides intrinsic rewards as opposed to material or external 'extrinsic' rewards. Reward comes from the growth of the player themselves, through the 'positive emotions' and 'personal strengths' uncovered in the experience (McGonigal 2012:27). The importance of emotions in videogames, then, is well established.

Yet, as Järvinen notes, emotional responses to videogames are not always positive. In particular, frustration and failure are common when players are unable to overcome videogame challenges. It is unusual that we would actively seek out an experience that we often take great pains to avoid, and perhaps even stranger that the experience of failing could be considered enjoyable (Juul 2013, see also Anable 2018). As such, Juul interrogates the topic of failure extensively in his essay *The Art of Failure* (2013) and provides several possible explanations for why players are more likely to accept failure in a videogame context. When we fail in a videogame, Juul argues, it generally does not have real-life consequences and therefore failure and its accompanying emotional responses are considered 'safe' (Juul 2013:4). It is also possible that we accept failure in videogames because it is a common part of the game experience – we cannot overcome some challenges without first learning how to through failure. As Juul points out, as with real life, failure in videogames allows us to better understand the details of the challenge, identify our mistakes or gaps in skill, and change, adapt, or improve ourselves in order to eventually succeed (Juul 2013:59). Veale (2015:8) further comments that continued failure can cause players to grow angry at themselves if they see the failure as a result of their own inadequacies, but that they will tend to try again regardless. Perhaps, then, when appropriate videogames could provide an avenue for museums to explore certain emotional and affective experiences in ways that other mediums cannot.

Returning to Lazzaro's exploration of fun, there are also emotional and affective implications of videogames as rich, stimulating experiences, which can be explored in how videogames immerse or engage players using different aesthetic, spatial, and interactive

elements. The participatory nature of gameplay creates possibilities for emotional experiences as videogames require the player to be active and engaged, investing themselves in the game (Calleja 2011:23; Nørgård 2016:90; Perron 2016:192). Calleja, Herrewijn and Poels (2016:47) build upon this idea by noting that playing entails emotional investment, and players will likely experience general emotions such as pleasure or interest. However, Järvinen (2008:90) argues that we should not attempt to define a specific relation between a game mechanic and an emotional response, which echoes the previous discussion on the individual nature of emotional and affective experience. Instead, Järvinen notes that videogames and their agents, objects and events can create 'eliciting conditions' for emotional responses. It is through interaction with a game's mechanics, controls, structures, rules, and systems that players come to navigate and understand the game (Jagoda and McDonald 2018:177; Perron 2016:190). This also relates to understandings of play and its relationship with both fun and the negotiation and understanding of rules, objects, other players, and the wider meanings of the game itself (Huizinga 2003). As such, there are many elements of videogame design that can create opportunities for emotion and affect. The allowances or limitations created through the use of specific mechanics and design elements can have a significant impact on the individual player's emotional response to a videogame.

Perhaps the clearest illustration of this is through the establishment of genre conventions and how videogames are designed to build a specific tone or mood. Isbister (2016:52) identifies how a game's mechanics, by defining which movements and interactions are possible to the player, can set the emotional tone and affective atmosphere of a game. Isbister uses the example of the player avatar in *LittleBigPlanet* (2008), a platform puzzle game designed around the tagline 'Play, Create, Share', as an illustration. Part of the way *LittleBigPlanet* creates a child-like, playful tone is in how it utilises a physics engine that makes player movements exaggerated and often humorous (Isbister 2016:49-52). This is particularly interesting considering its affective implications as interaction with the game's mechanics requires players to use hand movements to manipulate controllers or keyboards and in the cases of certain controller systems, also involves haptic feedback. In some cases, this has been taken to an extreme. In *Octodad: Dadliest Catch* (2010) you play as an octopus attempting to pass as a human. The videogame movement mechanics are made intentionally difficult to control, provoking both amusement and frustration at the unpredictable and often hilarious movements of the player-character [Fig 5.5]. The unwieldy nature of the controls aligns with the game's adventure genre, which requires the player to explore and solve puzzles in order to progress, and the comedic tone of the story in which an octopus pretends to be human. Furthermore, games such as these also help address questions

Fig 5.5: A player attempts to pick up items in *Octodad: Dadliest Catch*, evidencing the difficulty of controlling the player-character.
Image © Young Horses.

around the public's broad familiarity and comfort with videogames. If players find it difficult to control a character effectively, this is likely to result in failure and frustration, as Juul noted, yet in games such as *Octodad: Dadliest Catch* this issue is overcome by making movement unwieldy for any player regardless of their level of experience with videogames. However, it is still important to discuss these barriers. Whilst an increasing percentage of the population are familiar with the videogame medium, as discussed in Chapter One, this familiarity cannot be guaranteed and remains a particularly important consideration in the creation of museum videogames – an importance heightened by the emotional and affective potentials of the medium.

To give another example of affective environmental design in videogames, Calleja's (2011) examination of *F.E.A.R* (2005), a psychological horror game, provides useful insight. In *F.E.A.R* - much like museum exhibitions such as in the grid-based design of the Holocaust exhibition explored in Chapter Four (Hourston Hanks 2012) - aesthetic design elements and navigational and interactional possibilities work together to construct an emotional tone. A combination of various aesthetic, narrative, and gameplay elements build an immersive experience that engages players imaginatively and sensorily (Nacke and Lindley 2010:3). Calleja comments that the pacing of *F.E.A.R*, which switches from quick combat sequences to calmer areas, is designed to maximise both excitement and anticipation, as players might be placed in combat or frightening environments with little warning. In terms of aesthetics and navigation, levels in *F.E.A.R* are often dimly lit with lots of twists and turns that obscure

the path forward and provide hiding spots, contributing to a sense of anticipation and tension. In particular, Calleja highlights how the designers used player expectations of normal game design against them in order to evoke a sense of shock and horror. In *F.E.A.R*, game objects move unexpectedly and without the player's input. Items fly off shelves and lights sway. Together, these aesthetic and mechanical elements build a 'cognitive, emotional and kinaesthetic feedback loop' between the game and the player which has the potential to strongly influence a player's emotional responses (Calleja 2011:20). There has been criticism of the emphasis on videogame graphics in particular, with authors arguing that it can come at the expense of other elements of gameplay (Perron 2016). Yet, Järvinen (2008) makes the important point that graphics are an important element of a game's aesthetic stimuli, alongside other factors such as sound effects, music, and text. 'Flashy graphics', therefore, are 'not just eye candy but an important antecedent of the play experience as an emotional experience' (Järvinen 2008:95-96). Indeed, the colourful graphic design used in *Octodad: Dadliest Catch* adds to the playful emotional tone, just as the dark colours and textures of *F.E.A.R* build an atmosphere of tension. Finally, whilst these individual elements can impact a player's emotional and affective responses, videogames are arguably most effective at creating emotional and affective opportunities when the design elements used contribute to a coherent whole.

5.2.2 Telling Stories Differently: Choice and Empathy

As explored in Chapters Three and Four, the way narrative is implicated within videogames often differs from other mediums. Perron (2005:3) compares the ways videogames use narrative to 'classical narration', which is avatar-centred, and object and action-orientated. Indeed, the active positioning of the player has implications for how players might respond emotionally and affectively to games and the stories they tell. It is interesting that videogames, which have been criticised for having underdeveloped narratives and characters compared to other mediums, still commonly 'generate narrative emotions' that arise in direct response to the narrative and the player's role within it (Frome 2007:832). Fahlenbach (2016:142) also makes a clear differentiation between gameplay emotions and emotions arising from narrative. Whilst this can be a helpful distinction when examining the emotional impact of a specific videogame's narrative, it is also important to consider that the progression of videogame narratives often has implications in regards to the game's mechanics and design, and vice-versa. Within games, these elements are deeply linked. As Calleja et al. (2016:44) note, game narratives not only provide context in the form of worldbuilding and story progression, they also give the player's actions context, bestowing

those actions with an additional layer of meaning. As such, the experience of gameplay and narrative feed into each other to build an affective and emotional potential that can supersede the potential of the individual parts.

The implication of both narrative and gameplay in a game's emotional and affective potential further highlights the importance of the player, in particular, player choice. Veale (2015:1) argues the inclusion of choices means that players are more likely to become emotionally invested in the outcome. Though the depth of investment will depend on how the videogame has been designed, and each individual player's experience. The impact of player choice is perhaps clearest in games that are designed to include multiple possible narrative journeys. By giving players choices, games implicate the possibility that players might incur consequences as a result of their choices (Perron 2016:199). Yet, as Holmes (2012:42) notes, 'without consequences, choices are meaningless' because they aren't truly choices if nothing changes. Veale (2015) expands upon this by suggesting that the emotional and affective potential of choice and consequence is inherently linked to the player's perceptions of responsibility. Building upon the discussion in Chapter Four regarding connections between players and avatars, Veale argues that when a player makes a choice that has consequences, for the story or characters (including the player-character), they become responsible for those consequences, as they were of the player's making (Veale 2015:5-6). Of course, these consequences and their potential emotional implications can be either negative or positive, or unique to the videogame medium. Isbister (2016:25) suggests that a videogame's ability to evoke feelings of guilt when player choices result in negative consequences is 'a fictional experience unique to games'. As such, in videogames the player has control over, and can be seen as responsible for, changes to the narrative.

The relationship between gameplay, narrative, and players and can also have an impact on the intensity or breadth of emotional and affective responses. Videogame narratives are interacted with in a manner that is often very direct, and which has emotional and affective implications. Perron (2016:203) notes that this direct interaction with narrative results in feeling towards videogame representations that are less distant and can be more intense than in other media. Frome (2016) suggests that when players engage with a videogame, their focus is often split between different elements such as gameplay and narrative as such, players are not able to process the emotions they experience to their fullest extent, and certain emotions are better evoked during scripted elements such as cut-scenes. Indeed, player focus is not only split between the narrative and the gameplay, but also between the different types of emotions evoked by gameplay and narrative, which implicate each other and can sometimes conflict. Veale (2015:9) argues that players build up an affective

investment through engagement with gameplay, player choices and actions, and their narrative repercussions for characters and situations. Veale (2015:10) also comments that when we play a videogame, we do not have the same 'affective mediation' as we would in other media because we are not responding to a character's reaction, but instead are responding directly to events that we have ourselves influenced and shaped. Emotional and affective responses to games therefore have the potential to be deeply impactful.

Take the example of *The Last of Us* (2013). *The Last of Us* follows two primary characters, Joel and Ellie, in a dystopian future where much of humanity has been wiped out by a fungal virus. Joel, who lost his young daughter at the outbreak of this virus, acts as a reluctant guide and protector for Ellie, a teenage girl immune to the virus, as they travel across America in the hopes that a cure might be developed. During the course of the game and following numerous encounters with danger the two characters become increasingly attached to each other, eventually forming a father-daughter bond. In the game, players have little control over the narrative outcome, but the story nevertheless had a strong emotional impact.[39] *The Last of Us* tends to deliver the most emotionally charged parts of the narrative, such as confrontations between characters, in cut-scenes where the player is fully focused on the story and therefore open to intense emotional and affective responses. But these moments would likely not have the same impact had players not developed a sense of affective responsibility towards the characters who, at different points in the game, both act as the player-character. Indeed, the most pivotal and controversial choice in the story of *The Last of Us*, whether or not to sacrifice Ellie in the hopes that her immunity might save the world, is one the player has no choice in. It is scripted. Joel will always choose to save Ellie. Yet, the moment is emotionally impactful because, as Veale argues, players have undertaken choices as these characters and become invested in the outcome of their stories. Therefore, completing the final section of the game where players are required to kill both enemies and innocents in order to reach Ellie might evoke a sense of achievement, but the morally-grey accompanying narrative complicates the emotional impact, resulting in diverse responses.

This raises further questions around the ability of videogames to evoke empathy and tackle ethical issues. If sympathy in videogames is where the player is aware of the emotional state

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[39] Many reviews discuss the emotional impact of *The Last of Us*. See, for example reviews by Colin Moriarty for IGN, available at: https://www.ign.com/articles/2013/06/05/the-last-of-us-review; Philip Kollar for Polygon, available at: https://www.polygon.com/2013/6/5/4396286/the-last-of-us-review; and Chad Sapieha for the Financial Post, available at: https://financialpost.com/technology/gaming/the-last-of-us-is-a-terrifying-beautiful-emotional-tour-de-force

of a character or situation, empathy is where the emotional distance is removed and players try to comprehend an emotional situation for themselves, to truly 'know' how the character feels (Perron 2016:196). The ability of videogames to put players in another's shoes, Gee (2011:353) argues, creates an environment that encourages reflection on another's situation or perspective, and therefore an environment capable of producing empathy. As such, it has been argued that videogames have the potential to create particularly powerful empathic connections and to provide opportunities to practice skills related to empathy, such as ethical decision making (Isbister 2016:2; Schrier 2016:42). This is perhaps most obvious in videogames that represent real-life situations. As Perron (2016:191) comments, players will often compare imagined situations with real situations in order to decide how to respond. This suggests that videogames, especially games that tackle real-world issues, can create space for the development of empathic, ethical, and moral-based decision making. This is of particular interest when considering the affordances of games for museum interpretation.

A videogame that effectively, yet simply, evokes emotional and empathetic responses in relation to a historical event is *Hush* (2008). *Hush* is a simple game about a mother trying to

Fig 5.6: *Hush* gameplay. A failure to type the correct letter in type is indicated with the letter turning red.
Image © Jamie Antonisse.

calm her sleeping baby - a situation that is perhaps universally recognisable and, depending on the player, may result in an emotional or empathic connection to the character of the mother. The game mechanics of *Hush* are simple: to succeed the player must quickly and accurately press keys on their keyboard that correspond to letters that appear on the screen [Fig 5.6]. It is the consequence of failure, and the player's understanding of the context of the game, that has perhaps the greatest potential to evoke empathic and emotional impact. Failing to type the correct letters makes the baby cry and footsteps approach, fail enough times and a gunshot is heard before the screen fades to black. Actions and consequences in *Hush* build a sense of responsibility for the player-character, as both player and character work in narrative union to calm the child. The sense of tension evoked reflects real experiences, for *Hush* is set during the Rwandan Genocide and you play as a Tutsi mother hiding from Hutu soldiers, a context that is briefly introduced at the start of the game after an introduction to the game mechanics. Yet, as with interpretation in museums, it is important to consider that player responses to *Hush* likely differ depending on individual knowledge of the historical context, which is not explained in detail in the game. As such, taking into account the individuality of players is also important.

5.2.3 Emergent Gameplay and Player Experiences

Much as in museum studies, game studies academics have recognised the importance of understanding the player as an individual who may have very different emotional experiences based on the knowledge, intentions, and pre-conceptions they bring with them. As Grodal (2003:150) states, 'the player's emotional experience is a personalized one'. Building on this, Frome (2007:833) comments that player responses are distinct and different as 'each person draws on a unique network of mental associations' when they play, prior knowledge and experiences that influence the type and intensity of individual emotional responses. This can be related directly back to our examination theory in Chapter Three as each person, when they undergo the process of cognitive appraisal, appraises against different structures and criteria, resulting in unique emotional responses. Equally, as previously mentioned, players often engage with games because they are seeking an emotional experience (Calleja 2011:19). This not only suggests that players perceive videogames as capable of producing emotional experiences, and as a result may approach videogames with an openness to being emotionally affected, but that they might choose to play one game over another based on its potential to evoke the type of emotional experience they are seeking. For example, a player looking for an intense emotional experience may choose a horror game such as *F.E.A.R*, whilst a player looking to relax and express their

creativity might choose an *Animal Crossing* game. Even then, the motivations of one player in choosing a specific game may well be different to another player. Equally, fluctuation in goals, skills, and motivations, combined with an individual's prior experience with a game, may over time result in an individual player experiencing a variety of emotions in response to the same situation (Grodal 2003:150). For instance, fear may become negated as an encounter or scenario becomes expected, and frustration may be overcome as difficult obstacles are successfully navigated. Playing a game involves undertaking a personalised emotional journey.

With the knowledge that all players are different and come to the game with different prior knowledge and expectations the concept of emergent gameplay, where players interact with videogame rules in unexpected ways beyond their original intended purpose, as discussed in Chapter Four, again becomes useful and applicable. This type of gameplay experience is personal because it relies on individual players using their agency and creativity to explore the tools the game provides in unique ways. The most common example of this is in the exploitation of game rules and glitches in order to overcome challenges. Such exploitation can result in a sense of triumph when an unexpected, and sometimes humorous way to overcome an obstacle is discovered. A particularly well-known example is the use of grenades to climb walls in *Deus Ex* (2000). As the grenades are designed to stick to surfaces, players discovered they could be placed on walls and jumped upon in order to climb and reach areas that players were not supposed to find.[40] My own experience of exploiting the rules and mechanics of *Hollow Knight* (2017) resulted in experiences that evoked various emotions including amusement and triumph. For instance, it is possible to use one of the charm abilities in the game, which causes damage to enemies due to its 'heroic odour', to comically defeat major enemies by simply standing next to them. A different exploit, which takes advantage of a glitch where opening the map allows players to bypass a major fight, can in fact trap players in one area of the game. As winning the fight unlocks a key movement ability, without it players are unable to either progress further or retrace their steps. The only way to escape this situation (known colloquially as a 'softlock') is to restart the game, completely erasing any progress the player had made up until that point and forcing them to start again.

Player engagements with *The Sims*, a game that simulates real life, have also led to a significant amount of what could be considered emergent gameplay. Isbister (2016:39)

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[40] The grenade wall-climb technique in Deus Ex is explained at: https://www.youtube.com/watch?v=qwXqvCBWMVE

explores how players, creatively using the games mechanics which allow them to directly control characters or let them have autonomy, and image and movie capture tools, created stories that tackle real-life and often emotionally charged issues. A notable example is the story of Alice and Kev created by *Sims* player roBurky which explores homelessness. The story discusses emotions in relation to the characters and their situation, and how roBurky and the story's readers interprets their actions. 'It's then that she [Alice] appears to snap, and surprises me by coming back with some insults of her own… And most of it was entirely without any intervention from me'. [41] Considering emergent gameplay as an ongoing and evolving process of interaction between player and game through which individual players define their experience of the game based on their cognitive and emotional understandings (Calleja et al. 2016:53; Jagoda and McDonald 2018:177; Nørgård 2016:97), it can be seen as not dissimilar to museum interpretation. When players engage with a videogame, they engage in an individual process of communication that results in the construction of a personalised understanding of the game's meaning, built upon how they have interacted with, influenced, and become emotionally and affectively involved in the progression of the game and its narrative. As a result, designing emotional and affective opportunities into a game requires recognition that games cannot define the emotional or affective responses of individual players, instead designers can create game mechanics, rules, and narratives that provide space for players to engage in emergent gameplay.

5.2.4 Spatial and Social Contexts

Finally, let us briefly consider ideas of space and context, and their impact on emotional and affective possibilities. The specific situation, context or space within which a game is interacted with can affect a player's emotional and affective responses. Frome (2007:834) explores how different factors and the connections between them, such as game narrative and the sensory environment in which the game is played, impact upon emotional responses. For example, *Alien: Isolation* (2014) is a horror game. The game is designed to build tension, uncertainty, and fear through a mixture of its visual and audio design. Dim visuals mean that the player has a limited ability to see obstacles or enemies, navigation through the game space is made difficult, and the audio is designed to put players on edge through a mixture of in-game sounds such as banging or rattling, and the soundtrack, with

[41] The full 'Alice and Kev' story of homelessness as explored in the Sims 3 is available at: https://aliceandkev.wordpress.com/
This specific quote is from the chapter 'Growing Up'. The comments sections also evidence the variety of emotional responses readers had to the story.

discordant or intense music. However, even then the affective response of the player cannot be guaranteed by the designer, who has no control over either the players personal context, or the spatial context in which the game will be experienced. As such, affective responses to playing *Alien: Isolation* alone in a darkened room which complements the games environment and tone, are likely to be very different to the affective responses if it is played in a bright, open space which juxtaposes the game's atmosphere.

Frome (2006:22) develops a framework which explores 'actors', those actively playing the game, and 'observers', who watch the players but do not directly engage with the game themselves, in terms of emotion and affect. The acknowledgement of 'observers' and social context is especially relevant considering the rise of videogame spectatorship on platforms such as Twitch. However, it is in multiplayer games that the impact of social interactions on emotional dynamics is especially clear. Isbister (2016) comments that cooperative multiplayer gameplay can have a positive emotional effect on players through the enacting of social interactions and the need for coordination between players. Social interactions in multiplayer games, Isbister (2016:53) argues, can create shared emotional experiences. Isbister (2016:109) also comments that the formation of emotional bonds in online multiplayer games is especially interesting because players create these connections without the usual in-person cues used to build relationships. Therefore, the tools multiplayer games provide which allow players to interact, and the level and depth of interaction that these tools offer, will influence how emotional bonds are formed as well as the depth and intensity of these connections. *Journey* (2012) is a particularly interesting example of a game which can be played individually or as a cooperative multiplayer experience. If players choose to play cooperatively in *Journey*, the game will randomly pair players with complete strangers. *Journey* also only provides simplistic communication tools for players; players can 'talk' using sounds that mimic musical chimes, and one player can charge another's jump ability by standing near them. As a result, *Journey* requires players to develop both unique and universal systems of communication, using these tools and character movement to express their intentions and desires. The emotional bonds formed vary as a result, with some players barely interacting, perhaps limited by the restrictions of the game mechanics, whilst others appear to form deep relationships. Indeed, one player new to *Journey* described how they 'drew a heart in the snow' with their character to thank their more experienced companion for their kindness and compassion in guiding them to the end of the game, whilst another expressed sadness at losing a companion and continuing

alone: 'seeing that one lone figure, me braving the mountain, was heart-wrenching'.[42] It has therefore been suggested that designers of online multiplayer games can be considered social engineers as, through their games, they create possibilities for social situations (Isbister 2016:63,109). Frome (2006) also insinuates that cooperative multiplayer games have the potential to build emotional bonds through the positioning of players as working towards a common goal. These ideas are interesting to think about in terms of museum games, which are often played in different spatial and social contexts [Fig 5.7].

Fig 5.7: Personal, social and spatial contexts are at play in this competitive game at the Riverside Museum in Glasgow. Played in a physical gallery, the game rewards players who are able to interpret and understand the system the game explores - in this case, how ships transport items around the world – as they are more likely to succeed at the game.
Image by the author.

5.3 Conclusions: Emotion and Affect Affordances

To summarise, this chapter has identified a number of aspects in museum studies and practice which evidence how emotion and affect are implicated in the interpretative process, and how the emotional and affective potential of museum objects and spaces are increasingly being recognised. Experiences of empathy in museums, and its importance in the process of interpretation have been explored, as well as the potential for museums to

[42] Excerpts taken from anonymous submission to 'Journey Stories' on Tumblr, available at: https://journeystories.tumblr.com/tagged/journey%20stories

provide spaces for visitors to engage with emotional and affective responses, and challenge both themselves and the museum. In this, the consideration of the personal nature of emotional responses has been considered, as well as how social contexts impact upon an individual's capacity to emotionally and affectively engage and share experiences. Equally, it has acknowledged some of the difficulties faced by museums in evoking, or providing space for reflection upon such responses, especially when the museum touches upon difficult or contentious topics. However, we have also seen successful attempts at designing for emotion and affect in museums, which have often utilised elements of spatial design, embodied movement, playfulness and participation.

Videogames similarly employ the design of spaces, bodily engagement with controls, play, and active participation. This chapter has drawn out a number of areas in which videogame affordances might add to the current practices of museum interpretation. We have explored how emotion and affect are intrinsic elements of the gameplay experience, with videogames having the potential to evoke emotions that other mediums may find more difficult. Just as museums have been considered spaces where emotions can be evoked, so to have videogames, perhaps especially in the case of exploring more difficult narratives and negative emotions. We have also seen how the aesthetic elements of games, such as the design of spaces and the use of objects and movement are also acknowledged as having emotional and affective potential. Videogames have also been examined as a medium with capacity to build empathic connections between players and the game's characters and situations through the use of player choice and agency, resulting in a sense of responsibility for the game's outcome. The influence of spatial and social contexts on the type and strength of emotional and affective response has also been explored. Finally, the individual nature of a player's responses has also resulted in some interesting and relevant affordances through an exploration of emergent gameplay, where players take an active role in the construction of a game's story and meaning by engaging creatively, cognitively and emotionally, in a manner reminiscent of the museum interpretation process. The similarity raises the question as to what a museums videogame designed with interpretation itself as its primary challenge might look like, and what it would mean for museums in terms of engaging visitors actively with the cognitive, emotional and affective elements of the interpretative process.

