

# Master Degree Project



## **PRESS 'F' TO PAY RESPECTS:**

Grief and Memorialization in Video Games

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# Abstract

This paper aims to present, discuss, and analyze the potential role of digital games within practices of memory, bereavement, and inheritance. The paper examines how users inhabit game environments, how their in-game memories and identities extend into the real world, and what kind of digital legacy players may be leaving behind. A study based on theoretical frameworks relating to memorialization and grief processing is conducted to look at how games can become part of mourning and memorialization practices.

**Keywords:** games, memorialization, digital legacy, death, bereavement, digital culture

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# 1 Introduction

In a short webcomic titled *digital ghosts*, the author, SAM, relates an incident following the death of a friend. Accompanied by illustrations of a Wii console and various *Just Dance 4* (Ubisoft, 2012) poses, the webcomic is a brief reflection on the connection between modern technology, mortality, and memory. It was shared by the author on two non-grief specific sites, namely Twitter and Tumblr, and in a year after its posting it garnered over 60.000 likes and 600 replies and quote tweets from other Twitter users who shared similar stories. The webcomic reads as follows:

after 7 years, i took out my wii and opened up just dance.

my favorite song was oh no! by marina and the diamonds. i never dared to touch it, though. my best friend's high score was on it. she died seven years ago.

beating it, erasing it- it felt like a sin. like i was purposefully telling her that she wasn't important anymore.

isn't that strange? wonderful? my family could tell me stories of when my grandfather was still alive, passed down through generations and muddled by memory until they are no more. but now, memories of the deceased can exist in another, more permanent medium. at the very least, permanent by choice. they feel like glimpses of the past, a collision between times. like looking at the negative space where you feel a ghost should be.

i pressed play. i got a high score. i guess this is an acceptance, of sorts. im sorry. you always made a mark much larger than that on a screen. [sic]

(@notedchampagne, 2020)

*Just Dance 4* (Ubisoft, 2012) is a popular multiplayer rhythm game that includes a collection of classic and modern songs and dance choreographies. It is widely regarded as a fun party game, often played between friends and family. However, in SAM's case, the game acts as more than just an object of entertainment; it acts as a repository where the memory of a loved one can be stored and revisited even after their passing. In the social context of death, the game attains a new meaning: it becomes an heirloom where high scores are akin to stories that evoke remembrance. The act of erasing these high scores constitutes a loss and inflicts grief upon the bereaved. Yet, revisiting the memories stored inside the game also leads to closure and acceptance, enabling the bereaved to mourn and come to terms with their loss. The game becomes a site where the bereaved can undergo a grieving process.

This thesis aims to further explore the relationship between digital games, death, and memory. It presents, discusses, and analyzes the potential role of digital games within practices of memory, bereavement, and inheritance. The paper examines how users inhabit game environments, how their in-game memories and identities extend into the real world, and what kind of digital legacy players may be leaving behind. Moreover, theoretical frameworks relating to memorialization and grief processing are used to look at how games can become a part of mourning and memorialization practices.

The first section of this paper offers background information that introduces the problem area and places the study within a wider social and cultural context. It lays out a brief taxonomy of digital death practices and discusses the relationship between technology, memory, and bereavement. This section is based on intersectional and transdisciplinary research stemming from various fields such as human-computer interaction (HCI), psychology, anthropology, Thanatology, and game studies.

The second part of this paper presents the research question and the approach of this study, elaborating the methods and concepts I use to develop this research. The third part of this thesis elaborates previous research, synthesizes and analyzes the existing literature on the topic, and situates my own work in relation to this literature.

The forth part of this paper is a presentation and analysis of results where I relate and discuss the findings of my study. In this section, I present how memorialization and grief processes take place in the context of digital games and how games can be used in practices of mourning and inheritance. This part is succeeded by the fifth and final part of my thesis where I summarize the work as a whole and draw the main conclusions of the study in relation to the research questions and aim while also mapping out future research possibilities.