Following on from the discussions of narrative and storytelling and emotion and affect, Chapter Six further explores these and other ideas in relation to rhetoric and its implications in museum interpretation and videogames.

6. Rhetoric in the Museum and the Videogame

6.1 Rhetoric in Videogames

Unlike those which proceeded it, this chapter begins with an examination of game studies for, as established in Chapter Three, it is here that the concept of procedural rhetoric originated. Procedural rhetoric explores how, through the use of systems, processes and player interaction, videogames might convey arguments and messages (Bogost 2007:45; Matheson 2015:464). With the genre of serious games, which aim to engage players in a manner beyond solely entertainment, gaining interest, such study provides useful insight into the various ways rhetoric can be employed in games. Examination of the potential of procedural rhetoric and the ways it has been used enables the drawing out of themes and ideas related to rhetoric, which can then be explored in terms of existing museum videogames and the museum sector more broadly, identifying how understandings of procedural rhetoric might contribute to more effective interpretation of contemporary issues through games.

6.1.1 Procedural Rhetoric: Systems with Meaning

As a digital, multimedia format, videogames are capable of rhetoric that goes beyond the textual or even the visual. This is further supported by the idea of videogames as a representational media. Indeed, Gee (2007:139) describes their capability to create representative environments as one of the things that makes videogames so powerful. Videogames can also utilise symbolic forms of representation, and are therefore capable of addressing arguments about symbolic or non-material concepts such as societal, cultural or political processes (Bogost 2008:126). Fernández-Vara (2019:151) further comments that with procedural rhetoric systems are privileged over other methods of representation, meaning the message is implemented deeper than graphics or narrative alone, and is instead entwined with core game mechanics to be negotiated and interpreted through play. Videogames, therefore, do not just simulate cultural or social practices, they create processes through which players can participate in them, represent, evaluate, and understand them (Bogost 2008:119).

Through procedural rhetoric it is argued that videogames can convey a message or meaning, but what does this look like in practice? Ferrara (2012:203) notes that all games communicate meaning, as meanings give play purpose and keep players engaged.

Therefore, it could be argued that all games involve an element of procedural rhetoric. However, it is games that communicate an 'ideological statement' that are of interest to this research (Fernández-Vara 2019:150). This is where the persuasive element of rhetoric is most easily recognised and expressed. Serious games, which tend to deal with real-world situations and issues, often put forward a particular perspective or message. One aim of such games is that players might be encouraged to alter their understandings or behaviour through negotiation of the game's rhetorical argument (Ferrara 2012:204). The potential of procedural rhetoric has primarily been explored in games which have a specific message to impart to the player. When we play such games, there is the implication that we play for reasons that go beyond leisure. Bogost (2008:136) argues that when we play games which incorporate rhetoric, we engage in the exploration of possibility spaces, the negotiation of what is allowed within the rules of the game and why. This 'why' is important as it is through this process of interpreting game rules that players encounter and can critically engage with the intended message. A number of authors have acknowledged the importance of the player as an agent in constructing arguments through interaction with the game's systems. This active role of the player is, after all, what distinguishes videogames from other media. As King (2010) comments, 'only the game makes its claims through the processes it requires players to enact'. By interacting with the game's systems, players are able to break down and understand how the processes behind the game's representation of a situation or issue work (Wardrip-Fruin 2009:218). As such, by ensuring that certain actions in a game result in certain outcomes, a layer of meaning can be embedded into the game.

Celeste (2018) is an indie game available on PC, Nintendo Switch, PlayStation and Xbox that received universal critical acclaim.[43] As an example of a game which utilises procedural rhetoric, *Celeste* is interesting in that it does not fall in the serious game genre. Instead, it is a platformer, a type of game where players primarily progress by successfully moving between different points in the game environment, overcoming obstacles and challenges. The narrative of *Celeste* follows the character of Madeline as she climbs the titular (and fictional) Celeste Mountain, whilst exploring her struggles in navigating mental health and identity issues – issues which Madeline believes can be overcome by climbing the mountain. This is where procedural rhetoric comes into play because *Celeste* is intentionally difficult to complete. Its difficulty forms part of the game's systems through level design and the precise movement mechanics. Just as Madeline's journey to confront her fears and overcome her problems is hard, the experience of playing the game is also hard. In this way,

[43] See Clark's (2018) article regarding *Celeste*.

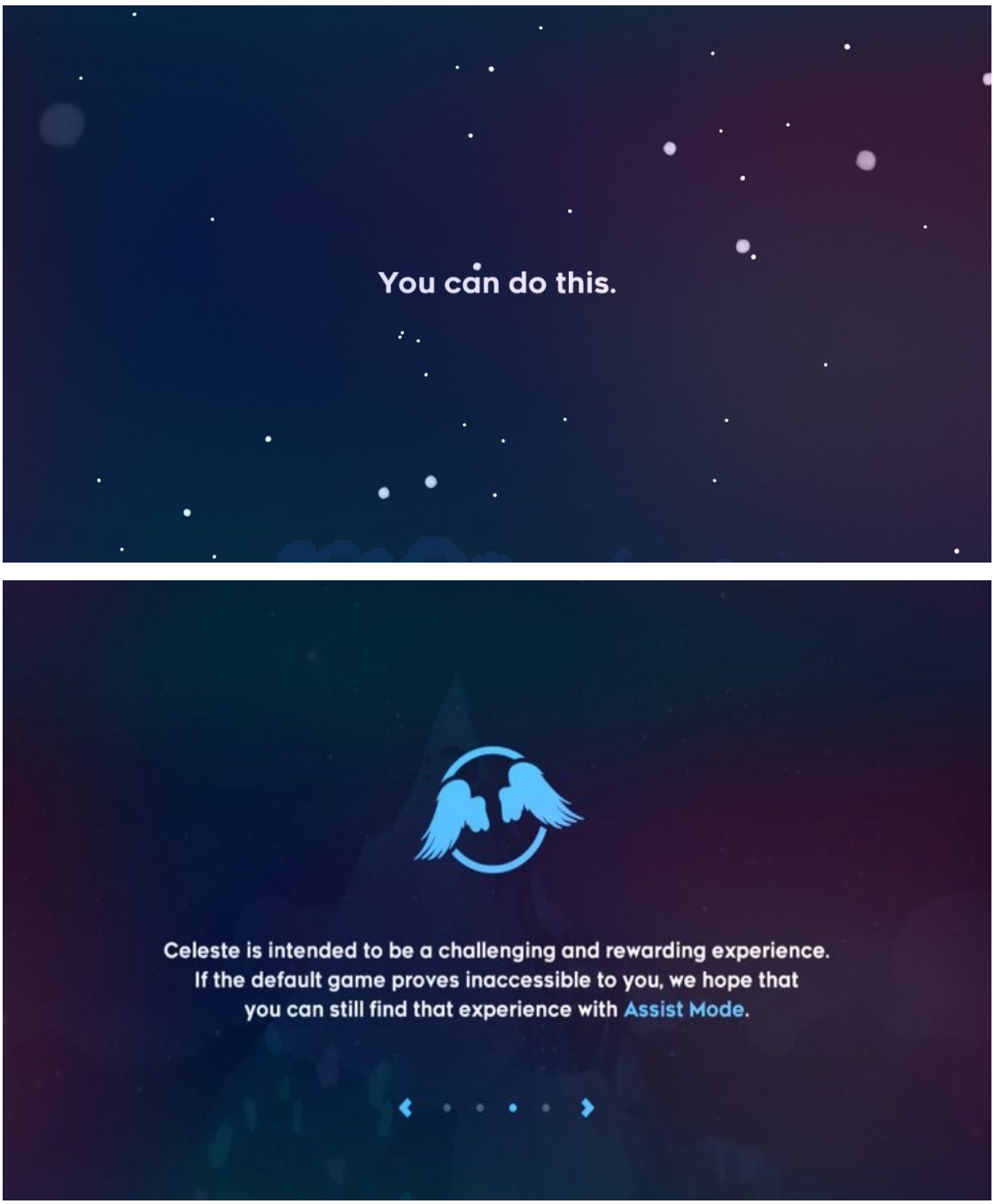

Fig 6.1: Top: A screen at the end of the Celeste's prologue which communicates the game's message. Bottom: Activating 'Assist Mode' in Celeste prompts this screen indicating the intended difficulty of the game.
Images © Maddy Makes Games.

the game's core systems are aligned with the key message of the game's story – this is hard, but if you keep trying, you can overcome it [Fig 6.1]. Failure is also an integral and frequent part of gameplay. It is expected that players will fail in *Celeste*, often repeatedly, before successfully navigating the area, solving problems, and accurately inputting the controls to complete the level. Whilst there are options to make the game easier for those who find the

difficulty inaccessible including the 'assist mode' [Fig 6.1], activating it comes with a message from the developer explaining that 'Celeste is intended to be a challenging and rewarding experience', reminding players of the core message of the game and hopefully discouraging the use of assist mode to negate the intended experience – the procedural rhetoric implemented in the difficulty.

6.1.2 Critical Thinking: Choice and Authorship

Building meaning into a videogame's systems, however, does not guarantee that the player will be successfully engaged with it. The manner in which people interact with these games is also important. Ferrara (2012:208) suggests that procedural rhetoric games can be especially effective at helping players to critically consider, and ideally adopt, the core message of the game. This is achieved by implementing the statement, meaning or message as a fundamental part of the player's journey through the game. In order to progress, the player is asked to 'buy in' to the message that the procedural rhetoric is expressing (Ferrara 2012:208). As such, procedural rhetoric is not necessarily explicit, but rather emerges from gameplay. This interaction creates opportunities for players to explore and consider choices and their consequences within the context of understanding and evaluating the game's message (Seiffert and Nothhaft 2015:261). Ferrara (2012:209) also comments that discovery is an important element of rhetoric in games as, through discovery, players gain a sense of ownership towards what they have uncovered. If players are invested in uncovering the most effective way to achieve victory in the game, they are more likely to engage in a deeper understanding of systems and processes. Yet, it is also possible to see how the act of play encourages the interpretation of player's actions. Galloway (2006:5) notes that when we play, both machine and player work together to enact the various actions possible in the game. As such, the meaning of the game is subject to change depending on how the player participates, and the machine's responses, and cannot be wholly dictated by the developer (Gee 2007:84). Therefore, the construction, interpretation, and deconstruction of procedural rhetoric and persuasive arguments in games is reliant upon both the player and the computer, and is also personal and individual, with the outcome dependent on how the player interacts and responds.

Ideas around critical engagement and adoption of a message through procedural rhetoric can be seen in Ferrara's app *Fitter Critters* (2010), a serious game about feeding pets designed to encourage healthy nutritional habits in children. In order to succeed in *Fitter Critters*, students must 'buy in' to the idea that a balanced approach to nutrition is better

than one that has too much fat, sugar, or overall calorie count.[44] An evaluation of the game in the *Games for Health* journal found that the attitude of many players towards healthy eating changed and, generally, there was an increase in nutritional knowledge, though further research would be needed to explore whether this translated into long-term behavioural change (Schneider et al. 2012). Ferrara (2012:202) emphasises that players must be given opportunities to critically engage, as procedural rhetoric aims to persuade, not coerce. The use of choice is often highlighted as important in ensuring this. In Chapter Five, the idea that choices can lead to a sense of responsibility for the game's outcome was discussed (Veale 2015). Ferrara (2012:202,208, 2013:301) states that players must be offered choices and that all choices, even the 'wrong' ones, must have some meaning behind them and an advantage to choosing them. Otherwise, the player is not critically engaged in learning about and interpreting the message through navigating the systems. Thus, by giving players choices, you can encourage them to think critically about the merits and drawbacks of each choice (Ferrara 2012:209). Seiffert and Nothhaft (2015:261) describe this effect as allowing the player to uncover the meaning of the argument by directly influencing the outcome and experiencing the consequences of these choices. When you make procedural rhetoric a key element of a game, the meaning behind these options and choices becomes especially significant, and the act of uncovering this meaning becomes part of playing.

In the *McDonald's Video Game* (2006) by Molleindustria, the game makes the argument that McDonalds employs tactics that exploit and damage land and livestock, calling into question the ethical and moral standards of the company and how consumers perpetuate the cycle. The game builds a model of the system within which McDonalds operates. The player must make decisions on topics that are often ethically and morally contentious in order to progress. These choices include deciding whether to destroy forests to make more farmland, or deciding whether or not the player can afford to cull diseased cattle in order to meet both the standards and product demand expected by the customer. Each choice has its advantages or disadvantages, but in order to most effectively complete the game, the best choice is often the immoral one. The game aims to inform players about the dubious practices behind the fast-food industry, and through its systems and processes helps them understand how the cycle is dependent upon customer demand. The procedural rhetoric of the *McDonald's Video Game* could therefore be seen as attempting to persuade players to

[44] Ferrara's 'Fitter Critters' submission to the 'Apps for Healthy Kids' hackathon run by the US Department of Agriculture: https://appsforhealthykids.devpost.com/submissions/6134-fitter-critters

reconsider their fast-food habits and to work to improve fast-food company practices. *Civilization VI* (2016), a world-building strategy game, provides a further example to explore how procedural rhetoric might be used to tackle real-world issues. With the release of a game expansion, *Civilization VI: Gathering Storm* in 2019, a new mechanic was added which conveys a message about the real-world issue of climate change. [Fig 6.2]. A number of systems within the game affect how climate conditions are represented, but the most notable is the impact of the newly-introduced resources and methods of producing power. When players need to produce power for their growing cities, initial options available to them are based upon fossil fuels. This is because the game is based at least in part on how the real world has developed. Players rely on coal or oil-based power plants before different options based upon renewable energy sources become available. Continuing to use coal power once renewable sources of power have become available - as players are not required to switch - does still have perks which can positively influence game progress, such as improved production skills. But the power plants are also inefficient compared to other sources of power and contribute to overall progression of the climate change process. Increases to climate change systems lead to increased frequencies of damaging natural disasters in the later stages of the game [Fig 6.2]. Therefore, it makes sense for the player to use renewable sources of energy in order to reduce the chance of natural disasters which hinder progress. With climate change becoming an increasingly prominent issue, the processes programmed into *Civilization VI*, could therefore be read as a commentary or persuasive argument for the use of more renewable energy sources in the real world.

As discussed, procedural rhetoric is not one-sided. The player is not passive, or rather cannot be passive. They undertake a process of uncovering and interpreting information which influences the decisions they make in the game. Developing the player's capacity for critical interpretation is another important element of procedural rhetoric. Wardrip-Fruin (2009:217) comments that the ability of videogames to simulate processes, and provide opportunities for the investigation and interpretation of those processes through procedural rhetoric-based gameplay, can help the player make more informed decisions in the real world. In essence, procedural rhetoric can help players develop critical thinking skills that can be applied both within and outside of the game. Moreover, videogames that use procedural rhetoric to address real world issues can disrupt and unsettle existing attitudes and opinions by exposing limitations and exploring different perspectives and

Fig 6.2: Left: A screenshot of the world climate screen in *Civilization VI: Gathering Storm*. Right: A storm damaging a city in *Civilization VI: Gathering Storm*.
Images © Firaxis Games, Aspyr. Source: Rock Paper Shotgun.
[These images have been removed by the author for copyright reasons]

ways of doing (King 2010; Richardson 2020). This process is summed up quite neatly by Gee:

> *'Videogames have an unmet potential to create complexity by letting people experience the world from different perspectives… This making sense of the virtual world amid not just thought but also action in the world amounts to experiencing new and different cultural models. Furthermore, you may experience these models much more consciously—and render some of your own previous models conscious by contrast in the process—than is typical of our daily lives in the real world.'*
> (Gee 2007:151).

It strikes me that the process Gee is describing, and indeed the possibilities of procedural rhetoric and its application, sound very similar to how museum interpretation has been theorised and understood.

6.1.3 Ethics and Potential Drawbacks of Procedural Rhetoric

Whilst the potentials for procedural rhetoric seem rich and, in many ways, applicable to museum interpretation, the concept is not without its drawbacks. For one, procedural rhetoric and the persuasive power of videogames remains under researched, with little theoretical work being undertaken since Ian Bogost introduced the concept (Jacobs et al. 2021; Matheson 2015; Seiffert and Nothhaft 2015:255). Indeed, Bogost (2007:7) noted that there were issues and limitations with procedural rhetoric including that its effectiveness, and the simulation of complex processes more broadly, very much depended on the capacity of the authors of the game to understand and translate these concepts into code and computer processes. Another potential limitation is that the meanings within the game with likely reflect a specific perspective – that of the developer(s) (Seiffert and Nothhaft 2015:262). King (2010) similarly notes that the human element of procedural rhetoric can be problematic as it often relies upon the player understanding the context of the message (see also Jacobs et al. 2021). As individual players bring different knowledge and experiences, some may lack the context needed to understand the game, resulting in a failure to comprehend the argument or the game as a whole. Interestingly, the issue of context has previously affected museum games. Many players of *High Tea,* designed in the context of a Wellcome Collection exhibition, commented that they had little or no knowledge of the Opium Wars upon which the game was based, and as few as 6.3% of players had actually found the game through the Museum's website (Birchall and Henson 2011:8). Birchall and Henson (2011) further write that whilst many players did express interest in

exploring the topic of the game, others were more interested in creating walkthroughs explaining how to win the game most effectively, or gain the best score.

In his essay *Against Procedurality*, Sicart (2011) makes a number of important points regarding the limitations of procedural rhetoric. In particular, he argues that the concept of procedural rhetoric as currently understood, whilst of value to the growing ontological comprehension of games, is problematic because it has not focused enough on the player (Sicart 2011; Frasca 2007). This effect, Sicart comments, is two-fold. If games are designed for procedural rhetoric, but not the player, they risk losing some of the 'richness, pleasures and challenges' that make games enjoyable to players (Sicart 2011). This approach insinuates that a game's meaning can only be found in its rules, and the player's experience thus becomes less about 'play' and more about completing the processes laid out. The result, Sicart argues, is that games explicitly designed with procedural rhetoric constrict the avenues for players to appropriate and negotiate the systems and rules. In essence, the games 'play the players' and in doing so, potentially alienate players who came for the game, not the message (Sicart 2011). There is also a potential problem in the way the message is communicated. Ferrara (2012:212) comments that the message of games which utilise procedural rhetoric is rarely 'stated explicitly' in the game. Therefore, it may not be clear to players that there is a message or position that the game is attempting to communicate. This risks persuasion becoming coercion, as players are not informed and aware participants in building and deconstructing the game's argument.

Whilst objects and even technology can be imbued with ethics, values or politics, ultimately these are personal experiences, and how the player interacts with and brings their own experience to the game will change how it is viewed and interpreted (Sicart 2011). What is often missing in procedural rhetoric, Sicart goes on to argue, is space for the player to give back and contribute their own viewpoints, to engage in that process of conversation as described by Bogost. Procedural rhetoric should not be about communicating ideas *to* the player, but rather inviting players to participate in a conversation *about* the ideas, in a manner than mirrors contemporary interpretative practices in museums that are becoming more participatory and dialogue-based. Sicart (2011) describes the effect of games which successfully implement this type of procedural rhetoric as providing a 'guided process of meaning-making'. Finally, when considering potential limitations particularly for museum games using procedural rhetoric, King in his study of Diane Davis' work on rhetoric, draws out a point that is especially applicable. When the content matter deals with the 'other', something beyond their frame of experience, the player will always be engaging with something that 'can never be fully grasped or represented' (King 2010). As explored in

Chapter Five, the limitations involved in attempts to communicate the 'other' are common and well-known in museums and it is important to recognise that videogames, and indeed procedural rhetoric, will not necessarily overcome these limitations. However, what videogames can do is represent the 'other' in an interactive format using different frames and perspectives that may help with understanding and identification, and, with the use of procedural rhetoric, challenge some of the assumptions and judgements that museum visitors may arrive with.

6.1.4 Procedural Rhetoric, Difficult Topics, and Contemporary Issues

Games which are explicitly designed with procedural rhetoric often explore real world issues. This is not a coincidence. Bogost (2007:244,340) stated that procedural rhetoric would be most effective and meaningful when it allowed players to 'interrogate our world, to comment on it, to disrupt and challenge it'. Similarly, Gee (2007:151) comments that videogames have 'an unmet potential to create complexity by letting people experience the world from different perspectives'. As players undertake an 'act of surrender' to the narrative/fiction of the game they are empowered to start a conversation with the game about values, morals and ethics (Guanio-Uluru 2016; Sicart 2013:12). Like museum interpretative practices which provide new perspectives and challenge preconceptions, games with procedural rhetoric can fulfil similar purposes. Taking this further, Ferrara (2013:303) argues that 'games can solve real problems' by creating opportunities to experience political, economic or social issues from a perspective outside existing frames of reference. When procedural rhetoric relates to real-world issues, the ideologically charged nature of the game becomes especially evident although, Vee (2010:346) notes that the political or social implications of such arguments are yet to be fully explored. This is particularly relevant considering that many videogames designed with procedural rhetoric in mind are either political in nature or politically charged, such as *September 12th* (2003), a game which challenges the political policy of the 'war on terror' and its implications following the September 11th terror attacks on the Twin Towers (Espel 2015). Not all videogames that put forward a political argument necessarily acknowledge that they *are* political, as we shall see later in this chapter with the *Decision Points Theatre*, making critical engagement all the more important. Therefore, it is worth exploring a few more examples of procedural rhetoric in games tackling contemporary issues, to aid consideration of what procedural rhetoric might be capable of in museum games and its potential drawbacks.

Bury Me, My Love (2017) was initially conceived as a mobile game. The title is drawn from a Syrian phrase which approximately translates to 'don't even think about dying before I do'.

Based on the refugee crisis caused by the Syrian civil war the game follows the fictional journey of Nour, a Syrian refugee travelling to Germany. The game aims to represent the complex situations of refugees as they attempt to reach safety and as such, the narrative is based on the experiences of refugees who have undertaken similar journeys to Europe.[45] The game's release, during ongoing refugee crises, was especially timely considering the often-negative portrayal of refugees in popular media (Berry et al. 2016). *Bury Me, My Love* sets out to provide a more complex and positive message regarding refugees, challenging preconceptions players might have, enabling players to explore why refugees might make certain choices, and creating a sense of empathy towards the potential emotional impacts of common refugee experiences. In *Bury Me, My Love* you play as Majd, the husband of Nour. In the wake of violent attacks near their home town, they decide that Nour should leave Syria. The game takes place through a phone-like interface through which players advise Nour as she makes decisions, and provide comfort and support when she encounters difficulties and dangers [Fig 6.3]. In order to represent a realistic experience, at times Nour will do what she thinks is best in a particular situation, even if that means acting against the player's advice. The story, whilst pre-scripted, further reminds us of the real people behind the terms 'migrant' and 'refugee' through small, familiar details such as autocorrect mistakes [Fig 6.3].