## 2 Background

Due to the rapid advancement of technology, a significant number of daily activities now take place in the digital sphere. People work and communicate online, they share content through social media, listen and read through cloud-based collections, and employ digital services on a daily basis. However, due to its embeddedness into everyday life, modern technology must also cover the unspoken reality of human existence: the fact that it will inevitably end.

Digital obituaries, virtual candles, and online support groups show that death also occupies a space in the digital sphere. However, the complexities of mourning and grief practices reflect the shortcomings of existing technology as well as incite the largely unexplored potential of the digital world in this area. In this section, I will discuss various ways in which death is considered and approached in virtual spaces.

### 2.1 Death in the Digital Age

Early attempts to establish dedicated spaces for online remembrance and mourning practices can be traced to the emergence of the first official memorial websites in the mid-1990s. Currently, however, there are numerous ways and places to mourn online. Digital obituaries and virtual candle websites, for example, represent contemporary online mourning practices that occur within the socio-cultural context of bereavement, and make grief visible in virtual spaces.

Grief occurs when a person is confronted with the loss of someone they cared about. It brings both psychological and social changes as the bereaved have to deal with complex emotions and possibly take on new social roles (e.g. becoming a widower or orphan). Mourning is a response to grief that allows the bereaved to make their loss known to others and turn death into something visible. It is manifested through a diverse range of practices such as the creation and curation of objects like mourning jewelry, photo albums, and journal collections.

Within Thanatology – the study of death and dying – various theoretical frameworks reflect the way people respond to death and process their grief. Among the first ones to emerge, the paradigm of ‘letting go’ implies that grief is a process that happens in stages and that there is a period of time during which grief is resolved. Stemming from Freudian psychoanalytic theory, the ‘letting go’ approach to loss proposes that grief frees the bereaved from their attachment to the deceased through confronting the memories and emotions connected to the person they lost.

The 'letting go' paradigm led to the creation of a number of stage theories and models meant to measure the progression of grief. The most well-known is Elizabeth Kübler-Ross's (1969) five stage model which claims that those experiencing grief go through a series of five emotions when confronted with the reality of their loss: denial (refusal to accept reality), anger (frustration over reality), bargaining (guilt or negotiation of reality), depression (sadness and withdrawal from reality), and acceptance (embracing new reality). The model was originally devised for the context of terminal illness as a way of coping with imminent death and was published in her seminal work *On Death and Dying* (1969). It was later appropriated to grief work and became widespread in mainstream media. The model came to be associated with any type of loss, not just that of human life, yet it is commonly misconstrued as a linear process. In a later work titled *On Grief and Grieving* (2005), Kübler-Ross clarified that the five stages do not follow a specific pattern.

However, this framework has been challenged and it has received criticism for being prescriptive and constrictive, as many people experiencing grief have found themselves unable to move on and let go (Gray and Coulton, 2013, p. 36). Instead, in recent years, the field of Thanatology has experienced a paradigm shift where new discussions about maintaining relationships, cherishing vivid memories, and recognizing the social presence of the dead even after bodily demise have come to the fore. Klass et al. (1996) propose the 'continuing bonds' model in which grief is not perceived in stages but instead it is seen as a renegotiation of the relationship the bereaved has to the deceased. This theory becomes relevant in the digital age due to an increase in online mourning practices, virtual memorialization, and digital legacy that facilitate remembrance and allow the bereaved to maintain their connection with the deceased and grieve in an increasingly diverse range of practices.

Mourning is an expressive and performative social practice. It is situated within a complex historical context that is subjected to change, and its manifestation is varied and dependent on numerous socio-cultural factors. Gray and Coulton note that individuals and social groups have engaged in mourning for millennia, but that between the nineteenth and twentieth centuries, mourning is considered to have entered a period of decline and an eventual 'collapse' (2013, p. 32). With the dawn of modernity – which brought forth the secularization of religion, the rise of consumerism and individualism, and changing concepts of hygiene – death has become institutionalized and removed from the public sphere.