In the game procedural rhetoric is primarily found in its realistic depiction of situations affecting refugees and the processes behind them. The information the player receives is purposefully limited as they are distanced from Nour's experiences. There are also no clear right or wrong choices in *Bury Me, My Love*, with progression relying on the player's judgements of situations about which they have very little knowledge. In this way, the game is able to represent difficult decisions refugees make whilst travelling and reflect how refugees often have little control, relying on both official structures and strangers to progress their journeys. These systems contribute towards a sense of helplessness, in which small victories where players successfully guide Nour through a situation become large achievements within that context. In addition, there are a multiplicity of narrative paths which explore the many complex and frequently perilous refugee routes from Syria to Europe, as well as how refugees are treated in different places. In total there are 19 different

[45] The story of *Bury Me, My Love* is partially based on the experience of Dana, a Syrian refugee, whose journey to Europe was documented by French journalist Lucie Soullier. The article – in French - "Le Voyage d'une migrante Syrienne à travers son fil WhatsApp" (The Journey of a Syrian Migrant, as Told by her *WhatsApp* Messages) can be found at: https://www.lemonde.fr/international/visuel/2015/12/18/dans-le-telephone-d-une-migrante-syrienne_4834834_3210.html

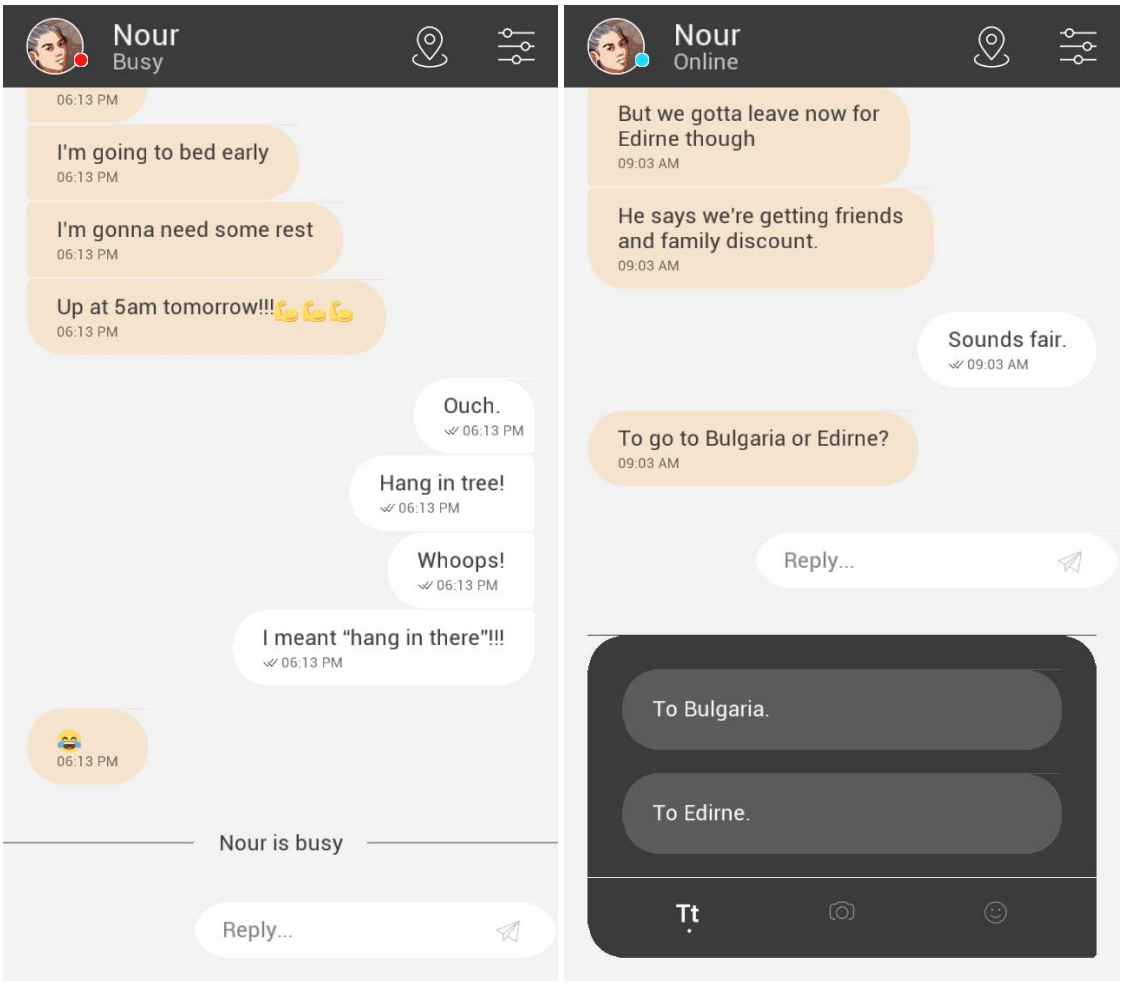

Fig 6.3: Moments of humanity in *Bury Me, My Love.*
Images © The Pixel Hunt/Arte France/FIGS.

endings to *Bury Me, My Love*, some of which are hopeful, others harrowing. When played on mobile (and arguably, the game is best on mobile), *Bury Me, My Love* also effectively utilises a mechanic that simulates real-time messaging which has both emotional/affective and procedural rhetoric potential. Following decisions about tense or dangerous situations seeing the message 'Nour is busy' and having to wait to hear back - if you hear back at all - is surprisingly affective as player investment in their choices can build empathy with the character of Nour and her circumstances (Richardson 2020:539). Simultaneously *Bury Me, My Love* enables the player to experience the worry and wait of those left behind whilst friends and families attempt the treacherous journey. *Bury Me, My Love* is not always a happy game, but if it is to accurately reflect the experiences of refugees then maybe it's not meant to be. As such, it is the hope of the developers that players will continue to ponder on

the stories of refugees beyond the game.[46] *Bury Me, My Love* thus demonstrates that a game which utilises procedural rhetoric techniques can build a connection with the 'other', enabling critical interpretation of a current social and political issue.

Short indie game *Easy Level Life* (2016) was developed by DE Team and released on itch.io, a popular online platform. Developed in response to media coverage and societal response to fatal police shootings of people of colour in America which often placed blame on the victims, *Easy Level Life* provides 'a glimpse of life for people of colour in society today'.[47] Richardson's (2020:538) interview with Yvvy, one of the developers, discussed how frustration with the media and online forums directly inspired *Easy Level Life*, and its inclusion of mock newspaper articles. In *Easy Level Life* the player experiences the perspective of a Black schoolchild who has recently moved to a new, and supposedly safer, neighbourhood, through an encounter with police officers during their walk to school. [Fig 6.4]. The player is immediately confronted by a representation of police brutality as their character comes across a scene of police officers attacking a Black man who is lying on the ground [Fig 6.4]. The player is then presented with choices, none of which are aggressive in nature, with the aim of avoiding becoming involved in the situation. Yet, regardless of which option is chosen, the police always find a reason to see the child as a threat and there is no narrative path in which the player survives the encounter. The final screen of the game is a mock newspaper report of the encounter which presents a message regarding real media responses to fatal police shootings, attempting to portray the child as a threat, often misrepresenting the situation entirely. The frequent disconnect between media portrayal and reality is made clear in these mock articles which describe the schoolchild as a 'large Black person' who supposedly - and absurdly - intimidated the officers by 'standing still with their hands in the air' [Fig 6.4].

Easy Level Life is intentionally and explicitly politically and socially charged, dealing with issues of systemic racism and police brutality towards Black people in America. It asks players if they are 'willing to step outside of [their] comfort zone' to understand the experiences of people of colour.[48] The political nature of the game is further emphasised in the default name for save files 'ACAB' (All Cops Are Bastards), an acronym commonly used as a political slogan. There are clear elements of procedural rhetoric in *Easy Level Life*'s

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[46] The developers express this wish at the end of the '…based on true stories' section of the game's website, available at: https://burymemylove.arte.tv/

[47] From DE Team's game description for *Easy Level* Life, available at: https://timecube.itch.io/easy-level-life

[48] Ibid.

Fig 6.4: Playing *Easy Level Life* (2016)
Images © DE Team.

message that the 'game' is rigged for people of colour (Richardson 2020:538). This message is suggested through the system of choice - or lack of them - available to the player, and how media is represented. Furthermore, at the end of the game, players are given two options: 'try again', or 'I've had enough thanks' [Fig 6.4]. These options are also interesting. 'Try again' takes players back to the beginning, providing opportunities to continue exploring the 'rigged' nature of the game, whilst 'I've had enough thanks' is suggestively worded. The latter could potentially reflect the feelings of the developers, the attitude of the player on realising they cannot win the game, or the adoption of a proactive attitude towards ending police brutality. Richardson (2020:538) thus notes that a 'discrete social justice claim' is made inside the game. Selecting 'I've had enough thanks' also provides no catharsis or hopeful resolution as the game immediately closes, leaving players to muse upon the phrasing of their final choice and what it might mean for them.

6.2 Rhetoric in Museum Interpretation

When considering how procedural rhetoric might relate to museum interpretation, it is worth establishing how museums are already engaging with rhetoric. Academic works and practical projects have begun exploring how the museum sector has engaged with rhetoric in a variety of ways. Whilst a number of recent academic works have focused specifically on rhetoric in the museum sector, as Kidd (2014:1) notes, museums are yet to fully understand the implications of engaging visitors with 'politically charged and ideologically loaded displays' in what is increasingly being recognised as a non-neutral setting. The following section will therefore explore museum engagements with rhetoric, and how videogames might contribute to contemporary museum interpretation.

6.2.1 Museums Are Not Neutral: Rhetoric in the Sector

In 2017, a twitter exchange between museum professionals Mike Murawski and La Tanya Autry led to the foundation of the 'Museums Are Not Neutral' campaign.[49] The primary argument of the campaign, as the name suggests, is that museums are not neutral institutions and can be 'powerful agents of social change' (Murawski and Autry 2019). Kidd (2014:7) further suggests that museums should, at least in part, aim to create 'good' citizens who understand and undertake in social justice. The study of rhetoric in museums is

[49] The 'Museums Are Not Neutral' campaign can be found at: https://www.museumsarenotneutral.com/

particularly significant in light of these changing perspectives on the role of museums in society in regard to social, political and economic issues. Similar questions have been posed by museum professionals, with Kate McLeod (2017) asking whether museums had a responsibility to become 'places of dialogue for change'. Increasingly, academics and museum professionals are recognising problems with the perception of museums as neutral institutions, leading to further development of understanding about the potential of museums as agents of change in society. This shift is well summarised by Kayleigh Bryant-Greenwell's keynote talk for Museum-iD, 'Taking a stand against neutrality: the role of social justice in museums'. Bryant-Greenwell (2019) breaks down the ways that the neutrality of museums can be questioned; in the influence that museums have over their visitors and communities, the politics behind funding and sponsorships and their influence on exhibitions development, and the impact of colonialism on Western museums and their narratives. As Murawski and Autry (2019) comment, 'for the most part, museums are products and projects of colonialism… they are by nature not "neutral"'. Cameron (2006:30) also argues that museums are 'inextricably political… acting as instruments of political and cultural power'. Museums are rarely ideologically 'clean' environments and often reflect their political and cultural context (Stylianou 2019:312). It is especially important that museums as places of social justice, activism, and change acknowledge the influences and biases that shape their stances on certain topics in order to enable the development of informed, comprehensive discussion.

All of this has implications for how we recognise and examine rhetoric in museum exhibitions, yet we must also acknowledge that to some extent rhetoric is always at work in the sense of communicating a meaning and message. Fleming (2016:74) argues that no museum is ever neutral as every display conveys a message. Museum exhibitions are unique as media, bringing together many different elements such as 'objects, installations, people and arguments' (Weibel and Latour 2007:94). Note the rhetorical implications of the use of the word 'argument' here. Macdonald's (1998:3-5) comments on issues of authorship, political and economic interests, inclusion and exclusion of audiences, and the privileging of certain interpretations of topics, could also be read as relating to rhetoric. Indeed, the rhetoric and persuasive potential of methods of display in exhibitions is explored later in her study (Macdonald 1998:3-5). Similarly, Bonnell and Simon (2007:68) acknowledge that museum exhibitions often communicate a specific perspective or viewpoint. Therefore, one of the biggest issues facing exhibition designers is deciding which objects to include and how to express certain meanings through interpretation (Bonnell and Simon 2007:68). Meaning is also an interesting concept in discussion of rhetoric, as objects might be interpreted in ways which support the communication of different messages. Objects, sites,

events, or practices might be considered meaningful because they have an emotional, evocative, or affective weight; or because they hold a particular meaning or significance for certain audiences (Dickinson et al. 2010:3). As such, the interpretation of meaning and significance by visitors is part of a 'highly complicated process hugely influenced by the wider interpretive framework within which they [objects] exist' (Stylianou 2019:320). Interpretative and exhibition design form an important part of explorations of rhetoric and persuasion in museums.

Although an object's meaning is communicated through interpretation in museums, the message or argument behind that particular interpretation is often only noticeable in its absence or when it is challenged. To return to an example from Chapter Four, the artistic intervention of Fred Wilson at the Maryland Historical Society also included a display of Western-style suits (Robins and Baxter 2012). Wilson chose to interpret these suits as 'costumes', undermining and challenging the Euro-centric practice of labelling clothes worn by 'others' as 'costumes' [Fig 6.5]. In doing so, Wilson critiques the way in which Western museums interpret and build narratives of meaning around their objects (Robins and Baxter 2012:248). Outside of projects such as this, in most cases the museum remains the author of the meaning(s) presented to the visitor through interpretation. Yet, Allison-Bunnell (1998:67) argues, due to the historical, and therefore at least partially unknowable, nature of the majority of museum objects museums can never fully capture the meaning(s) evoked during the life of that object. Interpretation of meaning, then, is always limited. As Dickinson et al. (2010:13) note, this suggests that there is 'no "pure" articulation of the past' but instead elements such as language, narrative, and tropes that we use to articulate the past can often be used as 'inventional' resources. These resources when used selectively or creatively in an 'invention' of meaning, can act in a rhetorical and persuasive manner (Bogost 2008:124; Dickinson et al. 2010). In this way, museums can use interpretation to persuasively present the past and its relevance. Rhetoric in museums has the capacity to challenge neutrality, effect social change, and contribute to our understanding of interpretation. When used well, rhetoric could also be used to bring to light the ways in which the past is drawn upon in order to suggest 'future-orientated possibilities' and 'new social formations' (Lafrenz Samuels 2015:7-8, see also Munslow 2007:520; Weiser 2017:34). In other words, rhetoric in museums can, by relating us to our commonality and differences throughout the past, prompt challenge or change about elements of our present and future.

Fig 6.5: 'Guarded View' by Fred Wilson
Image © Fred Wilson. Source: Whitney Museum of American Art.
[This image has been removed by the author for copyright reasons]

In academic works, the concept of rhetoric in terms of museums has been further explored. Weiser's work *Museum Rhetoric* (2017:5) makes a distinction between the study of rhetoric *in* museums, or 'rhetorical museology', and understanding the rhetoric *of* museums, or 'museological rhetoric'. Rhetorical museology can be studied by examining how individuals are 'persuaded to unite their identities with the civic identity through object, text, and space', through museums which, using exhibitions and interpretation, propose 'a flexible unification of diverse parts' (Weiser 2017:6, see also Daniel-Wariya 2019:395). These concepts of identification and unification can also be found in the work of Dickinson et al. (2010:1) who explore how 'rhetoric, memory, and place form complex and important relations', connecting people with objects, history, and each other. Museological rhetoric analyses 'the role of rhetorical museums as sites of civic engagement' (Weiser 2017:6). According to Weiser (2017:33-34), rhetorical museums serve as a place of intersection between the public and the academic, political and aesthetic, where rhetoric 'unites the logical and the emotional into thoughtful, action-oriented persuasion'. Whilst Weiser does discuss the persuasive element of rhetoric, Lafrenz Samuels (2015:4) more explicitly tackles the idea of 'heritage as persuasion'. Within her edited collection, the concept is explored through the social, political, economic, and moral contexts of museums, as well as considerations of the persuasive power of presenting objects or sites as having certain significance using various standpoints, perspectives and claims. Critically examining rhetoric enables us to more fully explore the increasingly strategic, persuasive, and active role museums play in contemporary society. As Lafrenz Samuels (2015:7-8) argues, to explore museum rhetoric is to explore how the past is 'mobilized in the present' in order to put forward and encourage the acceptance of a specific narrative.

Alongside the rhetoric that arises from the use of persuasion and argument in museums, another area of interest considers the rhetoric of museum practices themselves, such as the meaning and use of common museum terminology, and through this critically examines the role and purpose of specific museums. Lafrenz Samuels (2015:4) discusses the wider 'rhetoric of heritage', in terms of the existing meanings and practices through which heritage is enacted, codified and institutionalised; which can often be problematic and, as is often acknowledged, need frequent re-examining. For instance, Karlström's (2015) case study of cultural traditions in a Vietnamese village explores alternative methods and understandings of heritage to typical Western standards. In particular, practices and understandings of authenticity and preservation in relation to historic religious temples are discussed. Within Vietnamese culture, when a new temple is constructed rather than preserving the old temple, it is destroyed in order to empower the new temple and make it ready for use. This destruction, although the antithesis of Western understanding of

heritage preservation, is an important cultural and religious practice in Vietnam (Karlström 2015:32). For the people of the village, it was the spiritual heritage that the building contained that held value, rather than the building itself (Karlström 2015:33). Their concept of authenticity is more fluid and complex than is generally considered within museums (Karlström 2015:31; McGee 2006:181). Karlström (2015:43) concludes that it is important to be aware of our individual rhetorical background, and to be sensitive and imaginative about the way objects and sites are approached in order to best help people connect with their heritage in a way that is culturally relevant and reflects the values of that society (see also Kidd 2014:7). These issues of context and practice can be addressed and demystified through interpretation. In the case of the Vietnamese temple, interpretation of both religious and scientific discourses formed the basis of decisions about the preservation and management of the site, so that the needs of the community and heritage practitioners could all be understood and met (Karlström 2015:42-44). Rhetoric, therefore, can be put into practice using a variety of interpretative methods and for a variety of purposes. It is these developing understandings of museums as rhetorical and persuasive spaces and in particular the potential of new technology such as videogames which, as Gruber (2014) notes are underexplored in current literature, that the following sections will explore.

6.2.2 Critical Thinking: The Case of Decision Points Theatre

Staiff (2014:14) wrote that contemporary interpretation in museums is characterised in part by 'critical questions' which lead to 'informal learning'. Alongside discussions of rhetoric there has been a shift towards museums as places where visitors can debate and critically engage with contemporary issues as part of the interpretative process and negotiation of meaning. This critical engagement is arguably even more important considering non-neutrality and rhetoric in museums, as visitors will need to 'critically consider the nature and source of the evidence and information presented' in order to fully understand the interpretative context of the museum and undertake informed meaning-making (Cameron 2006:18,33). Depending on the perspectives visitors bring to the museum, engaging critically may involve challenging their opinions and existing knowledge. In this way visitors may, through active engagement with the rhetoric of an exhibition, reconsider their expectations in regards to how stories might be told in museums (Bonnell and Simon 2007:67). In order to encourage participation, many museums are beginning to develop co-productive practices and spaces where critical debate and discussion can take place. Radice (2015:255) identifies a number of ways in which visitors are prompted to participate in contemporary exhibitions including by contributing their own stories,

commenting on exhibits, voting, and co-designing. In this sense, museums are increasingly sharing their rhetorical power with visitors, empowering them to become voices of interpretative authority (Cameron 2006:33). Digital technologies, such as videogames, have been identified as a medium through which interpretative techniques can be transformed (Kraemer 2018; Osterman 2018). The growth of interest in these areas has resulted in one recent study explicitly exploring procedural rhetoric in a museum game, which evidences how some of these questions around critical thinking and participation have been negotiated – successfully or unsuccessfully - in practice.

Joshua Daniel-Wariya (2019) explores elements of procedural rhetoric in the digital game *Decision Points* from the Decision Points Theatre at the George Bush Memorial Library. The game forms part of an exhibition on the Bush Doctrine, the foreign policy principles employed by George Bush during his presidency.[50] Importantly, Daniel-Wariya (2019:389) notes, due to its political ties and purpose as a memorial library the Museum usually avoids the more controversial aspects of Bush's Presidency. The game is found, should the visitor traverse the Museum as intended, after a section of films and information that explore Bush's policy decisions, and the policy points upon which he was elected, but before the area of the exhibition that covers the Bush Doctrine itself. The section on the Bush Doctrine provides further context and information on how the doctrine represented a broader change to established U.S. foreign policy, and how situations encountered within the *Decision Points* game reflected and influenced these policies. Also of note is that the entrance to the Decision Points Theatre follows directly from coverage of the terror attacks on the Twin Towers on September 11th 2001 and, as such, arriving at the Decision Points Theatre, the idea of dealing with crisis is fresh in the visitor's mind. *Decision Points* puts visitors into the position of George Bush at key points during his term as president. The scenarios the game covers include the response to Hurricane Katrina and the decision to invade Iraq. The intended rhetorical message of the game is that Bush's decisions were 'correct', and it aims to achieve this by engaging visitors critically with each situation using information that was available to Bush. In this way, the game asks visitors to engage with the experience of the 'other' in a manner which might challenge their existing opinions (Bonnell and Simon 2007:81). The game asks players to choose one of four scenarios, providing each individual

[50] The full Bush Doctrine as taken from Bush's own memoir; Decision Points, is as follows:
1. "Make no distinction between terrorists and the nations that harbor them – and hold both to account."
2. "Take the fight to the enemy overseas before they can attack us again here at home."
3. "Confront threats before they fully materialize."
4. "Advance liberty and hope as an alternative to the enemy's ideology of repression and fear."

with brief (and unique) information updates from advisors, simulating the kind of information that George Bush was receiving. Upon receiving their different pieces of advice, players must discuss and debate the information they have been given and vote collectively on which action to take.

Due to this dependence on visitor participation, Daniel-Wariya (2019:400) suggests that although *Decision Points* might not be considered a true videogame as the institution has considerable control over the majority of the narrative and its outcomes, the exhibition can be viewed as videogame-like. This is interesting as it does not necessarily align with understandings of videogame narrative, authorship and emergent gameplay discussed in Chapter Four. Daniel-Wariya also acknowledges that *Decision Points* is far from perfect as a rhetorical tool, but highlights some specific rhetorical capacities of videogames that it uses which make it suitable for further exploration. In particular, he identifies three key elements that are used within the Decision Points Theatre. First are the 'possibility spaces' where the player is able to meaningfully interact with and build empathy and connection with the game, in this case through positioning the player in the perspective of Bush, and the representation of a Bush-era Executive Conference Room in the space's design [Fig 6.6]. Second is the use of valorised outcomes, the message that the designers want the game to convey. Within *Decision Points* this would be for players to perceive George Bush's decisions as 'correct', or challenge their preconception about his decisions by working through the processes of the game and interpreting the information to see if they independently arrive

Fig 6.6: The Critical Decisions Exhibition 'Decision Points'
Image © George W. Bush Presidential Center.

at the same conclusions. Finally, there is procedural modelling, or the rules guiding the game, the most relevant being the voting mechanic (Daniel-Wariya 2019:388).

A number of aspects of the *Decision Points* experience therefore reflect ideas related to procedural rhetoric and rhetoric in museums more generally. In the voting mechanic and its outcomes, the rhetoric elements of the game become especially clear. If players find that they disagree with Bush, the game accepts their response but provides an explanation for the president's thinking to encourage further reflection and critical thinking. In this way *Decision Points* creates space for debate which can open 'people's minds to other points of view on topics' (Cameron 2006:7). However, if players fail to make a decision, they are reminded that inaction was not an option for the president, and it is also not an option in the game (Daniel-Wariya 2019:393). They must make a decision to complete the game. In addition, there are other layers of rhetoric at work. The location of *Decision Points* plays a part in its rhetorical potential. For one, as a Presidential Memorial Library, the Museum attempts to persuade visitors that the person it memorialises was a good President. As such, within the Museum the narrative is one that encourages visitors to see the President's point of view and argues that the decisions he made were well thought out and valid. The specific context of the Bush Doctrine is also important. Daniel-Wariya (2019:405) suggests that visitors encountering information on the Bush Doctrine after completing *Decision Points* would not immediately understand its link to the game and therefore would fail to recognise the game's rhetorical role because visitors are not accustomed to encountering persuasion in videogame form. Therefore, he contends that the messages are covert and implicit, undermining the attempt to make a nuanced case for the Bush Doctrine. However, I would argue that the wider context around the game, which includes information on the Bush Doctrine, the influences on the policy changes employed by Bush such as the September 11th terror attacks, and the Museum as a Presidential Library, means that visitors probably had some sense of the message they were likely to encounter in *Decision Points*, even if the format was unfamiliar to them. Whilst they may not have the skills required to immediately interrogate the game, I believe that the game's systems of debate, decision making, and voting encourage players to begin undertaking a process of critical thought in relation to the subject matter. A procedural rhetoric museum game should encourage players to critically explore and interpret the message it is putting forward.

6.2.3 Issues of Authorship and the Balance of Power

Just as in videogames, rhetoric in museums is not without its issues. The common perception that museums are neutral sites remains prevalent and can prove problematic in

relation to rhetoric and persuasion. The acknowledgement of non-neutrality, making clear to visitors that the museum is not without bias, is becoming more widespread amongst museum professional and institutions. However, other issues around authorship and the balance of power can also impact on a museum's use of rhetoric and how visitors engage with it. Who is included and excluded in terms of authorship is something that needs to be reflected upon in the development of any exhibition. As Rodéhn (2015:101) notes, when faced with designing an exhibition for the 'people', it is rarely considered how diverse the 'people' are, with many minorities and social groups visiting museums that will be looking for representation and connection. Whilst new narrative approaches might improve representation, the narrative(s) that the museum uses will likely represent the viewpoint of a particular group and therefore a particular rhetoric.

Failing to recognise and incorporate different perspectives can result in issues, as McGee (2006) found in her study of the restructuring of a South African art museum. The Museum began to undergo a process of decolonisation in response to changing attitudes amongst its community. Tensions arose between Western-educated Museum staff and local artists who felt that they were not reflected in exhibitions, but who still recognised the value of the Museum and wished to be a part of it (McGee 2006:189). McGee (2006:188,192) found that a small number of Museum staff held rhetorical power, as the objects on display and how they were interpreted formed a collective memory which did not represent the wider community, a majority black population, or their heritage and traditions. Even when changes were made, McGee (2006:192) notes that in many cases the changes were temporary, and that the potential to challenge the status quo went unmet. Thus, the Museum still portrayed a flawed memory of the country's art heritage. A study of Manchester Museum's attempts to involve a group of Somali refugees in the interpretation of the Museum's objects examined similar issues relating to authorship and control. As refugees began to challenge the existing interpretation of objects, Lynch (2014) noted that the Museum responded by situating the contribution of the Somali refugee's interpretation in a way that subverted any substantial challenge to the Museum's narrative. Equally, throughout the process the Museum maintained authority over the relationship with the community, enabling the Museum to distance themselves from the potential emerging from the dialogue, instead maintaining an 'objective' position (Lynch 2014:87-89). These situations reflect a common rhetoric, especially in national museums, where the selection of objects and topics by the museum's employees is used to reaffirm a set of values that the nation or authority considers to be 'ideal', and which visitors are encouraged to embrace (Weiser 2017:31). If the community is excluded from this process and space is not provided for visitors to challenge narratives and values, this can prove problematic in terms of the

balance of power and authority over heritage and its meaning.

A recent case study on museum persuasion provides further insight into the ways in which museums engage in rhetorical practice and the potential issues with undertaking a persuasive approach. Gruber (2014) critically examines *The Majesty of All Under Heaven*, an exhibition of the terracotta warriors at the Hong Kong Museum of History, and the ways in which the exhibition attempted to persuade visitors to align themselves with China's discourse of unification by emphasising the power and grandeur of China. This message has only become more contentious following recent events and protests in Hong Kong. The rhetoric was mainly expressed through exhibition design and narrative, but of particular interest to Gruber and this study are the ways visitors were encouraged to participate in rhetoric through digital technologies. Gruber (2014:151) describes this as a 'bodily "rhetoric of the people"' where rhetoric is performed through interaction with immersive digital spaces. These included the first encounter visitors had with the rhetoric of the exhibition, a large interactive film, and an interactive where visitors could project their face onto a terracotta warrior thereby enacting an alignment with the warrior's identity (Gruber 2014:157,162). The projected film had three parts, the first two of which tried to align the visitor with the Chinese identity and agenda, whilst the third and final section acted as a deterrent against those who might oppose China. In the first section, visitors are invited into a narrative of friendship where they meet a friendly terracotta warrior and examine his chariot. Within the second section, traditional Chinese music plays and birds fly across the screen. Visitors are encouraged to dance along with the figures and, through this enacting of a culturally significant tradition, begin a process of internalising Chinese culture. In the third and final screen, visitors are given the option to stand in opposition to the warrior and are 'attacked' by the projection. Gruber (2014:157) suggests that this virtual attack is intended to imply the potential opposition faced by those who stand against China's narrative.

There are some notable elements that build this exhibition's rhetoric. Digital technology features heavily, with an emphasis on immersion and visitor participation. Whilst not a videogame, the interpretation in the exhibition does have playful, game-like elements, and it is possible to see aspects of procedural rhetoric at work. In particular, the use of feedback between visitor and machine is clear within the film projection. The importance of visitor enactment of the exhibition's argument mirrors the idea of players working through the rhetoric of games by enacting their systems. The choice to utilise technology in this exhibition allowed the designers to facilitate and provoke interactions in ways that would be difficult in other forms of media. Similarly, as Gruber (2014:163) notes, the narrative of

the exhibition is one that encourages identification with the 'other'. When visitors interact with rhetorically-charged elements, they are asked to consider how the 'other' might feel and react. *The Majesty of All Under Heaven* also shows how persuasive rhetoric can be enacted within museums by outside parties. Gruber (2014:163) concludes that the exhibition is a good example of political affect 'mobilized as a kind of constitutive rhetoric' wherein Mainland China is able to build up a 'political affect' or disposition towards their narrative of unification.

What this exhibition highlights are the ways in which persuasion in museums can be potentially problematic, particularly when the persuasive aims of the exhibition are not made explicit. Rhetoric is most successful when those interacting with it are able to openly debate and critically engage. In order to persuade and not coerce the rhetoric argument underlying exhibitions must be clearly and openly articulated, so that visitors are aware that they are engaging in discussion about a specific political or social message. The importance of the visitor as a challenging voice is highlighted by Kidd (2014:2-3), who writes that the visitor's voice is one that is 'eloquent, considered, powerful and (crucially) visible'. Museums are increasingly becoming places within which different communities and individuals are able to question the authority of the museum and the narrative they present. In this way, the museum continues to move away from the ideology of museum as temple, and towards the idea of the museum as forum (McGee 2006:192). Through rhetoric and persuasion, museums can become a transformative and transforming power in society. But what these examples show is that whilst rhetoric is becoming more visible and recognised in the museum sector, we must be careful to engage with rhetoric in a manner that opens up space for discussion, debate, and response, and not revert back to museums as authoritative institutions that put forward what a select few see as the 'correct' and 'acceptable' view of the past and present.

6.2.4 Museums, Contemporary Issues, and Rhetoric

The potential of museums as agents of change is perhaps most clear when they tackle a contentious or contemporary issue. Indeed, museum narratives that tackle topics traditionally considered difficult, uncomfortable, or controversial have become more common with Macdonald (2015:13) noting that addressing such topics is often seen as the right thing to do. A consequence of this is that museums are increasingly embracing the idea that interpretation involves taking a stance or side, and, as we have seen throughout this chapter, rhetoric in exhibitions is especially effective when the intended message is made clear. Before moving onto the conclusion of this chapter and Part Two, we will explore some

examples of museums engaging with complex contemporary issues, using videogames and rhetorical techniques to encourage positive social change.

As discussed in Chapter Five, *Utah Climate Challenge* is a multiplayer game created for the National History Museum of Utah by game company Preloaded. Situated within an exhibition entitled 'Utah Futures' *Utah Climate Challenge* tasks players with building a Utah city for the future whilst also tackling climate change. Players participate in groups, making choices from a series of individual options to most effectively meet the needs of the city. These choices emphasise the impact of different policies on climate change, and climate change on the city [Fig 6.7]. The rhetorical nature of the game is made clear by Museum staff who comment that they wanted the game 'to effect genuine behaviour change around issues of sustainability, biodiversity, population growth and urban sprawl'.[51] This reflects discussions of how procedural rhetoric might impact behaviour by representing real-world situations. The choices players make in *Utah Climate Challenge* are made meaningful because, as Ferrara argued earlier, failure is also incorporated into the game's systems where choosing certain options might be initially beneficial but ultimately lead to disaster. The game therefore argues that certain policies are better for both the environment and the future of Utah. Furthermore, *Utah Climate Challenge* encourages visitors to recognise and take ownership of their individual battle against climate change, but also emphasises that damage can only be prevented if society works together. This is implemented in the multiplayer mechanics where individual actions may bring about change, but more options are available and actions more effective when the game is tackled by groups. This also opens up communication between players on their interpretation of the topic as each player's decisions impact the overall progress of the group, creating space for debate and discussion. Remarkably, the Museum found that the multiplayer requirement reduced the number of players that approached the game with the intention of deliberately sabotaging progression, as players tended to encourage each other to work towards the common good, enacting behaviours that could be translated into real collaborative action on climate change. The Museum concludes that 'our hope is that visitors will take away these ideas – that their choices matter, that collective impacts are critical, and that we can all work together to make

Fig 6.7: Utah Climate Challenge
Image © Preloaded.
[This image has been removed by the author for copyright reasons]

[51] As quoted on the Preloaded website, available at: https://preloaded.com/work/utah-climate-challenge/

the future we want in Utah'.[52]

Finally, another museum game that uses elements of procedural rhetoric in a particularly interesting context is the *Virtual Reality Blacksmith* (2017) created in collaboration between the Chain Bridge Forge Museum and the University of Lincoln. Bogost argued that games are capable of representing symbolic arguments which tackle social and cultural issues, and the *Virtual Reality Blacksmith* provides insight into how this might be employed by museums. The *Virtual Reality Blacksmith* is a VR re-creation of a blacksmiths forge where players can engage with intangible cultural heritage - in this case the blacksmithing skill – by using real blacksmithing techniques in a safe environment which doesn't incur the cost of materials usually required to teach the trade. Particularly interesting about this game is the way in which the virtual world interacts with the physical, as virtual items can be sent to a 3D printer and made real and tangible for players to take home as evidence of their new skills. The contemporary issue the *Virtual Reality Blacksmith* tackles, identified by the Heritage Craft Alliance, is that the number of people trained in traditional skills is dropping and there is a risk that these trades will be lost. The procedural rhetoric of the game therefore, in essence, encompasses the entire playable experience. The Museum hopes that the opportunity to explore blacksmithing in a virtual, playful environment where players can experiment, fail, and learn without fear of consequences might prompt interest and encourage new audiences to take up the skill. As a news report on the project says 'the hope is that young people may go on to take [blacksmithing] up for real'.[53] Increasingly, then, rhetoric and even procedural rhetoric are at work in museums in complex and interesting ways.

6.3 Conclusions: Rhetoric Affordances

To conclude, this chapter explores how concepts of rhetoric are considered and applied in each field. Videogames are capable of communicating a message using procedural rhetoric, designing meaning into their mechanics and systems. These systems enable players to deconstruct the processes underlying the game's representation of different situations. As

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[52] Ibid., see also a MuseumNext talk by Becky Menlove from the Natural History Museum of Utah and James Allsopp from Preloaded, available at: https://www.museumnext.com/article/using-power-play-inspire-action-around-climate-change/

[53] The BBC news report on the *Virtual Reality Blacksmith* is available at: https://www.youtube.com/watch?v=aBqtTyzQ6EM, see also a video by the Digital Culture Network on the project, 'Chain Bridge Forge | AR & VR Case Study | Digital Culture Network', at: https://www.youtube.com/watch?v=3MpUtirLt5g

players actively participate in the negotiation of these processes, they can develop a deeper understanding of how things work, building a strong basis from which to critically interpret the message. In representations of difficult topics and contemporary issues, which procedural rhetoric games commonly tackle, this deconstruction and discovery of systems and messages may result in players considering the implications of, and potentially changing attitudes and behaviours in relation to, real world situations. The representative power of videogame systems may also provide an additional avenue through which players can engage with the perspective of the 'other'. Critical engagement as a prerequisite for the successful implementation of procedural rhetoric in videogames has been explored in terms of choice and consequence, where players critically consider advantages and disadvantages of actions and, through this, interpret and construct meaning with the game. Furthermore, as players are co-authors in negotiating and interpreting meaning, this prompts consideration that players may not necessarily arrive at the exact message intended by the developers as their personal context and knowledge will influence their interpretation.

The importance of rhetoric in museums is highlighted by a shift in the sector towards recognising the non-neutrality of museums and that they can and arguably should engage with contemporary issues. Rhetoric is always at play in museums in the construction of certain meanings and messages in relation to objects and exhibitions, which is often communicated through interpretation. The possible issues with biases and underlying messages in museums have been evidenced through an exploration of examples of different approaches to rhetoric and persuasion. In particular, acknowledging authorship has been highlighted as key in ensuring that visitors are able to negotiate and interpret the messages an exhibition is communicating in an informed manner. This has been further tackled by including communities and visitors in the construction of meaning, challenging the museum's authoritative voice through participation, and through utilising different or new perspectives to encourage critical engagement. The idea that museums can effect real change in society by encouraging visitors to critically consider their attitudes or actions around a topic or situation, has become increasingly prominent. Therefore, the critical component of the interpretative process has emerged as especially important in light of these discussions of rhetoric in museums.

Finally, examples used in this chapter indicate that a number of museum videogames are already engaging with ideas of rhetoric. There are a number of parallels between the way rhetorical games help their players experience and make sense of the world from different perspectives, and the way in which museum interpretation aims to engage visitors in understanding historical objects and sites. I would therefore argue that videogames using

procedural rhetoric could contribute to museum interpretation in a number of ways. Such games, through their mechanics and systems, engage players critically with a topic. Where museum visitors might be reluctant to challenge the perspective and meanings put forward by the museum, videogames with procedural rhetoric are built upon the act of questioning. As Bogost (2007:284) comments, procedural rhetoric games encourage players to 'oppose, question, or otherwise internalise its claims'. Whilst there are many ways in which museums can provide opportunities for visitors to engage in critical interpretation, the videogame medium's affordances, such as participation and choice, make it particularly suited in further enabling visitor recognition that they too are interpreters. Procedural rhetoric could therefore be used to implicate the visitor as an active and aware participant in an interpretative process where their opinions and actions have value and can contribute to our wider understanding of objects, sites, or collective histories.

As museums increasingly embrace digital technology and continue to experiment with videogames, the skills and knowledge to effectively design and use videogames in interpretation need to be developed. Within Part Two, I have built an understanding of both the museum studies and game studies perspectives on the three areas of narrative and storytelling, emotion and affect, and rhetoric, providing a foundation for the consideration of the intersections between them, resulting in the identification of videogame affordances that can meaningfully add to museum interpretative practice. In Part Three, we move on to explore how these affordances might be employed in an interpretative videogame and how the process of developing such a game might influence reflections upon the research.

Part Three

A Videogame for Interpretation

It is recommended that you play *Hard Craft* before reading Part Three.

7. The Placement: Hard Craft

'Hence, the oft-asked question of 'what kind of doctorate' I was engaged in elicited the response: "a useful one".' (Willems 2010:332).

7.1 A Placement Journey

> 21/09/2020
>
> Well, that's it.
>
> I've just had confirmation that my fieldwork isn't going ahead because this pandemic situation has dragged on far longer than we hoped and they've decided, quite fairly, that they can't afford to wait for a relaxation of restrictions that might not even happen. Instead of live user-testing they're using feedback from previous games. It's completely understandable, but it's a shame.
>
> I'm going to need to have a major re-think. It's equally unlikely that anything's going to come of the possible project we discussed with the museum in Australia either, especially with international travel being all but impossible right now. Frankly, considering my previous bad luck with the government's university funding changes maybe I should have expected that a global pandemic would hit in what should be the major fieldwork year of the PhD. It's getting rather tiring.
>
> The one small light at the end of the tunnel is that M4C have changed the placement regulations, broadening the definition of the 'research placement' so that it can now explicitly link to your thesis, rather than being solely employability-based. If I can find somewhere that's willing to work with me for a placement, it should fall under the new definitions, and I might yet be able to explore what I've been researching in practice.
>
> So, it's time to get emailing. Hopefully Duncan and Helen have some ideas because I can't help but feel like I'm running out of time.

Following on from the reviews of literature and practice in Part Two, this chapter begins the work of drawing the preceding research together. Continuing the examination of the intersection of museum interpretation and videogame affordances, this chapter explores the ideas emerging from Part Two by employing them in a more practical manner – specifically using a research through design method. The intentions behind undertaking a placement with a museum partner were three-fold. The first was to explore how the

videogame affordances identified in Part Two could work as part of an interpretative museum game. In particular, the aim was to examine how these ideas could be most effectively used to further the interpretative process and the partner museum's work, enabling further reflection upon the ideas emerging from the research. The second was to examine whether these ideas worked in practice through developing an interpretative game in collaboration with a museum. Specifically, the goal was to see if there were any institutional or practical barriers, or affordances, arising from collaboration with a museum that impacted upon the application of the research. As such, by identifying the limitations and possibilities that might potentially affect the development of an interpretative videogame, knowledge which is not easily obtained through solely literature-based research, the placement would allow for further exploration of the possible uses of specific videogame affordances. The placement opportunity also allowed for the exploration of the practicalities of developing a game including the skills and knowledge required, with an emphasis on utilising free game-making tools that might be appropriate for future use by museum professionals. Finally, another aim of this placement project was to ensure that the final thesis could contribute not only to the growing body of academic work in this area, but also be of practical use to the professional museum sector. Therefore, the two chapters that form Part Three cover the journey of a six-month research placement undertaken at the National Justice Museum in Nottingham.

7.2 Planning the Placement

7.2.1 The Museum

The National Justice Museum (hereafter the NJM) is an independent museum based in the city centre of Nottingham. The Museum building is the former Shire Hall and County Gaol, a Victorian courtroom, prison, and police station, with a long history of links to the criminal justice system. The Museum has collections of objects which tell various stories around the broader themes of justice and the law, and many of these objects are used in their exhibitions, including temporary exhibitions, which are often created in collaboration with partners and the local community. In particular, the NJM employs co-productive techniques throughout the lifetime of their exhibitions in order to involve visitors in the development of interpretation through conversations, workshops, and provocations. This collaborative working style is evident in a recent temporary exhibition at the Museum, *Constraint / Restraint*, the gallery guide for which included a sample of visitor responses to the question "what constraints would you like to be free of?" [Fig 7.1]. Entry to many of these exhibitions, including temporary exhibitions, is free, which further facilitates the invitation for visitors

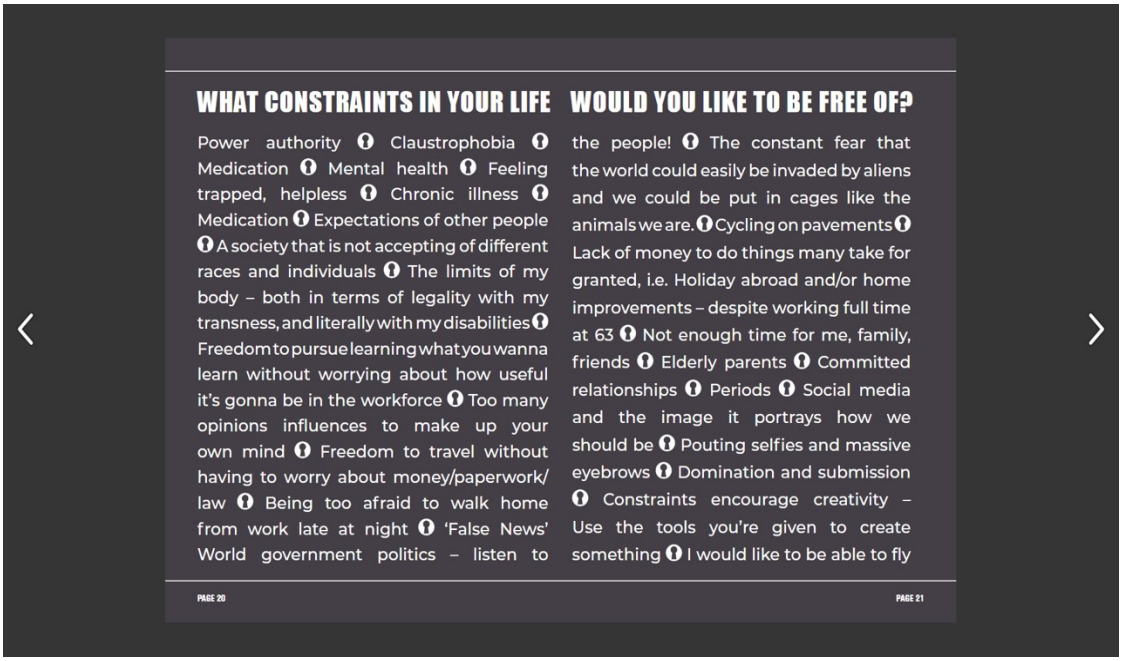

Fig 7.1: Visitor responses to the prompt 'what constraints would you like to be free of?' from the *Constraint / Restraint* gallery guide.
Image © The National Justice Museum.

to contribute. The NJM also offers a wide range of different interpretative experiences, including tours and activities with live costumed interpreters such as mock court room hearings based on historical trials, interactive activities both physical and digital, and more traditional techniques such as interpretative text panels. The Museum frequently holds a range of artistic and seasonal events relating to their exhibitions, such as the art installation *Witness* by Susan MacMurray. *Witness* was made from a series of rope pillars which linked 'to the painstaking process of picking tar from old rope – known as 'picking oakum', a common form of penal labour in Victorian times'.[54] The artwork was installed in the old prison yard, overlooked by the gallows and a rope noose, providing space and provocation for visitors to consider the stories of the people who had once passed through the historic site. Furthermore, the NJM has an ongoing series of free 'Make It Yours' workshops as part of their Creative Courtyard. Running every Friday, the workshops are led by artists, writers and creatives, and provide a specific space for visitors to engage with topics relevant to the Museum and the contemporary world, and to contribute to the interpretation of those topics through creative responses. The NJM also has a 'Project Lab' which is a physical space in the Museum where visitors can reflect upon and respond to various themes and contribute

[54] The *Witness* installation at the NJM can be explored further at: https://www.nationaljusticemuseum.org.uk/museum/witness-a-unique-event

ideas as part of an ongoing conversation between the Museum and their visitors.

When considering which museum to approach for a research placement, the NJM presented an ideal and serendipitous opportunity. Situated in Nottingham and therefore conveniently located for any physical visits that might be required, the NJM represents a strong example of creative and collaborative practice. Through their work they have consistently expressed an interest in exploring new and creative ways to respond to their collections, and in exploring how to involve visitors actively and visibly in the process of interpretation. This includes the use of digital tools and techniques, as seen in the creation of 3D virtual versions of their temporary exhibitions on the V21 Artspace platform for visitors to explore online before, during and beyond the COVID-19 pandemic. Indeed, one of the goals of the NJM was to improve their digital representation and outreach, an area within which a digital game would be well suited. Finally, another factor that led to the consideration of the NJM as a potential partner was the existing relationship between the Museum and the university, as I had previously worked with the NJM during my master's degree.

7.2.2 Placement Plans and Purpose

When my supervisors and I originally reached out and suggested the idea of a research placement to the NJM the response was positive, and the NJM were supportive and very open minded about what the placement was trying to achieve. Initial discussions provided an opportunity to talk through the aims and direction of my research and how it might fit within the NJM's current programme of events and approach to interpretation and outreach. The NJM were interested in making the placement part of an ongoing collaborative project entitled 'Ingenuity, Creativity and Hope', which aims to share historical objects crafted by people in prison in a physical and virtual exhibition. This exhibition would bring together and interpret objects in relation to these three themes – ingenuity, creativity, hope - through research, lived experience contributions, and contemporary creative responses to the objects and themes identified. The objects, which were around twenty-five in number, were from a range of historical eras and many were of unknown provenance, with little to no information about their creation and use. Due to the artistic nature of the majority of these objects including a model of a heart in a cage and a toy car, some of which were made as part of rehabilitative programmes, the Museum also wanted to highlight the role of rehabilitation and artistic programmes in contemporary prisons. It was agreed that the contribution of the placement would be a short videogame designed in collaboration with the Museum, which implemented ideas from the research and responded to the themes and objects of the exhibition. The game would act as a digital creative response and

interpretative provocation which would enable the NJM to further connect the exhibition with digital audiences, and it would also contribute to the wider thinking and creative processes exploring the exhibition objects and topics. As such, the brief for the game was fairly broad as there wasn't a specific theme or object from the exhibition that the NJM wanted it to focus on. The game would become part of either the digital or physical exhibition, or potentially both. There was also discussion around the possibility of using the Museum's Project Lab to share prototypes of the game at various stages of development. Using the Project Lab would connect the placement work to the NJM's co-productive practice and allow both myself and the Museum to gain feedback and responses from the NJM's visitors, to further inform the direction of the game and the examination of the research ideas. Furthermore, due to my previous experience with Twine, the intended software for the game, I offered to run training in the use of Twine for the NJM. This would upskill NJM staff, providing them with the skills and knowledge to either contribute to the development of the game alongside myself directly, or provide them with the tools to make their own games in the future. The placement would therefore be mutually beneficial.

7.2.3 Methodology

As summarised in the Introduction, the placement used a research through design methodology which draws upon the design thinking process, elements of autoethnography, and the 'practitioner model of creative cognition' framework laid out by Skains (2018:84). This methodology was appropriate for the project as creative research methods can offer 'new ways of knowing', which 'privilege such things as play, intuition, serendipity, imagination and the unexpected' as resources through which new understandings can be constructed (Kara 2020:6,29). Research through design emphasises the role of making, and of the creative process as a whole, as a key factor in the construction of knowledge and the answering of questions (Sanders and Stappers 2014:6). This argument is neatly summarised by Zimmerman and Forlizzi (2008:3-4) who comment that the research through design approach enables the researcher to 'explore problem spaces' and build understanding through the construction of artefacts. The focus, therefore, is not solely on the creation of the product, but on the exploration of research questions through design methods (see also Skains 2018:86). As such, research through design enables the creation of new knowledge through critical engagement and from insight developed through the process of exploring ideas in practice (Gauntlett 2015:3). Indeed, Gauntlett (2015:3) goes on to write that sometimes we need to '*make* things in order to *think* more thoroughly about the opportunities and risks associated… both within themselves and when out in the world'.

Utilising a research through design method also allows for exploration of the 'fuzzy front end' where significant choices are made as to what does and does not work in the process of designing (Sanders and Stappers 2008:7). Examining the rationale behind these choices allows us to identify, explore, and address issues, barriers, and opportunities related to the potential future implementation of the research in practice, and to discover relevant and innovative solutions (Moura et al. 2012:682).

The design thinking process [Fig 7.2] provided a particularly useful framework for undertaking the development of the placement game and, as such, elements of it will be discussed throughout this and the following chapter. Due to the iterative nature of the process, the chapters themselves are not structured in a way that rigidly follow the stages of the process. Created by the design school at Harvard University, the design thinking process is broken into five stages – empathise, define, ideate, prototype, and test – all of which feed into each other in an iterative and non-linear fashion. The process is useful for 'tackling complex problems' by taking a hands-on, human-centred approach (Dam and Siang 2021). As such, research undertaken using these methods has the potential to spark change within its relevant industry or communities, as well as critically engaging with and reflecting upon the tensions and difficulties of the design and collaborative process (Ward and Shortt 2020:2). Equally as Ward and Shortt (2020:2) also note, methods of research

Fig 7.2: The Design Thinking Process
Image by the author.

which 'involve visual, performative and collaborative forms of enquiry' can engage individuals and communities by situating people within the creative process. Therefore, reflexivity is an important element of the research through design methodology, positioning the researcher within the environment as an active and involved figure who brings with them personal qualities and emotions that might also influence the design process (Kara 2020:95). As such, these chapters also include short sections of autoethnographic writing, which take the form of diary entries. Autoethnography as a methodological approach aims to openly acknowledge and explore the influence of the authors emotions and cognitive, sense-making processes upon the research (Atkinson 2006:401; Boyle and Parry 2007:188; Ellis et al. 2011:2). In this sense autoethnography as a methodology, just as with research through design, is interested in the journey of the research process as much as the final destination.

7.2.4 Impact of COVID-19

Before proceeding to the full exploration of the placement it is important to recognise that this was very much a placement of adaption and compromise, far beyond that which I initially anticipated. Early discussions with the NJM about the placement began towards the end of summer 2020. It was during this period that the planned activities were outlined, including the production of the videogame, the running of training for NJM staff in the Twine software, and the co-productive elements of the project - where staff and visitors would contribute to the development of the game and provide initial evaluation data. As such, the placement was designed to be research 'with' rather than research 'on', exploring how the development of the game impacted upon both my research and the partner institution (McManimon 2021:247). This outline for the placement ended up being somewhat different to the placement that later emerged, the primary disruption being the COVID-19 pandemic. In particular, the UK government implemented national lockdowns both before and during the placement period. Over the summer of 2020, restrictions in the UK had been relaxed and it was possible that the planned placement might not be overly impacted. The NJM and I had begun to discuss ways in which the game development process might involve the Project Lab or focus groups with visitors - though even then we knew that this might prove difficult because the situation was ever-changing. By the time initial planning was complete, the situation had indeed changed considerably. Restrictions were once again tightening, and the second UK national lockdown came into force on the 9th November 2020, two months before the start of the placement. This lockdown was to last four weeks, after which the UK would move to a system in which restrictions would be decided by region and based on

COVID-19 case numbers. Although not ideal, this was something we could work around assuming cases dropped again before Christmas. However, over the Christmas holidays a huge spike in cases nation-wide resulted in the implementation of a third, longer lockdown beginning on the 6th January 2021.

As part of this third lockdown indoor spaces, including the NJM, were required to close until the 17th May 2021 at the earliest, which meant that the majority if not all of my placement would be completed remotely. It also made it likely that we would not be able to undertake work with NJM visitors as planned. Whilst we had ensured that the placement could be run remotely before we submitted the placement application to the university and M4C, it was unfortunate that I would no longer be able to visit the Museum to see the objects the game was to be based upon. The new lockdown also limited my interaction with the NJM staff involved with the 'Ingenuity, Creativity and Hope' project, as many of them were furloughed or working fewer hours. This meant that there were far fewer people involved in the discussion around the development of the game than there might otherwise have been. With the NJM's physical site closed, the placement also could not use the Project Lab, where it was intended that visitors might play and provide feedback on early prototypes, resulting in the co-productive aspects of the project becoming much reduced. Even once the Museum reopened in May 2021, COVID-19 restrictions put in place by the Museum would have made it difficult for visitors to engage with the game as planned and preventing the spread of the COVID-19 virus took priority for all of us. In the end, feedback and discussion of the game's development occurred wholly between the researcher and available Museum staff, particularly my primary contact, who was my main and regular point of contact with the Museum. Training in the Twine software could be, and eventually was, held online.

The other element of the placement that the lockdown restrictions significantly impacted was the evaluation of the game. Without public involvement in the development of the game we had lost the opportunity to gather visitor responses to the implementation of the research ideas, and the chance to explore the impact that audience feedback might have on the final game. However, another major impact upon the placement project was the change of plans regarding the exhibition for which the game was being developed. Originally, the exhibition had been scheduled for early 2022, and would therefore fit within my PhD period, allowing some evaluation to be conducted and included within this thesis. The impact of the lockdowns upon the Museum's exhibition programme and project development meant that the exhibition was eventually pushed back to 2023, beyond my final submission date, which meant that undertaking evaluation with visitors during the exhibition was no longer feasible for the purposes of this thesis. As a result, the placement I completed was in many

ways different to that which I had originally intended. However, through adaptations and adjustments the NJM and I were still able to realise the core aims of the placement, designing and delivering in collaboration an interpretative game which was based upon the ideas emerging from my research, and providing training for Museum staff in the use of the Twine software.

7.2.5 Logistics of the Placement

The placement took place between January and July 2021. It was mostly self-directed and, due to the circumstances of the time, completed remotely. Before the placement period began, the NJM provided me with a number of documents to introduce me to the planned exhibition and its themes, existing research around some of the ideas for the exhibition such as the role of rehabilitation and artistic programmes in prison environments, and images and descriptions of the exhibition objects. These provided a useful starting point for the research process. Although many staff at the NJM were affected by furloughs, my primary contact ensured that they remained available for questions and queries throughout the entirety of the placement. In order to facilitate further collaboration with the furloughed staff, it was agreed that I would have a regular progress meeting approximately every other week with my primary contact and my supervisors. These online meetings would allow me to update the NJM on my progress, present and discuss ideas and prototypes, gain initial feedback, and plan the work to be completed before the next meeting in order to ensure that the project would be completed on time. In between these meetings any relevant material could be distributed to other members of staff or supervisors who were not present and additional feedback could be gathered and shared to be discussed at the following meeting. Due to the nature of Twine as a browser-based software, in the later stages of the placement I was also able to share HTML file prototypes of the game with the Museum, which could then be run on internet browsers without requiring the staff to download any additional software. In addition, during the placement I compiled a folder containing presentations from the regular meetings, prototype versions of the game, and research documents which formed the placement documentation used as the basis for these chapters. Alongside these, a series of additional documents were created, such as a summary of my research into the videogame industry which was shared with the Museum, and a daily record of work, key decisions, and other thoughts. The full series of documents created during this placement has been made available as part of this thesis and can be found on figshare, as referenced in the Introduction.

7.2.6 The Final Placement Game: An Overview

Hard Craft is a short, primarily text-based videogame created using Twine. Twine, as introduced at the start of this thesis, is a free and beginner-friendly open-source software designed for building interactive stories and simple games, without requiring its users to have knowledge of programming languages. Twine games can run in any modern internet browser without the need for further equipment or software, and *Hard Craft* can be played using either a keyboard or keyboard and mouse. *Hard Craft* explores the processes behind the creation of many of the objects from the exhibition through the use of materials, tools, the creative process and the theme of 'ingenuity'.

Positioning the player in a prison-like setting, *Hard Craft* is intended to accurately reflect the contemporary daily experiences of people living in prison. The player is introduced to the environment by playing from the perspective of a person living in prison, which also reflects the perspective of the creators of the exhibition objects. The player must navigate the environment in order to progress through the game [Fig 7.3]. Many of the design choices within the game build upon this prison-like setting. The majority of the game progresses in a linear fashion as players work through a daily schedule of different activities and areas. Whilst players are able to jump ahead in the schedule, it can only be fully engaged with if approached in a chronological manner as once an area has been missed it cannot be returned to, mirroring the lived experiences of people in prison. There are also areas of *Hard*

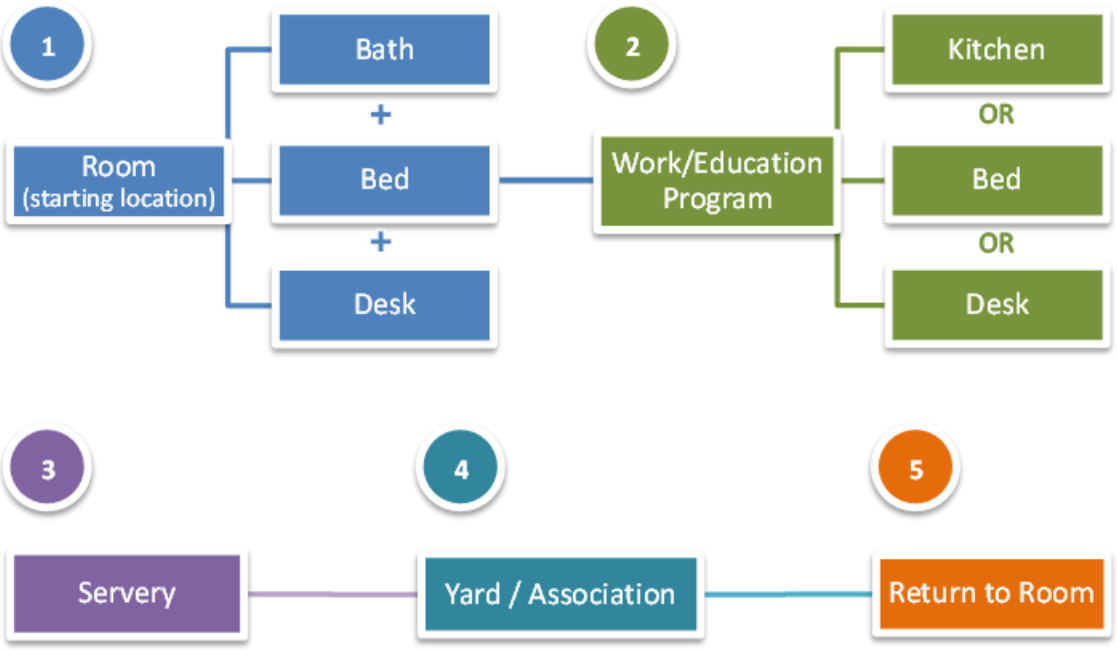

Fig 7.3: Navigating the Daily Schedule in Hard Craft.
Image by the author.

Craft where navigation occurs slightly differently. The main place where this is apparent is in the use of branching narrative paths - as discussed in Chapter Four. Towards the beginning of the game, players are invited to select a rehabilitative activity for their character to undertake as part of their daily schedule, and must choose one of three possible activities, all of which are based on real rehabilitative programmes. The areas each of these activities occur in can only be accessed if the player chooses the related activity, thereby opening up that specific area and opportunities within that specific playthrough. The areas linked to the activities not selected by the player are, therefore, not available for exploration. This allows the game to explore the tension between the themes of choice and creativity within a prison environment, whilst also highlighting the different ways in which the contemporary justice system engages with rehabilitation. Player progression throughout the game can be tracked using the Progress screen, which shows which achievements the player has unlocked and how many of the items, areas, 'learn more' options, and exhibition objects they have encountered up to that point.

The primary game mechanics of *Hard Craft* are collecting and crafting, and the player must navigate both choice and constraint within these systems. The goal of *Hard Craft* is to create an artistic 'object' similar to the exhibition objects. In order to achieve this, players must explore the different areas of the game environment in order to collect items, use these items to craft tools, and then use those tools in combination with other items to create an 'object' or 'artwork'. This 'object' might be inspired by the exhibition objects, the themes explored within the game, and the player's own knowledge and experiences. Depending on each item's properties, they can be used for different purposes at different points in the game – to craft tools, as a material a tool can be used upon, or both. The items within the game are all based upon the materials that the exhibition objects were created from and the possible tools that might have been used to create them. They are also all items which could be realistically encountered within contemporary prison environments, highlighting the differences between the lived experiences of people in prison and daily life outside of that environment. Again, there are slight nuances in how collecting items works within the game. For example, items cannot be collected more than once, and in certain areas the number of items that players can collect is restricted and players must choose which items to prioritise – once again drawing upon that clash between choice and constraint and further highlighting the ingenuity behind the creation of the exhibition objects.

In contrast to navigation, the crafting and object creation systems are much more open and emphasise the themes of creativity and ingenuity in connection to the exhibition objects. Once they have enough items to do so players first unlock the crafting ability, and are

prompted to choose two of their collected items in order to craft their tool. Players are invited to think creatively about their choices and are prompted to describe what sort of tool they would create with their chosen items. Once a tool has been crafted the creation option unlocks, where players are invited to use their crafted tool on another item they have collected, such as strips of cloth or scrap paper. Again, the prompt is very open and encourages players to consider what they would make if all they had to work with was the tool and material that they have chosen. At any time during these stages, players can ask to 'be inspired' and the game will show them an image and short description of one of the exhibition objects at random. When the process of creation is complete and players have described the details of their creation, a final screen before the end of the game invites them to explore exhibition objects which relate to the tool and material they used, to share their object idea with the Museum via social media channels, or to choose to return to an earlier point in the game and make something different.

7.3 Beginning the Placement: Context for Design

> 19/01/2021
>
> What a start to the year.
>
> The bad news: the new lockdown means this is going to be a mostly remote placement, which is understandable but feels like a loss, as I'm going to miss the opportunity to discuss ideas in person. The good news: I just got out of the first meeting with the NJM and it's all very exciting! It sounds like there's a lot of alignment between my work on interpretation and the Museum's approach. There are lots of possibilities in terms of potential subjects for a game as well within the ingenuity project.
>
> Most of the meeting was spent on practicalities and expectations, should I be able to make physical visits later on, (the health and safety form was a bit strange to complete when working from home, its clearly not designed for this), but we were also able to talk about some of the possibilities for how the placement could be involved in the broader work of the Museum, considering the circumstances. In particular, I'm interested in the Make It Yours workshops (currently being held online but also physical 'workshops in an envelope') which are good examples of the different, creative ways the Museum is engaging visitors in interpretation even during lockdown. They're going to send me some of the workshops in an envelope to have a play with whilst I work on initial game ideas.
>
> We also discussed the worst-case scenarios as the NJM had hoped to have

> more information for me (from taking their objects out of the Museum and into local community venues to get people's thoughts on them but then, of course, COVID happened) and there might be a way to delay or take a break from the placement if necessary. Hopefully it won't come to that.

7.3.1 Navigating the Early Stages

At the start of the placement, I laid out a rough timeline identifying when each stage of the game design process would ideally take place. This timeline was agreed with the NJM at our first full progress meeting in mid-February. The timeline was broadly in line with the stages of the design thinking process, which I used as a guide, though the stages were not labelled using the same terminology. This timeline covered the research on the exhibition content, themes, and wider context which enabled me to better define the desired outcome, the ideation process to generate game ideas, and then the development, prototyping and testing of the game, all of which would feed into each other in an iterative manner throughout the placement period. Prior to beginning the placement, I had outlined the intended goals and research aims of the project for the benefit of the NJM and had created a document which explained in detail what the ideas emerging from my research were and how they related to the broader thesis, all of which was shared with the Museum.

I aimed to spend January reviewing the materials provided by the NJM and embarking on broader research into the reality of contemporary prison life, of which I had very little understanding. I also explored existing videogames that might provide inspiration regarding how to approach the various themes relating to the exhibition that arose out of this initial research and idea generation. From there, I would enter into a more informed dialogue with the NJM to identify specific themes and gameplay ideas that resonated with both the Museum and my research. Whilst this research would be ongoing throughout the placement as new ideas emerged, in February and March I planned to place more of a focus on using the research already completed for ideation, creating a number of possible game ideas which would be planned in more detail. These ideas would be shared with the NJM, adapted based on feedback, and narrowed down to a single game idea. The longest stage, I anticipated from previous experience in designing short games during my master's degree, would be the development of the game itself. I knew that game design was often more complex than expected and could throw up unexpected problems on a technical level that, alongside other suggestions and challenges arising from feedback and testing, would have to be overcome in order to fully realise the implementation of ideas. With a deadline of mid-July in place for the completion and handover of the game, I wanted to be sure that I would

have enough time to work through the development process. The final element of the research through design process, the reflection process, would occur both during and in the few months after the end of the placement for, as Skains (2018:88) notes, it is often easier to identify patterns and elements which may not have been clearly observable during the actual creative process with the benefit of a more distanced perspective.

7.3.2 Undertaking Contextual Research

The amount of creative freedom I was given during the placement was in many ways both a blessing and a problem, in the sense that the possible directions the game could go in were so numerous. There were, as previously mentioned, a number of documents provided by the NJM at the beginning of the placement which acted as a starting point from which I could delve into further research. These included images and descriptions of the objects as well as the plan for the broader exhibition project and its intended narrative, outcomes and goals. A relevant issue of the *Prison Service Journal* on artistic programmes and their outcomes in UK prisons was also forwarded to me, as an entry point into exploring prison life and the types of programmes that were being run. This was especially important as the provenance of some of the Museum objects were likely connected to similar programmes. Finally, I was provided with a document detailing anonymous visitor responses to one of the exhibition objects - a wooden toy car made by a person living in prison and sold by a charity - that the NJM had compiled before the pandemic had forced the Museum to close. Combined, these documents suggested a broad range of possible avenues that might be explored in a game. Whilst the main themes emerging from the exhibition - creativity, ingenuity, and the importance of rehabilitation - gave me a solid foundation from which to generate some initial ideas it quickly became clear that, as noted in Chapter Four, there were many often contrasting stories and opinions which could potentially be represented within the game. For example, the responses to the toy car illuminated how different visitors reacted to the idea of an object created by a person in prison being sold for charity. When asked if they would tell a child where the toy had come from, visitors were split in opinion, some felt it best not to tell them whilst others saw it as a good learning opportunity.[55] Equally, whilst there was a general consensus that it was good that people in prison were doing something productive with their time, and that learning skills as part of rehabilitation was a good thing, some respondents questioned whether or not certain skills – such as the

[55] See figshare for a summary of key points taken from different NJM visitor responses to the toy car.

woodcarving evidenced in the toy car - would necessarily be useful for reintegration into society and finding work, thereby questioning the value of artistic programmes in relation to more work-based or educational options.

Interestingly, the articles within the *Prison Service Journal* issue that I had been sent often echoed the thoughts given by visitors in response to the toy car. The interviews and case studies within the *Prison Service Journal* helped me further build upon the themes that had emerged from the other documents, objects and exhibition plans. One of the more common responses to the toy car by NJM visitors had been a consideration of the importance of rehabilitation, and the role that the learning of new skills plays in helping to re-adjust to life outside of prison. However, many of the exhibition objects were not necessarily created as part of a work or skills-based rehabilitative programme, but instead were works of art and creativity which provided insight into the realities of the daily lives of people in prison [Fig 7.4]. Equally, whilst some of the NJM's visitors had considered the potential positive effect that creating art might have on people in prison – especially considering that life in prison can negatively impact upon mental health or worsen existing mental health issues (Haigh and Caufield 2018; Stephenson and Watson 2018) – the impact of the arts was much more obvious in the articles of the *Prison Service Journal*, which proved very useful in shaping early ideas for the game. The issue, a special edition on 'The Arts in Prison' published in

Fig 7.4: Improvised playing cards.
Photograph reproduced with the kind permission of the National Justice Museum

2018, examined numerous different artistic programmes, residencies and interventions that had been run both within and outside of prison, from music to theatre to more traditional art forms such as painting. What was particularly interesting were the insights arising from interviews conducted with people in prison and prison staff on the ways in which interacting with, creating, and sharing art affected them. '"You see my name on there? That makes me feel proud. It's only a piece of paper with my name on it, but I've never had that"' explained one participant of a programme called *Talent Unlocked*, an arts programme run by and for people in prison (Herrity et al. 2018:9). Within the journal, the positive impact of the arts came to the forefront and was expressed variously through personal pride, self-expression, freedom, better relationships, and improved mental health. This is well summarised in the evaluation of a theatre intervention by Geese Theatre Company entitled *Scratching the Surface*:

> *'…Scratching the Surface had a positive impact on participants in areas such as hope, mental well-being, confidence, self-efficacy, self-esteem, positivity, anger reduction and control, decreasing depression, and reduction in the risk of attempted suicide and DSH [deliberate self-harm]'* (Stephenson and Watson 2018:20).

Therefore, considering that nearly all of the objects intended for the NJM exhibition reflected an artistic form of creation, and that considerations of the impact of the arts on people in prison had been less prevalent in visitor responses to the toy car, the idea of using the game as a way to explore the objects through an artistic lens incorporating ideas of rehabilitation and mental health became clear. By including these themes, the game would provide an interpretative journey through which visitors/players are invited to consider the objects from a different, and perhaps new, perspective.

7.3.3 Game Representation of the Exhibition Themes and Topic

The other major area for initial research was exploring the context of how videogames have previously engaged with the main exhibition themes of ingenuity, creativity, and hope, and how the various approaches to game design might relate to my research and to the needs of the placement game. This led to a broad overview of games across a number of different genres. It was harder to find games that engaged with some of these themes than others as, for example, hope is a theme common to many games narratives but it is rarely explicitly the main focus - with a few notable exceptions, such as *That Dragon, Cancer* (2016). The approach I took was twofold, drawing upon my own knowledge of games, either as a player or from other encounters, and upon additional research into online recommendations from

videogame reviewers and searches of the Steam homepage using the themes as key words.[56] From this search, I compiled a document that detailed how each of the games I had encountered dealt with the exhibition themes, and which elements of game design those themes were mainly communicated through and how [Fig 7.5]. Additionally, this document also explored how these videogames related to my research - whether it was by using interesting narrative techniques (*Kentucky Route Zero* 2013), utilising the affordances of gameplay mechanics (*Journey* 2012), or both (*Celeste* 2018; *Sea of Solitude* 2019). The aim of this document was to highlight how the exhibition themes could be and had been addressed through videogames for staff of the NJM who did not necessarily have the same level of knowledge of the industry. One encouraging aspect of this exploration of videogames, game design, and gameplay choices was that it was relatively easy to draw out how my research ideas applied to games that were *not* designed for museum interpretation,

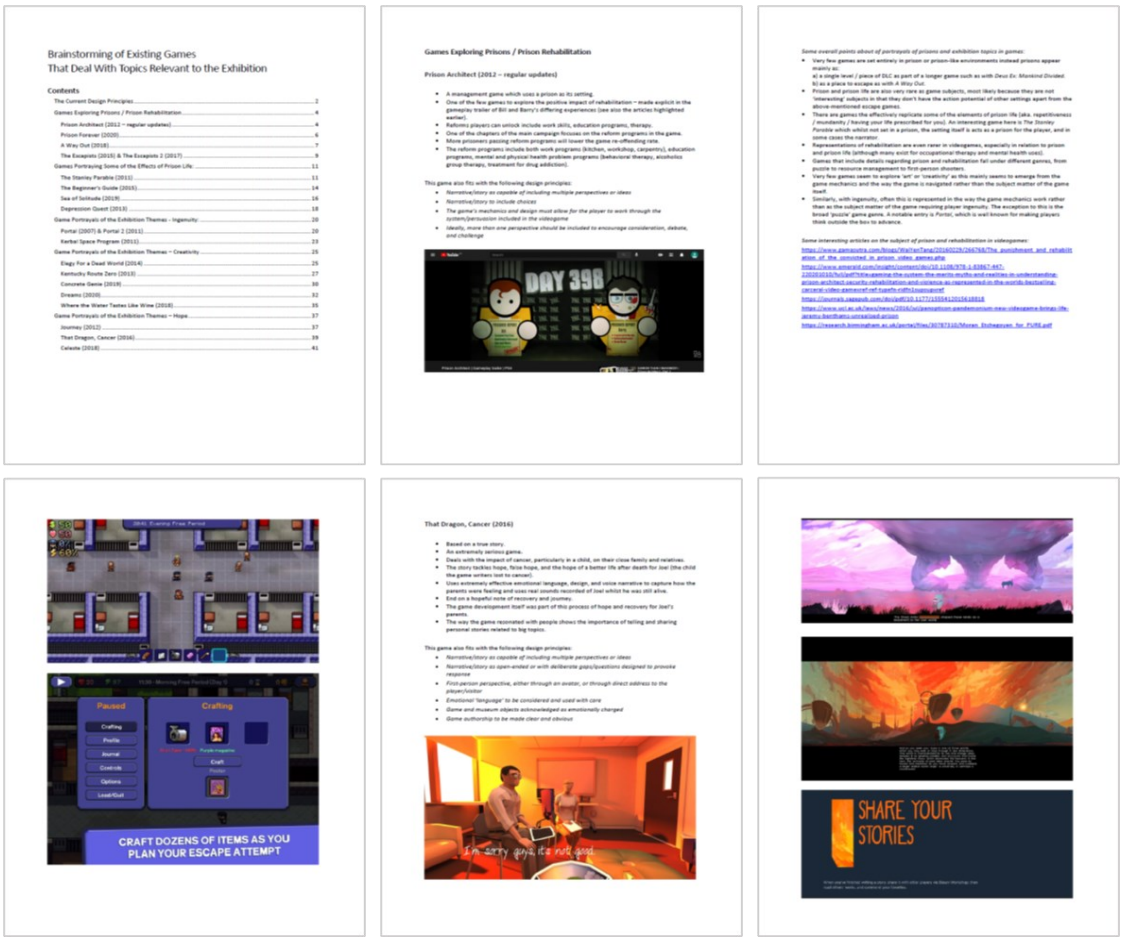

Fig 7.5: Select pages from the brainstorming document on videogames that explored relevant themes and topics.
Image by the author.

[56] Steam is an online videogame distribution service, and it is the largest platform for the distribution of PC games, housing around 75% of the market share as of 2013.

adding weight to my idea that videogame mechanics could be used for, and were often well suited for, interpretative purposes.

Within this document I also began to address what I expected would be a potential issue. Very few videogames are set solely in prisons. Instead, prison and prison-like environments have historically been portrayed in what could be perceived as a problematic manner by the medium (Levan et al. 2020). For instance, one quest in *Grand Theft Auto Online* (2013) asks players to participate in a prison break.[57] Indeed, prisons often appear in videogames only as settings for the player to escape, such as with the games *A Way Out* (2018) and the aptly named *The Escapists* (2015). Considering our intention to create an accurate portrayal of prison life within our game, it was likely that visitors familiar with videogames might have pre-conceptions of how prison environments were portrayed within the medium that we would need to overcome. Furthermore, the NJM had emphasised at our early progress meetings that they wanted to avoid the theme of escape as, whilst in many ways prison and escape are somewhat synonymous, especially in popular media,[58] the focus of the exhibition and the NJM's partnerships with other organisations was very much on the role of rehabilitation and other legal routes out of the criminal justice system. However, the theme of escape proved difficult to avoid as two of the objects for the exhibition, an improvised key and rope, could themselves be interpreted as tools of escape. Perception of encounters with prison environments in popular media, then, were likely neither accurate or positive, and this perhaps gave the impression that it would be difficult to use a prison setting in a manner which was respectful and realistic. In fact, I could find only a couple of videogame portrayals of prison life, and particularly of rehabilitation, which came close to representing reality. One example can be seen in the 'second chances' trailer for additional content that was being added to the videogame *Prison Architect* (2015), a prison management game where players are able to build and run a virtual prison.[59] The added game content provided tools that made it possible for players to create rehabilitation programmes, although the extent to which this was engaged with would very much depend on how the player approached using those tools, if they used them in the intended manner or, indeed, if they used them at all. I found that in videogames dealing with prison environments, accuracy is often sacrificed for

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[57] A summary of the prison break mission in *Grand Theft Auto Online* is available at: https://gta.fandom.com/wiki/Prison_Break

[58] See, for example, the films *The Great Escape* (1963), *The Shawshank Redemption* (1994), family film *Paddington 2* (2017), and the TV series *Prison Break* (2006-2009).

[59] The rehabilitative programmes included in *Prison Architect* are introduced in the trailer by Paradox Interactive, 'Prison Architect: Second Chances | Release Trailer' (June 16th 2021), available at: https://www.youtube.com/watch?v=b7Wf9Fn6GtU

more dramatic narrative opportunities and gameplay possibilities, and even when the possibility of truly representative depiction is provided, the extent to which it is realised relies on the unique experience of the individual player. As such, I would have to carefully consider the use of any prison environment in the game.

7.3.4 Moving from Research to Research Through Design

From this research, I had discerned a number of possible themes and approaches for the game which I then fed back to the NJM as part of our first progress meeting in February, along with the documentation I had created. The initial themes, detailed below, were varied, and it became apparent that it was unlikely that a single game would be able to tackle all of the themes. Instead, the focus would narrow as ideas developed. Nonetheless, the NJM responded positively to them as themes which were relevant to the objects and planned exhibition and had clear connections to the additional information they had provided. The themes were as follows:

- Ingenuity
- Creativity
- Hope
- Rehabilitation
- Finance / Money
- Productivity
- Identity
- Ideology
- Pride / Ownership
- Overcoming Barriers
- Self-Confidence
- Education and Learning
- Mental Health

With the possible themes that the game might tackle established, work began on the development of the game ideas and, later, prototypes. The continued process of research through design, and the reflections upon the barriers and opportunities the placement presented for the implementation of the research ideas, is documented in Chapter Eight.

8. Creating a Videogame for Interpretation

Following the period of background research into the topics and game examples, and the identification of the possible themes, the next step was ideation. Four initial ideas were generated and shared with the NJM, and through discussions with my primary contact and additional feedback from other members of staff, one idea emerged as especially promising. The idea was based upon the game mechanic of 'crafting' in which players combine items in order to create an object. The NJM were able to draw clear links between this game idea and the exhibition objects, as well as themes of ingenuity and creation. As such, although there were some initial challenges, as detailed in the following sections, it was agreed in March that this idea – which would later become the game *Hard Craft* - would become the focus of development.

8.1 Opportunities and Barriers in the Design Process

8.1.1 Making the Case for a Prison Setting

> 10/03/2021
>
> The first round of feedback has just come in. I'm feeling a mixture of emotions, really. There's a lot of enthusiasm for the broader aims I'm trying to achieve and for a game in general, which is great to see. Also, for the focus the game ideas place on the objects and exploring narratives and creative ideas around them, especially around the crafting idea. Definitely positives.
>
> On the other hand, there's a lot of push-back against the idea of a prison setting for the game, which is frustrating. In part, I can understand why. Videogames haven't exactly been great at portraying prisons and prison life in a sensitive manner – and the Museum wants to avoid mis-representation because the focus of the exhibition is on rehabilitation and they don't want to damage their relationship with other exhibition partners.
>
> Still, I feel it's hasty to dismiss the idea out of hand. There are a lot of games out there that *do* tackle difficult subjects well. Maybe I could share some of the titles with them so they can see for themselves that it's possible? Hopefully I can convince them that it's worth the risk and reassure them that ultimately, this is a collaborative project and that they do have input into this to ensure it is done sensitively, otherwise I worry that the game (and by extension the Museum and my research) is going to be diminished by the loss of a potentially rich opportunity.

Collaboration requires negotiation and compromise. I knew from the beginning of the placement that not everything I put forward to the Museum would be realistic or achievable, and that it was likely that the stages of the design process would inform each other in a way that would result in change. However, whilst I had considered that it might be a problem, I had not fully anticipated the first major barrier. Many among the NJM staff that provided feedback on the initial ideas responded positively and communicated a general enthusiasm for the project, but there was one major stumbling block, which was the use of a prison setting for the game. This hesitance regarding the use of a prison or prison-like environment was fed in part by the recognition that NJM staff have experience in dealing with and interpreting difficult topics. The staff knew that a prison setting would have to be approached with great care in order to ensure that the representation was respectful, and avoided stereotyping or otherwise undermining the real, lived experiences of people in prison. Equally, the NJM also had a responsibility to their other exhibition partners – which included local prisons – and which I had not necessarily fully considered. This added to their concerns about using a prison-based setting and the implications of making a 'game' of the prison experience. Equally, one staff member who had experience playing videogames commented on the negative and inaccurate representation of the criminal justice system in the medium, specifically naming the *Grand Theft Auto* series. Yet, there was also an acknowledgment that the issue of how to best display and interpret such topics was something that the Museum frequently faced and that, with appropriate adjustments, a prison setting for the game could work.

Whilst initially frustrating, I could see that the staff had valid concerns. In response to their feedback, I tried to address each point in turn. First, I highlighted the potential advantages and abilities of videogames, such as their capacity to build empathy with the story being told, that could make the use of a prison setting effective in terms of inviting respectful interpretation as discussed in Chapter Five. I also evidenced how videogames had previously dealt with difficult and contentious topics such as mental health issues (*Depression Quest* 2013; *Loved* 2010), and terminal illness (*That Dragon, Cancer* 2016) in a sensitive and effective manner. I also offered to make the prison setting deliberately abstract in an attempt to avoid the issues around misrepresentation, as I feared that some of the game ideas would be less effective or unviable if the setting had to change. Further discussion with the NJM at our next meeting proved productive, and it became clear that the NJM had already begun to consider the advantages that a prison-based narrative could bring, particularly in relation to building empathy and connecting visitors with the Museum objects. The use of the prison setting was agreed at a meeting with my primary contact in late March, provided that a commitment was made to ensure, as much as possible, that the

representation was accurate and respectful.

8.1.2 Adapting to Meet the Needs of the Museum

Before development could get fully underway, there were a number of additional considerations that informed the early prototyping process. In particular, there were the potential opportunities and barriers that arose through discussion with the NJM regarding the implementation of the research in *Hard Craft* and in meeting the needs of the Museum. The first of these, at the earlier stages of development, was that the NJM were uncertain if they wanted the game to be aimed at a specific audience, or whether they wanted it to appeal more widely. In April, with initial prototyping underway, the NJM confirmed that they wanted the game to be accessible for all ages. As such, *Hard Craft*'s story would need to be written in a way that avoided complicated language and which could be understood by visitors with a broad range of reading abilities – including children. This also meant that the game's narrative would have to undergo a similar process, with complex concepts being clarified through context or explanation. Equally, some of the prison terminology used in the game would likely be unfamiliar to players. Therefore, in order to ensure that the game met these requirements, the wording of all text within the game was checked by the NJM, changed if necessary, and finalised in collaboration with them.

Further in development, discussions began about the broader accessibility of the game and what was possible in Twine. Accessibility is a key concern for the NJM across all of their work, and in May it was requested that the game be made as accessible as possible, so that players who might be blind or partially sighted, or have difficulty using either a mouse or keyboard, could still experience it. Accessibility is also increasingly a concern of museums (Osterman 2018:10; Radice 2015:252), and the videogame industry as previously games have not necessarily been designed with accessibility in mind.[60] Therefore, as implicated by the iterative nature of the design thinking process, I returned to research. However, it turned out to be easier than expected to improve accessibility, in part due to the opportunities afforded by the Twine software. Fortuitously, a recent study found that Twine games performed relatively well in terms of accessibility, and regular users of screen readers had little to no difficultly navigating complex games made in Twine.[61] With this in mind, additions were made at various points in the design process to further improve the

[60] Interest in improving accessibility had led to videogames with a significant range of accessibility options, notably *The Last of Us Part II* (2020). See also, Molloy and Carter (2020).
[61] See the Interactive Fiction Technology Foundation 'Accessibility Testing Report' (2019).

game's accessibility, utilising what was already included or possible within the Twine software. These included the addition of alt-text for all images within the game, written descriptions to go alongside the object images, and the addition of an audio cue which played whenever a link was clicked in order to clearly indicate that an action had been taken. The game was also tested explicitly to ensure that Twine's recent update - which allowed navigation with just a keyboard - worked for the entirety of *Hard Craft*. A final addition was also made to the game's Instruction passage which explained the resources that had been included for any players who might need them.

Another potential barrier to the game's successful development related to the way the game might be included in the exhibition as we had yet to decide if the game would be physical, online, or both. Generally, interactive activities such as games do not have particularly high dwell times in physical museum spaces (Emerson et al. 2020:166), although research has also indicated that dwell times for computer-based exhibits can vary, with visitors spending anything from 30 seconds to 40 minutes, depending on their level of interest and engagement (Gammon 2010:282). This I also recalled from previous fieldwork, learning about the design of games and interactives for another museum. Based upon this research the advice was that, preferably, games should have minimal instruction, be quickly understood, and the entire experience should be as short as possible to maintain interest. If *Hard Craft* was to be included in the physical gallery experience, then ideally it should not take long to complete the game. Conversely, for online games it is likely that players will have a little more time and fewer distractions, which might lead to longer engagement times (Solima 2020:54-57). Publishing the game online also has the advantage of potentially drawing in an audience of people who enjoy playing games but might not necessarily have directly encountered the NJM before. Certainly, these were the findings of the Wellcome Collection regarding *High Tea*. *High Tea* had an average play, or 'dwell', time of around 15 minutes and attracted players who were both existing visitors and, interestingly, players who had not visited the Museum before, but who came across *High Tea* on one of the indie game publishing sites the Wellcome Collection had used (Birchall and Henson 2011:3). Therefore, as it was possible that *Hard Craft* might be utilised in either the gallery itself, online, or both, I aimed to make the game relatively short so that it could be completed within 10-15 minutes, but with enough content to keep interested players engaged for longer and to encourage players to replay in order to encounter all of the content within the game.

8.2 Developing and Prototyping the Final Game

With all of this in mind, the prototyping process built upon my understanding of the requirements of the Museum and its users, as recommended in the 'empathise' and 'define' phases of the design thinking process. Although the research had to some extent shaped the game ideas developed in the 'ideation' process, including *Hard Craft*, it was during the prototyping and development period that these ideas would begin to be fully implemented within the design. As such, the iterative process of prototyping, feedback, renewed ideation, and further prototyping detailed below demonstrates the ways both the collaborative design process and the research ideas influenced the final design of *Hard Craft*.

8.2.1 Collecting, Crafting, Creating and the Cycle of Collaborative Feedback

Although many changes were made to *Hard Craft* during this iterative process of prototyping, testing and feedback, and redesigning, the most significant changes to the game were made to the primary game mechanics; the collecting, crafting and creation systems. Initially, I had wanted to implement an exploration of the interplay between the concepts of choice and limitation within these systems, as this interplay was evident in a number of the exhibition objects, many of which were evidently made from or with improvised materials and tools. One of the most notable and striking of the exhibition objects for me was an embroidery sampler made in prison which was painstakingly created with the person's own hair [Fig 8.1]. As the videogame medium itself often relies on the interplay of choice and limitation – on giving the players freedom to explore and choose to shape their own play experience but ultimately limiting what actions are possible through the game's rules - it seemed like an ideal medium through which to attempt this. If designed well, a videogame would enable me to impose limitations on the player that could simulate the limitations that might have been felt by the original creators of the exhibition objects, in a way that other interpretative mediums might not afford. As such, one way in which these limitations were initially implemented was through the main game mechanics.

The crafting system used in the final version of *Hard Craft* differs greatly from the one used in the first two prototypes. The final system works in two stages. First, players craft a tool using collected items in the Craft passage, a process limited solely by the player's choice of items and their own imagination. Once they have crafted a tool, players then unlock the Create passage where they can create an object or artwork using their chosen tool and an additional material which they have also collected, again limited only by their choices and imagination. In the first versions of the game, however, the crafting system was much more

Fig 8.1: Embroidered sampler.
Photograph reproduced with the kind permission of the National Justice Museum.

restrictive than in the final version. Originally, I had planned for there to be a set list of possible tools that the player could craft, which would be created by combining two specific items, and, equally, for players to eventually create one of the exhibition objects through a pre-determined combination of tools and other materials, rather than creating their own object. In order to avoid causing frustration through repeated failure, each tool or object could be created using a number of different combinations, with the idea that players would have to think creatively about which items might combine effectively. For example, if one of the combinations that could result in a tool was attempted (a spoon and scraps of fabric), the player was able to craft that specific tool (a paintbrush). However, if players attempted a combination that was not pre-programmed to result in a specific tool, the crafting attempt would fail and they would be encouraged to try again. Whilst this system had interesting potential in terms of exploring failure and emotional responses around it within the context of the themes of creativity and ingenuity, problems with this system became clear in feedback from staff at the NJM who were testing the game, where the system was causing unintended frustration. In particular, staff were becoming confused when combinations that individuals felt should be viable or logical based on their knowledge of the exhibition objects and history turned out not to be.

Adding additional item combinations was a possible solution to mitigate this issue, however I also decided to attempt, with the agreement of the NJM, a variation on the crafting system that allowed for much greater creative freedom on the part of the player. By removing the pre-set tool options, this system instead allowed players to freely choose which two items to combine and to decide for themselves what sort of tool or object they might be turned into. It also further involved the player actively in the process of interpretation, as they would not be solving a puzzle in a game but rather be given the space to consider the act and circumstances of creation and ingenuity, and to reflect upon the exhibition objects in light of this. Whilst this did mean that there wasn't as strong a link to the exhibition objects in the game's crafting systems, feedback from NJM staff was that the new variation was easier to play with and arguably aligned more with the spirit of creativity and ingenuity at the heart of the exhibition [Fig 8.2]. As the theme of limitation was carried through in other areas of *Hard Craft*, such as the way collecting and navigation worked, it seemed like an appropriate compromise and therefore I moved forward with the new, more open crafting system.

06/04/2021

Another good meeting with the NJM with lots of brainstorming and

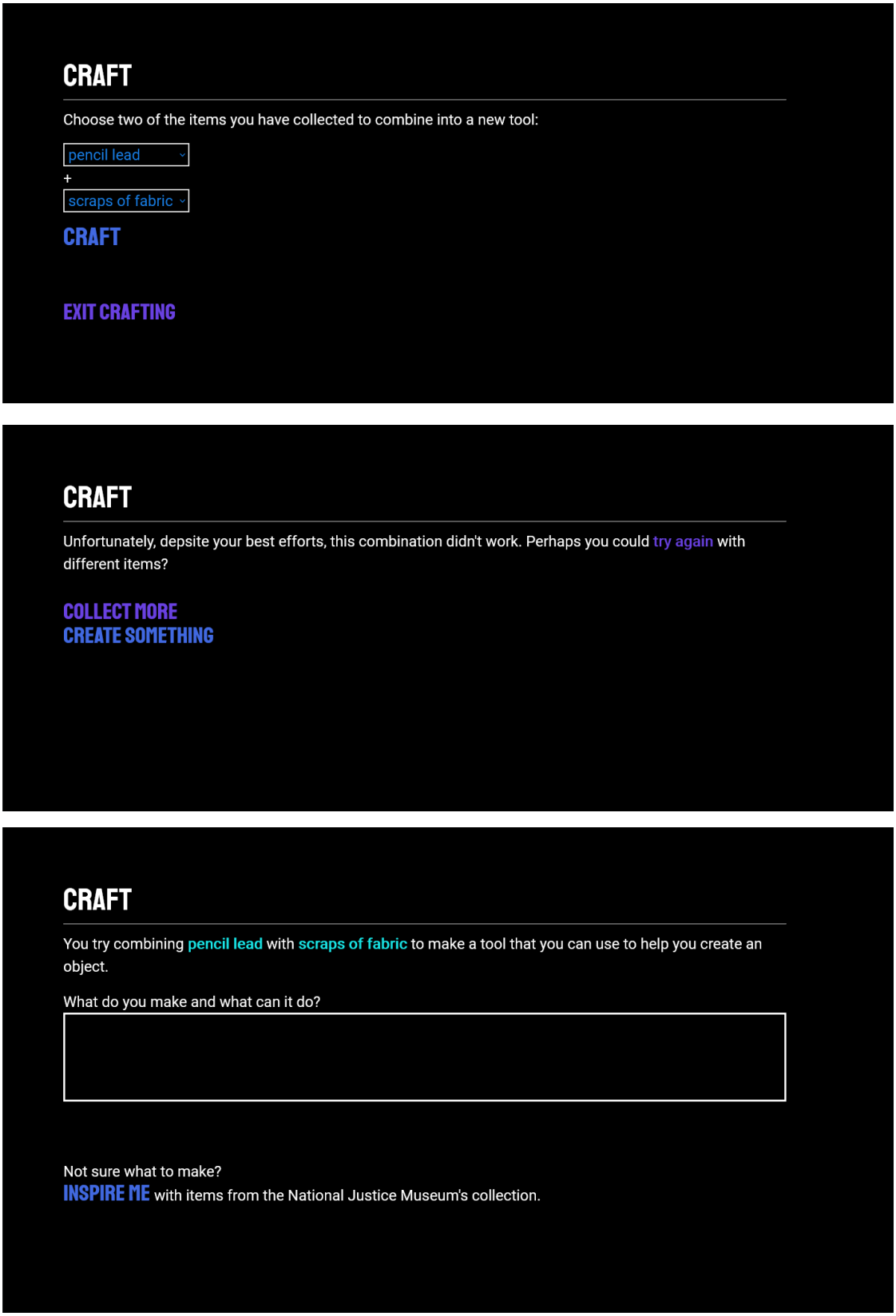

Fig 8.2: The evolution of the crafting system in Hard Craft. Top and Middle: The original crafting system. Bottom: The crafting system used in the final version of *Hard Craft*. Images by the author

> discussion, particularly in relation to the crafting system, which isn't really working as envisaged and is causing confusion amongst the staff that have played the latest version.
>
> I was initially a little annoyed at myself – perhaps I hadn't made it clear enough how the system was supposed to work, but now that I've had time to think, the idea we discussed about a different kind of crafting system might actually work better than the first version. It might also fit better with my research.
>
> Now that I'm reflecting on it, I don't think having such a 'closed' ending, where every path led to an exhibition item, was the right path to take. It seems to go against a lot of the research I've been doing into narrative as a way to involve visitors in interpretation. Instead, this new system puts them at the heart of the process. The 'end' will still be there in that the game will finish, but the outcome will never be the same because it depends on the unique creativity and ingenuity of the player to craft their own 'object', whilst still tying back into the exhibition themes and the processes behind the creation of the objects.
>
> The more I think about it, the more optimistic I am that this would be a good solution.

The second area which received significant attention in the early stages of game development and prototyping was the way in which players collected items. In the first versions of the game, items were collected and added to the player's inventory automatically whenever a player chose to enter a room or space where items could be found. Yet issues quickly emerged with NJM staff not understanding which items they had and hadn't collected as there was no clear and explicit feedback to the player that something had occurred. Another issue was the large number of passages (Twine passages are how Twine divides stories and games into separate blocks, rooms or pages that the player navigates through and between) or 'clicks' it took for players to collect items. This resulted in a system which quickly became tiring and repetitive, causing players to lose interest in continuing to play. Two separate fixes were used to adjust this system in order to make it more player friendly although, unlike with the crafting system, they didn't represent larger changes to the overall gameplay, beyond ensuring that player progress was more obvious. In order to combat the problem of players not being sure which items they had collected I implemented a system of 'active' collecting rather than 'passive' collecting. Where before items had been collected automatically upon encounter, players now had to actively click on each item to collect it. Ensuring players had a participatory role in collection would, therefore, help players be more aware of which items they had collected. This had the additional effect of reducing the need to frequently check the Inventory passage. It also gave

the player the option to choose *not* to collect certain items, furthering interpretative opportunities by encouraging players to consider the potential of each item, and benefitting players who were either interested in exploring only specific possibilities or who wanted to progress through the game quickly. Linked to this, another major change early in development was the way navigation worked, especially to address the concerns about how many clicks it originally took to move from one item to another within the game's environments. I instead decided to consolidate these environments, which had initially been spread across several passages, into a single one, so that all the items within that area could be examined and collected without the player having to move between different passages. Feedback from the NJM staff who tested these changes was positive, and it was felt that they improved the gameplay and brought the focus back to the themes underlying the game rather than negotiating the mechanics of the game itself.

Whilst these were far from the only changes made at the level of the game's mechanics, many of the additional changes were made from the perspective, as with the elements already discussed, of improving the game *as a game*, rather than necessarily explicitly relating to the research. Some of the more prominent of these changes included moving the instructions to the game's sidebar, rather than requiring the player to read them to start the game. This ensured that the instructions, which were quite long as they included an explanation of the game's goals and the accessibility information, were both easy to find and clearly signposted to new players who wanted to read them, whilst more experienced players and users of Twine would be able to begin playing straight away. Indeed, some staff at the NJM, who were themselves unfamiliar with games, fed back that reading the instructions made them more enthusiastic and excited to play. As such, including them was important. Additionally, including the instructions in the sidebar also meant that if players did get stuck or confused at any time during play, they would be able to return to them without needing to restart the game. A final addition to *Hard Craft* that emerged from the cycle of prototyping and feedback was the implementation of the Progress passage and the achievement system – both common systems within the videogame medium. Feedback from my supervisors and the NJM suggested that having some way to track progress within the game would help players envision how far they had to go, and that having achievements for certain actions would both encourage players to progress and further indicate what was possible within the game. In a way the Progress passage acted as an additional guide to the game, indicating how many items, areas, and objects could be encountered with the implication that encountering them all would unlock something else – in this case hidden extra achievements. Furthermore, as the game was designed so that not all of the items and areas *could* be encountered in a single playthrough, this also encouraged players to restart

the game to find new areas and items that they had not yet discovered – which in turn added further avenues and possibilities for players to encounter the exhibition objects and ideas and to continue to be involved in the process of interpretation.

8.2.2 Realising the Research in Hard Craft

With the impact of the collaborative cycle of feedback during ideation, prototyping and testing explored, and the opportunities and barriers that arose from working with a collaborative partner identified, let us now turn to examining how ideas emerging from the research were realised in *Hard Craft*. The purpose of the placement, as discussed in Chapter Seven, was not to attempt to apply all the research undertaken in Part Two to the game, but rather to explore how elements of the research might contribute to developing an interpretative game, and how their application was influenced and impacted by the particular circumstances of the project.

Narrative and Storytelling

The narrative structure of *Hard Craft* is intentionally open-ended and incomplete, providing players with spaces to contribute their knowledge and experience to the game's interpretation of the exhibition objects (Ellsworth 2005; Fraser and Coulson 2012). As progression through the game is predominately linear this is primarily achieved through the inclusion of branching narrative paths which ensure the 'complete' narrative cannot be engaged with in a single playthrough (Backe 2012; Lucas 2015), and through the crafting and creation systems which use open-ended prompts where players can voice their ideas. As a result, whilst the game has a narrative 'endpoint', the way that end is reached and the story of the final player creation itself will be unique. The replay value inherent in the breadth of creative possibilities in crafting and creating also adds to this sense of open-ended narrative, with player contributions forming a vital part of its conclusion. The inclusion of an option to return to an earlier point in the game at the supposed 'endpoint' further highlights this narrative replay value to players. Furthermore, players are actively involved in the construction of story in *Hard Craft*. As a result of changes to the game's systems which emerged from NJM staff feedback, players are invited to become co-authors and contribute towards the interpretative work of the game. Through the narrative of crafting and creating, players write their own story of creation, building an object which has unique meaning to themselves and through which they can come to a broader understanding of the exhibition themes of creativity and ingenuity (Albano 2007; Baker et al. 2016; Gee 2007; Ulaş 2014). As such, the balance of narrative authority in *Hard Craft* is

shared between the Museum and the player.

Whilst *Hard Craft* is largely a text-based game, it does include other narrative forms to take advantage of the multi-media potential of videogames and findings that a combination of narrative forms more effectively facilitates interpretation (Bedford 2014; Ensslin 2014; Spock 2015). This is particularly evident in the incorporation of the exhibition objects. Images and accompanying text descriptions of the exhibition objects are included at various points within the game. Players can engage with them as part of their interpretation in the Craft and Create passages by clicking 'Inspire Me', as well as in the Explore passage at the end of the game where, depending on the items used by the player in the crafting and creation stages, the game will provide a list of exhibition objects to explore which may have been made using similar techniques. As players will likely have used different combinations of items, and entirely unique crafted tools in developing their creative story, this will provide individual players with the opportunity to consider the exhibition objects from different narrative perspectives (Hooper-Greenhill 2000). The narrative setting of the game also adds to the interpretative potential of the game; the process through which players are asked to produce their object in many ways mirrors how the process might work in a prison environment, and introduces a new perspective. To further build a connection between players and the narrative within which they are interpreting the exhibition objects, the game explicitly casts players in the role of a person in prison, or the 'other' (Bogost 2011; Chu and Mazalek 2019; Schorch 2015). Using direct address, such as 'you', and the player's own name to implicate the player in embodying their character, *Hard Craft* places players in the shoes of the 'other' and asks them to play, interpret, and ascribe meaning from the 'other's' perspective.

Emotion and Affect

As discussed in Chapter Five, museum objects, exhibition spaces, and videogames can all have significant affective and interpretative potential (Blackman 2016; Hooper-Greenhill 2000; Nacke et al. 2016; Schorch et al. 2016). The aesthetics of *Hard Craft*, including the use of media such as images and audio, and the design and navigation of the game's passages, play a role in building a sense of environment and in implying emotional and affective possibilities (Calleja 2011; Järvinen 2008). The colour palette is intentionally grayscale using white text on a black background to affectively suggest the restrictive nature of prisons as environments. Additionally, grayscale images from the NJM's historical archive were used to provide a visual layer to the construction of the game environment. These images also added to the affective potential of the game's representation of prisons, emphasising the restrictive and regimented nature of such spaces as well as, in some cases,

portraying emptiness that invites players to imagine the inhabitant(s) [Fig 8.3]. The only colour in *Hard Craft* is found in the clickable links and the images of the Museum objects, which are represented in colour and separately from the narrative in order to give the objects space to convey meaning and imply their emotional and affective potential (Hooper-Greenhill 2000; Tolia-Kelly et al. 2016). Sound also played a role in developing this emotional and affective potential. As I was not able to record sound in real prisons, I created an abstract soundscape using distant sounds of doors, keys, footsteps, and conversations to suggest both isolation and size, which on its own did not necessarily evoke a sense of a prison, but when layered with the imagery and narrative further suggested that environment. Interestingly, the soundscape was the only element of the game that came at a financial cost. *Hard Craft* therefore acts as a space in which emotional and affective responses to the prison environment, and the reality of life for people living in prison, are encouraged and can be considered (Smith and Campbell 2016).

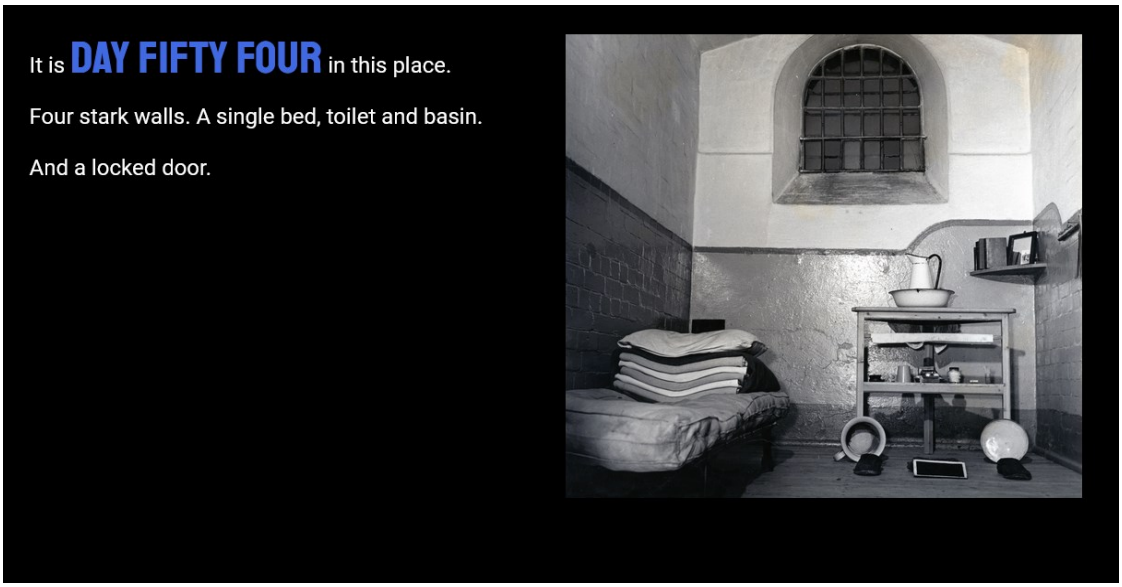

Fig 8.3: A passage in *Hard Craft* which include an archival image from the NJM to help build a sense of place and atmosphere.
Image by the author. Photograph reproduced with the kind permission of the National Justice Museum.

There is also an emotional and affective layer to consider in terms of how players interact with, interpret, and respond to the game. I have already discussed how the narrative approach aimed to connect players with the 'other', however the NJM also wanted to explore the potential of the game to evoke empathy and connect players with the objects and exhibition themes (Rahaman 2018). As I was unable to undertake evaluation with players, I can only make observations based upon engagement with the literature. *Hard Craft* asks players to embody the role of a person in prison, to connect with the experience of the

creators of the exhibition objects and to consider their perspective (Gee 2011; Perron 2016; Witcomb 2013). This emotional engagement and connection is further implicated through choice and player agency (Veale 2015), which form an important part of the game. In recognition that each player is individual and will therefore respond to the game differently (Crouch 2015; Frome 2007; Grodal 2003; Smith and Campbell 2016), *Hard Craft* is designed to allow the player to personalise their experience. This is achieved by asking players to make choices, such as whether or not to collect an item or which branching path to take, which each have consequences that affect the player's crafting and creating options. Players are thus encouraged to invest emotionally as they are directly responsible for the outcomes of the Craft and Create processes and therefore the game itself (Veale 2015). As such, there are many ways that the game provides space for and encourages emotional and affective responses on the part of the players, and suggests that emotional and affective encounters are part of the player's individual interpretation. Yet, *Hard Craft* could have better articulated this and made the role of emotion and affect in interpretation clearer. Upon reflection, this could begin to be implemented as simply as adding the words 'and why?' to the prompt in the Craft and Create passages, actively inviting players to reflect upon the emotional and affective dimensions of their interpretation.

Rhetoric

In Chapter Six it was established that there is always an element of rhetoric at work in museums, and especially in assigning meaning and significance to objects (Allison-Bunnell 1998; Dickinson et al. 2010). The potential of procedural rhetoric in videogames to help players deconstruct and understand arguments and messages was also discussed (Bogost 2007; Ferrara 2012), especially in relation to real-world situations and issues (Richardson 2020). Within *Hard Craft*, the message or 'argument' being put forward relates to the object's meaning and significance in relation to themes of creativity, ingenuity, and rehabilitation in prisons. Breaking down the context of the creation of the exhibition objects, the game asks players to enact processes in order to better understand them (Gruber 2014; King 2010). In *Hard Craft*, players are invited to construct their own object within the limitations of the games systems, systems which reflect the real limitations likely faced by the creators of the exhibition objects, people living in prison. These limitations are intended to help players break down the meaning and arguments behind the exhibition objects and the themes through which they are being interpreted by the Museum, but also as a way to get players thinking critically about their understanding, and preconceptions, of the daily life of people living in prison. Through this it asks players to reconsider the meaning(s) of the exhibition objects and the significance of rehabilitative and artistic programmes in

contemporary prisons. As such, the game acts as a facilitator for critical interpretation.

Finally, *Hard Craft* tackles what might be considered a 'difficult' subject matter, so it was important that all elements of it were approached in a respectful manner (Devine 2014). As previously mentioned, it was a particular concern of the NJM that the representation of prison in the game did not sensationalise or trivialise the real lived experiences of people in prison. Equally, the NJM wanted emphasis to be placed upon the role of rehabilitation within the justice system. As such, following guidance by the NJM the daily schedule and rehabilitative programmes included within *Hard Craft* are taken directly from routines and programmes in real prisons, allowing players to engage critically with an accurate representation of the limitations and realities of prison life. This was further implemented in the rhetoric of the game's processes (Bogost 2007). For instance, just as people living in prison cannot turn back time neither can the player. Progression through the daily schedule in a linear and chronological manner is enforced and once certain areas or activities are either skipped or moved on from, they cannot be returned to, thereby limiting options for progression through the day. Finally, in relation to the persuasive and rhetorical potential of the game, the importance of making the authorship of the game, and therefore to some extent the meanings within it, clear was also considered. Understanding the games authors and their context would further help players critically navigate, contribute to, and interpret the game's messages (Ferrara 2012; Radice 2015). Admittedly, this could have been better achieved in *Hard Craft*, as although the authors and partners involved in the development of the game are clearly listed in the Credits passage, they are not made explicit in the main game.

> 22/06/2021
>
> We're getting into the nitty-gritty of the details now. The main structures are there in the daily schedule and the way the player progresses through the day. Now it's about making it as realistic as possible. I'm relying heavily on the NJM and their partners here, as there's only so far secondary research can take you and, due to the pandemic, any primary research in actual prisons that we tentatively discussed back when we were first planning the placement is no longer possible. There's lots of insight to be gained from the NJM on the prison-based terminology and making the wording accessible to an all-age audience, as this is an area where the Museum has a lot of experience. I suspect the bigger changes are going to be in which items are included though, so I may have to rework certain rooms as a result. I'm definitely seeing what they meant about the processes of design being interconnected.
>
> Anyway, my primary contact had a moment of genius in our last meeting.

> The name has always been a bit of a placeholder and a pun, 'Hard Graft', but they suggested we just change it to 'Hard Craft' which makes a lot of sense as crafting is the mechanic at the heart of the game. So that's the title sorted!

To summarise then, whilst the implementation of research ideas in the game was, for the most part, achieved, *Hard Craft* is not a perfect example of the research in practice, nor is it meant to be – rather it is a demonstration of the potential of the research ideas, and of how the process of designing a game and reflecting upon that process can impact how they are implemented, and how successfully.

8.3 Reflections on Research Through Design

> 20/07/2021
>
> Just sent the final version of the game to the NJM. I'm both relieved and sad that it's over. The NJM have been wonderful to work with, and even though I'm working with them for a Make It Yours workshop soon, I'm going to miss the fortnightly meetings. It's been a journey of discovery trying to work out how elements of my research fit within the confines of the brief and the reality of making an interpretative game that still works *as a game*, and seeing the ways different elements came to fruition in often unexpected ways. Still, I'm proud of the final product, and that we achieved it in the time that we set ourselves, even with all the changes and adjustments.
>
> It's a shame that the exhibition likely won't be opening until 2023 now (thanks to the pandemic) which will put any chance at evaluating the game with the public beyond the scope of my PhD research. But I'm still looking forward to introducing my friends to it when the exhibition goes live. Who knows, maybe some of them will want to visit the NJM after playing it!

Having explored the process of undertaking research through design, the opportunities and barriers raised through collaboration, and the design and development of the game, it is now time to reflect upon the placement experience and what it has added to my understanding of the broader research. These reflections have been drawn from ideas touched upon across Part Three, and examine both the academic and practical implications of designing a game for interpretation, as well as the negotiation of the intersection and the process of collaboration. What follows is a summary of the key conclusions from the

placement and the development of *Hard Craft*.

The challenges and opportunities that arose from collaboration with the NJM did not impede the realisation of the research ideas in Hard Craft.

The first outcome of this process of design and reflection is a recognition that the barriers and challenges I encountered during the processes of collaboration and feedback in the development of *Hard Craft* did not hinder the application of ideas arising from the research. This is not to say that the realisation of the research was not affected at all, but rather that there were very few, if any, instances where the needs of the Museum affected my ability to include relevant elements of the research. The relative breadth of the research and the approach to the ideas may have played a role here. The interdisciplinary focus of this thesis resulted in many of the concepts being explored from a more open and broad perspective which avoided the specifics of implementation. As a result, the research ideas are flexible and adaptable depending on the needs of individual institutions. Indeed, this also indicates the flexibility of the affordances of videogames as a medium.

Many of the barriers I faced in the application of the research were to do with the practicalities of game design.

> 19/05/2021
>
> I'm starting to regret this. I had forgotten how much of game development is bug fixing – playing through again and again to find all those little things that are wrong, fixing them, and then doing it all again. Thankfully, a lot of it is minor, and more about ensuring consistency in styling than code issues, which is a relief because one of the reasons for doing this was to explore if you needed to a be a coding expert or game designer to make a game these days.
>
> Not that there haven't been issues at the code level. The weirdest one so far was that it was possible to get stuck in the sidebar. It turns out that I hadn't set the passage history up correctly so instead of taking players back to the last page outside of the sidebar, you just got stuck in the sidebar and couldn't progress.
>
> Still, I know it will be worth it in the end, and if being a game player has taught me anything, it's the games with lots of obvious bugs can either be unintentionally hilarious or really put players off (sorry Assassin's Creed: Unity). It's better I catch them now.

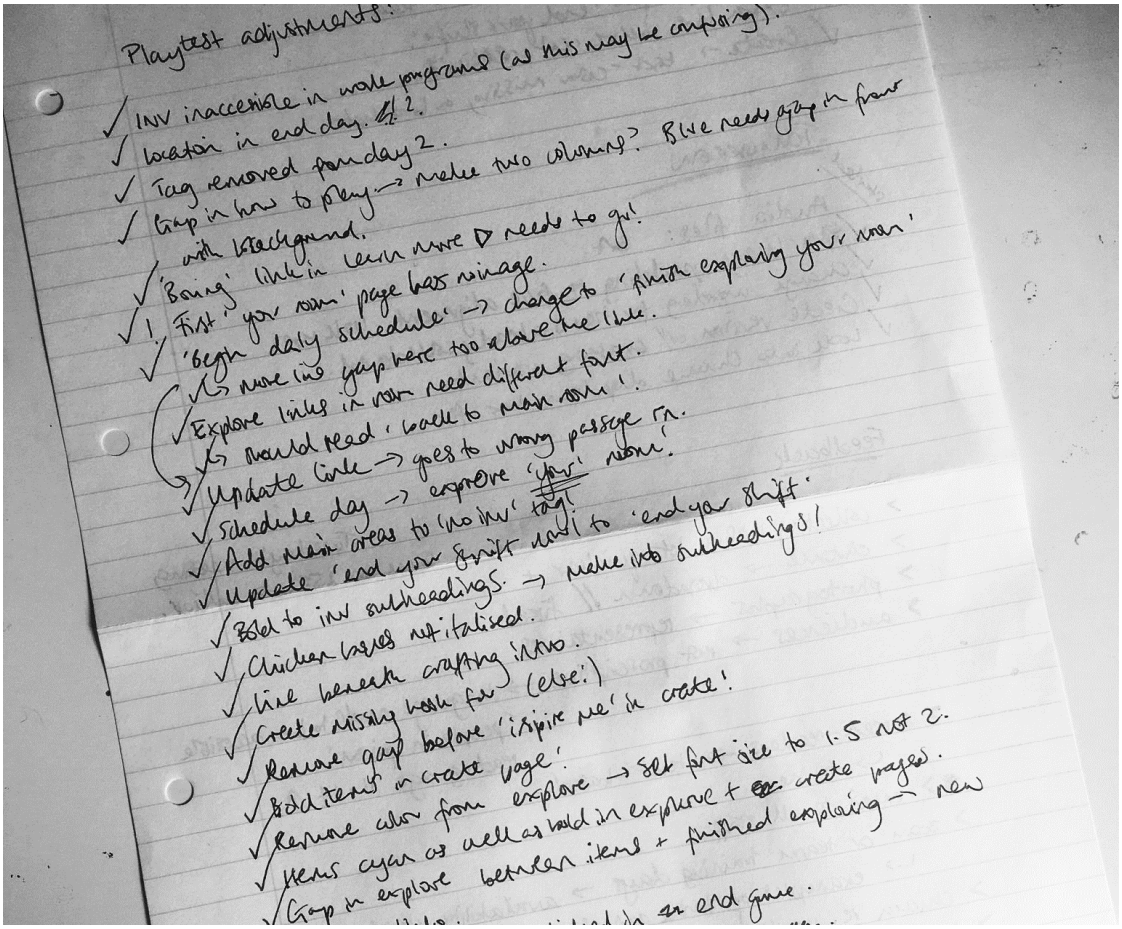

Fig 8.4: One of the realities of game development – fixing bugs. An image of one of many pages of notes based on playtesting.
Image by the author.

As established in Chapter Seven, one of the primary reasons for undertaking this placement using a research through design method was to explore the practicalities of videogame design in museums which were not easily observable using an integrative literature review method. Although I have previous experience in using Twine, I am not trained in game design. The process of designing *Hard Craft* therefore gave me insight into often unexpected practical and design issues. In fact, the vast majority of barriers and opportunities I encountered during the placement were resolved primarily by working with and around the practicalities of creating a game. These included, as previously discussed, the changes made to improve the player experience, accessibility adaptations, and the inclusion of common game mechanics that I had not covered in the broader research such as achievements and progress trackers. The application of the research ideas will depend upon the circumstances and nature of the specific game project. For example, in this case the use of the Twine software, which is optimised for text-based games, meant that elements related

to different media were less relevant. This experience also highlighted other practicalities, such as the need to be able to understand and therefore fix problems with the game [Fig 8.4], requiring basic knowledge of the software. Providing training in Twine to NJM staff became key in helping them understand the basics of how *Hard Craft* worked as a game, and what they might themselves be able to achieve with Twine in the future. Therefore, a recommendation for museum professionals interested in making interpretative videogames would be to develop your understanding of the videogame medium and to seek training in the specific software or platform you want to use or, if your organisation has the capacity and resources, work in collaboration with game industry professionals to overcome these barriers.

Exploring these barriers and opportunities through the process of research through design sometimes enabled me to better implement the research ideas.

As mentioned in the first point, there were cases where, upon reflection, the path to overcoming many of the 'barriers' I encountered and the outcome of moments of serendipity led to a game that, in many ways, perhaps more accurately represented my research than a game that realised the initial concept and plan for *Hard Craft* would have done. This is perhaps most evident in the changes to the crafting and creating systems, and the impact they had upon the narrative and overall message of the game. We explored in the previous section how feedback from NJM staff led to significant changes to, in particular, the crafting system. These changes ultimately led to an entirely different system being implemented which provided players with more agency in progressing through the narrative, which itself became more open-ended and 'incomplete'. *Hard Craft* contributes to the interpretation of the themes of 'creativity' and 'ingenuity' in relation to the Museum objects by requiring players to employ these traits in order to successfully progress.

If I were to do this project again, there are elements of the process, the game, and how the research ideas were applied that I would change.

The original proposal and prototypes for *Hard Craft* were somewhat different from the final game that was created in collaboration with the NJM [Fig 8.5]. However, the placement and the process of developing *Hard Craft* was not without its limitations, many of which have already been discussed. For example, if I were to do this or a similar project again, I would include museum visitors in the development process. This would be achieved at the NJM by utilising the existing Project Lab in order to provide space for visitors to play and comment

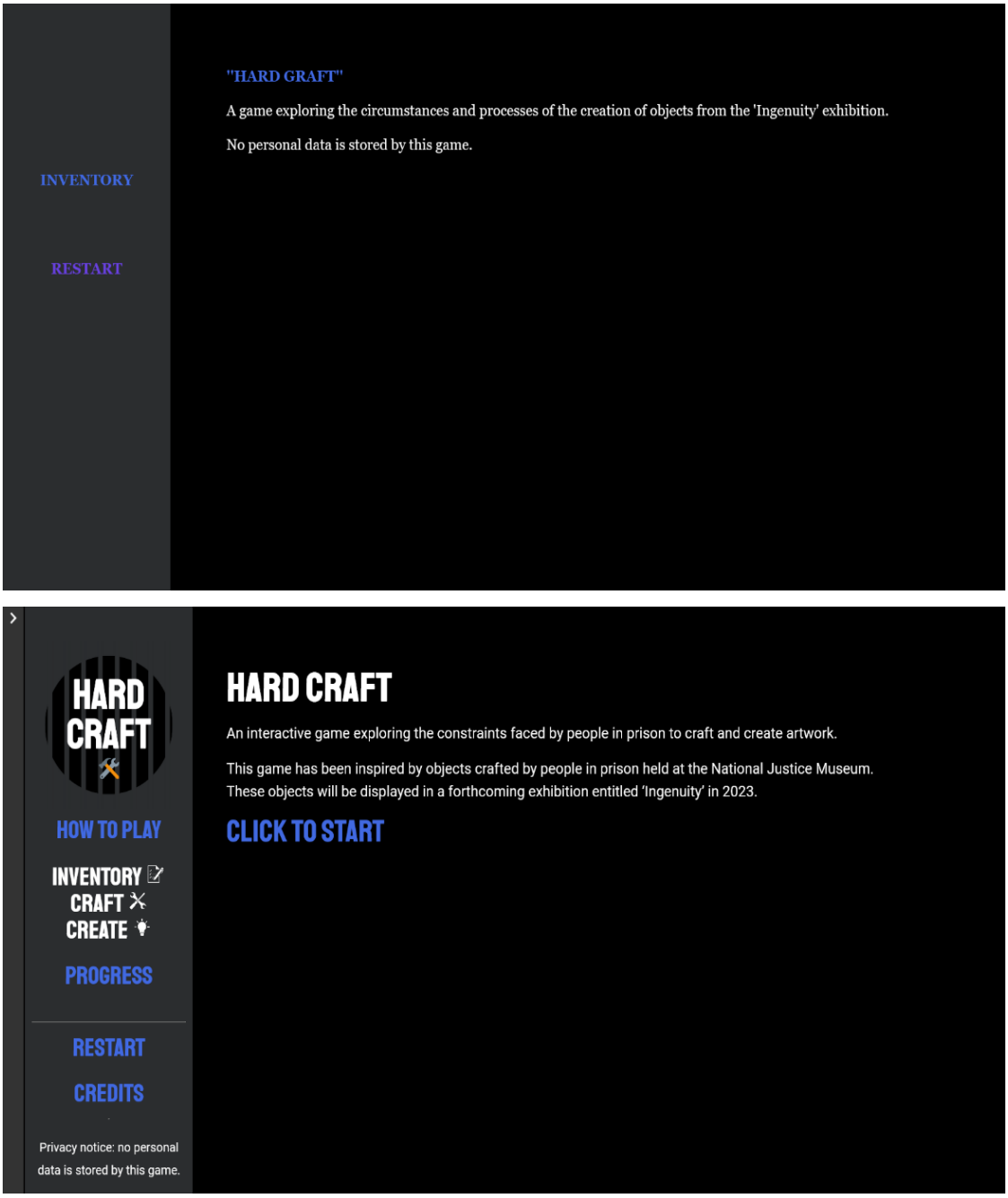

Fig 8.5: A side-by-side comparison of the first and final versions of the game's starting screen. Images by the author.

upon the various prototypes, adding to the pool of feedback alongside that received from the Museum's staff. Whilst this could have been achieved on a smaller scale during the placement, by running an online workshop or similar, the availability of staff, most of whom were furloughed, meant that it proved difficult to set anything up within the time limitations. Equally, as the COVID-19 restrictions resulted in the exhibition schedule being pushed back at the NJM, additional chances to engage with visitors moved beyond the timeline of this thesis. If the exhibition had opened in time, work could have been

undertaken with visitors at the NJM to evaluate the game using quantitative and qualitative methods, the groundwork for which I had already begun during the placement. This data could then have been used in this thesis to add weight to the ideas and conclusions discussed. As the exhibition will not open in time, any evaluation and analysis of the results will instead have to form part of a future study. Finally, as discussed in section 9.2.2, visitor research may also have indicated elements where, upon reflection, slight changes to the ways in which the research ideas were realised might have improved the interpretative potential of the game, and better aligned it with the ideas emerging from the research.

This project has supported the argument that there is significant potential in the use of videogame affordances in museum interpretation.

These conclusions, and the process of undertaking and writing up the period of research through design have provided further support to the argument that the research ideas can be applied effectively in an interpretative videogame, and that there is significant potential in the use of the affordances of the videogame medium in museum interpretation. The process of research through design, exploring the 'fuzzy front end', meant that I encountered and overcame many of the challenges and compromises of applying the research to a videogame designed explicitly as an interpretative product, and also in the broader process of designing a *game* (Sanders and Stappers 2008:7). Throughout the course of this collaborative placement, one thing that continually struck me was how different elements were at play in shaping the final product, and in how, through navigating them, I was able to come to a better understanding of the myriad challenges museums face in creating games. This, in turn has helped me position my broader research into something that is more effectively applicable for the sector, as the flexibility of the affordances suggest that they have the potential to be widely applicable depending on the needs of individual projects. The resulting knowledge of the process of designing an interpretative game represents a step beyond the insights that could be gained in a purely literature-based study. Part Three and *Hard Craft* reflect and build upon the previous chapters of this thesis and add additional layers of understanding to the consideration of videogame affordances and their potential role in museum interpretation.

Conclusions

The Potential of Videogames as Interpretation

For as long as I can remember I have been interested in museums and heritage. My summer holidays were shaped by castles, steam railways, and exhibition spaces – evidence of which has been collected over the years as blanket patches, photographs, and memories. But I was also developing a love of videogames. By the time I was ten I had played my first games, of which *Wizball* (1989) and *Star Trek Voyager: Elite Force* (2000) are fondly remembered. Yet, until a field visit to the National Videogame Arcade as part of my master's degree, I had never really considered what it might look like to bring these two interests together. My encounters with videogames in museum spaces up until that point had been minimal, and often disappointing, especially as I got older and outgrew many of the common types of games offered by museums. It was these experiences that inspired me to consider what I could offer, however small it might be, to change that and to get museums thinking creatively and seriously about videogames. When I started this research I did not know for certain that I would make a game as part of it, nor did I anticipate that I would spend a considerable part of the research period working under various restrictions brought about by a global pandemic. The resulting thesis, which has by necessity been adapted several times across the four years between beginning the research and completing it, has also been shaped by the changing atmosphere and environment within museums towards the digital and towards games. Returning first to the questions that inspired and directed the research, I will establish where and how each question was addressed before going on to examine the main conclusions in the next section.

This thesis aimed to explore how developments in understandings of museum interpretation connect with game studies, the videogame medium and the potential of videogames as an interpretative product. Chapters One and Two examined the wider context of the ongoing and accelerating convergence of the fields, and of museum interpretation – a concept which itself is nebulous, complex, and often misunderstood and misidentified in bridging the gap between academia and practice. Chapter One also explored the recent increase of investment and interest in the digital capabilities of museums, which has included considerations of both interpretative practice and videogames. Chapter Two examined interpretation as a process of communication and meaning-making that encompasses a significant proportion of museum work and design. Following the groundwork laid down in Part One, Part Two examined in detail connections in theory and

practice between museum interpretation and videogames in order to identify intersections that might lead to fruitful developments and possibilities. The second aim was to explore the affordances of videogames in order to identify what they could add to museum interpretative practice as part of a wider development of digital practice. These affordances were examined in Part Two where, moving to a more focused study, I examined in detail three concepts - narrative and storytelling, emotion and affect, and rhetoric - each of which have strong links to museum studies and game studies. The final aim of this thesis was to consider how the identification of these connections and affordances might enable museums to develop a deeper understanding of the videogame medium and how it can be used as interpretation in practice, thereby aiding the creation of future museum games. As such, the affordances explored in Part Two were then taken further in Part Three through a process of research through design where the research was applied to the development of a game in collaboration with a museum. In these Conclusions, I now summarise the key ideas and crossovers that have emerged from the research undertaken and draw back out to the 'big picture' in order to answer the research questions for this study, identify original contribution to knowledge, and suggest ways in which videogames could meaningfully contribute to the practice of interpretation in the museum sector.

The Affordances of Videogames for Museum Interpretation

This research has identified a considerable overlap between the aims and methods of museum interpretation and the affordances of videogames. Whilst this research has focused primarily on three specific areas of intersection – narrative and storytelling, emotion and affect, and rhetoric – I have also demonstrated broader connections between the fields where numerous areas of common interest are to be found. These connections include the similarities between the common principles of videogames and museums such as accumulation and navigation established in Chapter One and, in the academic context, commonalities in terms of theory and terminology in each of the three areas explored. In many cases, the adoption, examination, and practical application of relevant theory has occurred in parallel with the same texts and ideas forming the basis of each field's understanding of specific concepts. This is particularly evident in the connections made in the use of theories of cognition, affect, and rhetoric explored in Part Two. The links drawn between understandings of interpretation and meaning-making in both fields were also especially interesting in light of the focus of this research. These commonalities allowed for more direct and explicit comparison between the ways in which these concepts were tackled across the fields. The influence of the theoretical understandings in academic

research further enabled consideration of how the more distinct elements of practice reflect, respond to, inspire, and build upon these ideas.

The various affordances of videogames identified within Chapters Four, Five and Six and articulated in their concluding sections suggest that many elements of contemporary interpretative practice could be translated with minimal difficultly into the videogame medium, and that the videogame medium is capable of addressing the needs and challenges of interpretative design developments. Indeed, the beginnings of this process of translation are evident in the case studies of museum videogames explored in this thesis. The affordances identified in this research are summarised in the following sections.

In terms of narrative and storytelling, in Chapter Four I examined how different design approaches to narrative structure and form in the videogame medium enable the construction of multimedia, linear and non-linear narratives, which can themselves contain multiple, incomplete and sometimes contrasting stories in a manner similar to transmedia storytelling. The flexibility and breadth of narrative possibilities in the videogame medium has the capacity to address the diverse needs of museums who are experimenting with different narrative approaches and forms. The use of player-characters in videogames, through which players interact with narrative, enables the development of deeper connections between the player and the 'other' and mirrors the move in museums towards first-person perspectives in interpretation. I also explored how videogames actively and explicitly involve players in the construction of narrative in a manner similar to co-productive museum practices, with design that facilitates player agency in story navigation and progression, resulting in narratives which intentionally provide space for player interpretation and contribution to storytelling.

In Chapter Five, I explored how videogames as a medium evoke and encourage emotional and affective engagement in gameplay and in response to narrative, addressing developing recognition in museums of the emotive power of objects, stories and spaces and the need to provide ways for visitors to participate and engage on an emotional and affective level. I have examined the ways in which videogames are considered 'safe' spaces where individual emotional experiences, including negative responses, can be negotiated, reflected upon, expressed and shared. The impact of the design of spaces and the use of different media has also been acknowledged as important in providing opportunities for embodied and sensory affective engagement such as through physical and haptic interaction with videogame controls, and especially in AR and VR games which privilege movement. The capacity of videogames to evoke empathy, using player choices to create a sense of responsibility, facilitates further connection with the perspectives and experience of the other. Player

agency, choice and emergent gameplay in both single and multiplayer videogames also provide space for emotional and affective expression based upon personal and social contexts – contexts which are also implicated in museums and in interpretative processes.

Finally, in Chapter Six I examined how videogames can utilise procedural rhetoric to convey messages or meanings as part of the gameplay experience, addressing ongoing discussions in regards to museum neutrality and the idea that museums always communicate a message – often the museum's narrative perspective - through interpretation. Using procedural rhetoric, videogames engage players in critical thinking, enabling and requiring them to explore and deconstruct arguments and systems in order to progress, in a process that is itself not dissimilar to interpretation. Videogames that explicitly engage with rhetoric are perhaps most effective when they tackle difficult topics and real-world issues, much like the increasing number of museum exhibitions that explore challenging and difficult histories and ideas. Rhetorical videogames aim to invite the player to examine, understand, and potentially adopt a different viewpoint.

These affordances of videogames address the needs and challenges emerging from academic and practical developments in understanding of what museum interpretation is, the ways in which interpretation can be designed, and how museum visitors can engage with the interpretative process. This is also reflected in some of the key themes that emerged more broadly across the research, for example in the growing recognition of the importance of active participation in museum interpretation and videogames, shared authorship, and in providing ways for individuals to respond, interpret, and contribute. Finally, in Chapters Seven and Eight these ideas were employed in the development of an interpretative videogame and the impact of their implementation was explored in the context of collaborative work with a museum. The challenges and limitations examined provided further support for the adaptability of the ideas in relation to the negotiation of the needs of both the museum, and the process of game design.

Making a Videogame for Interpretation

When I began this research I had considered making a game as part of it, but I had not committed to doing so. I am not a game designer. I have no formal training in game development or writing code. I simply had an interest in videogames and an understanding of what makes them work from a player's perspective, and from research undertaken for my master's degree dissertation. Ultimately, during the process of this research, I would come to make two games. One of these was *The Sum of its Parts,* an experimental Twine

game originally planned for a showcase of postgraduate research at Nottingham Castle which was eventually cancelled, with the game going on to be showcased at the 2020 M4C Research Festival as a prototype and proof of concept for some of the ideas I was beginning to explore.

The second was *Hard Craft*. The placement with the National Justice Museum was not something that had been planned from the start of the research. Instead, the opportunity came about following the cancellation of fieldwork at a different museum where I was going to follow the development of games during a redevelopment. In many ways, it was serendipitous that I had connections with the National Justice Museum, that the Museum was interested in developing its digital offer – in part due to the pandemic - and that they had the time and capacity to support such a placement considering the uncertainty around lockdowns and pandemic restrictions. Ultimately, the placement and *Hard Craft* enabled me to further build upon and consider this research in ways that the originally planned fieldwork would not have done. Adopting an active role as a game developer gave me a deeper and more informed insight into the complex series of factors that come together to create something like *Hard Craft*, and into the ways in which a museum's wants and needs can relate to the practicalities of designing a videogame for interpretation. It also allowed me to respond to some of the practical questions that I had been encountering during reading, conferences, and conversations about the potential evolution of museums towards becoming game makers.

Hard Craft acts not just as an exploration of the application of the research ideas, but also as a proof of concept in its own right that it is possible to make a museum videogame at minimal to no cost, and that the training and tools required to accomplish this are becoming ever more accessible. Equally, as I worked on writing up the other chapters of this thesis following completion of the placement, I found myself returning to the same question: what would a videogame designed with interpretation as its primary challenge look like? Upon reflection, I realise that *Hard Craft* had already begun to answer that question. Through the application of the research, I found that the act of interpretation itself became an integral part of the game, aided and enabled by the various elements of interpretative practice that I had translated into the design of *Hard Craft. Hard Craft* is therefore not just a game *as* interpretation, but in some ways, it is also a game *about* interpretation.

Finally, as detailed in Chapter Eight, *Hard Craft* applied ideas and affordances emerging from the research undertaken in Part Two to a practical project. By using these affordances to guide the development of the game and implementing them within the game's mechanics and systems, I was able to establish that the affordances were both practical and adaptable

to varying needs. Therefore, the affordances in this research will be of use for museum professionals looking for guidance in designing interpretative games.

Exploring Limitless Potential in Limited Circumstances

'The potential of videogames for museums is limitless.'

- Museum Lab, *When Museums Meet Videogames Handbook* (2022).

Returning to the quote that opened this thesis, I feel my research has further evidenced that there is considerable potential for the use of videogames as museum interpretation. Whilst videogames have been the subject of many articles and academic projects in recent years, most of these studies have taken a narrow focus by critically examining a specific element of an existing museum game. Attempting to take a broader view, this research has stepped back to draw together these studies as part of a deeper examination of the intersection of videogames and museum interpretative practice. The connections drawn by this research suggest that there is much more work that could profitably be undertaken at the intersection of videogames and museum interpretation in both theory and practice. For example, how might techniques used by the videogame medium to engage players be translated to help museums engage their audiences? How might ongoing work in accessibility enable museum videogames to make collections, stories, and interpretation available in new ways to people who cannot physically visit museum spaces? How might the videogame medium's critical and representative potential be employed to further discussions about decolonisation and diversity in museums? These are but some of the questions that I have encountered during this process, sparked by research and discussions.

Of course, the research for this thesis also faced disruption, most particularly in terms of the research placement with the National Justice Museum. Elements of the planned research and activities were not completed due to circumstances outside of my control, either by limiting options for research at the time, or by pushing further opportunities for study beyond the scope of this thesis. Most notably, the planned inclusion of public evaluation by collecting quantitative and qualitative data was affected by this. Plans to use the National Justice Museum's Project Lab space to test prototypes with the public became impossible due to COVID-19 restrictions and staff furloughs. Following this, plans for evaluating the final game with visitors were initially prepared but, due to the impact of COVID-19 pushing back the planned programme of exhibition development, this meant the exhibition of which the game was to be a part would not be installed until, most likely, 2023. As such, attempts at evaluating the game could not take place. If it had been possible, I would have liked to

have collected quantitative and qualitative data from visitors playing the game both during development and following its release. This data would have provided insight into the experiences and opinions of visitors on the game and its effectiveness at that point in meeting the needs of the Museum and in terms of the application of the research ideas. This was intended to form part of the cycle of feedback upon which the game was built and adapted. Following the release of the game, additional research would have been conducted with visitors to explore the interpretative potential of the game in terms of the exhibition and ideas within which it was situated, insights from which would have further informed the reflections and conclusions derived from the placement and the thesis as a whole. It is possible that this evaluation could yet be undertaken, however, the findings of such research would have to be situated within future studies.

The experience of undertaking this research both in terms of the academic research and its application to practice has taught me a great deal. I find myself agreeing with the statement of the Museum Lab, that, depending on the context of individual museums, there are potentially limitless opportunities for the use of videogames. Whilst I explored just some of these opportunities in limited circumstances, this research nevertheless indicates that there remain many more opportunities for further research; research that builds upon this study, and research that continues to examine the broader intersection of museums, interpretation and videogames.

Contribution to Knowledge

This thesis has contributed to the field of museum studies by providing a deep and sustained examination of the videogame medium's potential as museum interpretation. Whilst many of the ideas encountered in the research have previously been explored independently, this thesis has established new connections between the fields, and deepened existing ones, by undertaking a more comprehensive study of the intersection of museums and videogames and bringing together previous research from museum studies and game studies across a variety of topics in the new context of interpretation. The focus on interpretation in this study responds to a lack of previous research that explicitly explores the potential of videogames as a medium for museum interpretation. This research evidences that there are significant similarities between academic understandings of museum interpretation and videogames in theory, and through critical examination of crossovers in the three areas of narrative and storytelling, emotion and affect, and rhetoric. This thesis has identified a series of affordances of videogames in terms of the potential beneficial application of the medium to contemporary museum interpretative practice. These affordances can be used

to inform the development of future interpretative videogames, enabling museum professionals to better understand the videogame medium's potential and how it can be applied in the sector. These outcomes also provide a basis for further academic research into the intersection of museum interpretation and videogames.

A further original contribution of this research is *Hard Craft* itself, a videogame designed as an interpretative tool for a museum which utilised and drew upon the affordances discussed in Chapters Four, Five and Six. *Hard Craft* acts as an example of how a videogame designed explicitly for interpretation might be developed, whilst the placement experience documented in Part Three provides insight into how barriers might be overcome and opportunities taken in collaborations between game designers and museums. Furthermore, as a Twine game *Hard Craft* is not only accessible to play but it can also be opened in the Twine program, giving researchers and professionals the opportunity to explore the code behind the game's systems. Accompanied by the placement documents detailing its development including previous versions of the game, future projects can use these materials to inform and guide their own game-making. These contributions, I hope, will inspire others to explore the crossover, to continue to build a wider picture of how the fields intersect, and what that might mean for the future of videogames in museums.

Potential Futures for Museums and Videogames

What might be the futures for videogames in museums? My aspiration is that the productive collision of fields explored in this research will provoke academic and professional re-examination of the videogame medium in museum interpretative practice. Following the developments of the last four years, I hope that relationships between museums and videogames will continue to develop, and that the playful attitude many museums adopted during the pandemic will endure beyond it. As museums become more open-minded about the possibilities of videogames, I hope they recognise the potential of videogames to fulfil a more complex, thought-provoking and involved role in the museum space and implement these ideas through continued experimentation, creating videogames in collaboration, in house, on a large or small scale. I would like to see the structures and practices around videogames that are developing in the museum sector continue to flourish and encourage conversation, innovation and creativity. Bridging the gap between theory and practice, I hope for continued interaction between professionals and researchers, working together to develop new knowledge, ideas, and examples around videogames in museums. I hope that future generations of museum professionals and visitors who have been brought up surrounded by videogames engage deeply and thoughtfully with museum games, recognise

the affordances of the medium for museum work, and encourage others to play, explore, and interpret. During the thesis write-up period I taught a module on museum interpretation and its connection to contemporary narratives, social activism and justice, and digital innovation as part of the MA Museum and Heritage Development programme at Nottingham Trent University. Here I introduced my students to videogames in a museum context and guided them through the production of their own Twine games. I hope that the knowledge and experience they gained in relation to museum videogames is expressed through their future research and professional work in the sector. It is my hope that people who love videogames are able to more frequently encounter a videogame in a museum that they can engage with, enjoy, and which adds something meaningful to their museum experience that they otherwise would not have had. Finally, my hope is that engaging with this thesis might inspire and enable others to undertake their own explorations at the intersection of museums and videogames and contribute to this emerging area of research and practice.

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Data Access Statement

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