Lagerkvist states that "hidden away and sequestered, removed from everyday experience, death has made a mediated return to the public sphere" (2013, p. 2). Digital media have changed the bereaved relationship to death and mourning and gave rise to new patterns of

commemoration, ritualization, sociality, and publicness. As Gray and Coulton also note, in the present, mourning practices have become “an increasingly socio-technical concern, as mourners engage in forms of private grief within highly public spaces online” (2013, p. 32). Streamed memorials, digital shrines, and online support groups show that grief can be shared once more, and that the memory of the dead can live on long after they are gone from the physical world.

However, these practices also draw in criticism. Cultural discourses of mourning define the appropriateness of different practices. Therefore, publicly mourning in profane online spaces like Facebook may be seen as incompatible with the reverence customarily affiliated with the dead and deemed frivolous or even “attention seeking” (Haverinen, 2014b). Nevertheless, as Arntfield reminds, funerary writing and commemoration is ultimately expected to be a public affair (2014, p. 93). From unsanctioned obituary writings on Ancient Roman walls to the prescribed Victorian Era mourning garbs and jewelry, mourning practices have been intended for public display and performative rituals, becoming an integral part in the way people express and observe grief. Digital death practices, like condolence messages or black ribbons pinned to profile pictures, adhere to the same principle but must also consider privacy issues that may arise from site metrics such as IP tracking, cookies, and algorithms. These issues are part of a larger conversation surrounding online privacy and are an increasing concern in the digital age which must be accounted for when creating virtual memorials or digital legacies (see Marwick and Ellison, 2012; O’Hara et al., 2008).

## **2.2 Virtual Memorialization**

Memorialization facilitates mourning and provides an opportunity for the bereaved to express their grief. According to Rumbold et al., memorialization supports people searching for meaning following loss, offering individuals an opportunity “to form their own distinct responses and reimagine their lives without the deceased, while also integrating their memory. Through memorialization, the past, present and future can merge to form a new understanding of an ongoing relationship with the deceased” (2020, p. 7). Therefore, memorials serve as objects or spaces of remembrance and negotiation of loss, which provide comfort and familiarity to the bereaved.

Memorialization takes various forms. Perhaps the most widespread practice is through physical memorials, for example graves and crypts, which are important for locating the deceased, reuniting them with family, and honoring their wishes (Rumbold et al., 2020, p. 6). Objects that belonged to the deceased as well as funerary portraiture and writing can also be used in memorialization. However, some people are increasingly moving towards the

merging of physical and digital mourning spaces. Physical memorials are sometimes supplemented by digital ones since funeral service providers now offer service packages that include, for example, digital condolence books, online registries or even QR codes for online memorials that can be attached to gravestones.

Common online memorials consist of web pages created by the bereaved to commemorate the life of the deceased and capture their achievements. These sites are frequently designed to mimic traditional spaces for loss – such as shrines, cemeteries, and gardens of remembrance – where the bereaved can gather to share eulogies, light candles or leave flowers. There are many ways in which online memorials resemble physical ones, as both contain information about the person who has died and both allow visitors to strengthen their bond to the deceased and connect with other people who are grieving. Subsequently, they can be considered grief-specific online spaces.



Figure 1. An example memorial page. Source: forevermissed.com

Figure 1 shows an example of an online memorial page with various customization options and suggested content. The page contains biographical information about the deceased such as their name, age, place of birth and death, etc. It also contains quotes meant to honor the memory of the deceased and photos that immortalize their life, social relationships, and accomplishments. Other people can be invited by the person who created the page to contribute to the memorial by adding stories and leaving tributes like virtual flowers or candles.

However, not all online memorials are created in grief-specific spaces. Memorialization also happens in less bounded spaces for grief, in which the bereaved have appropriated and displaced available online platforms and services to make their loss visible. Gray and Coulton argue that non-grief specific sites can “fall outside of the dominant filter of memorialisation,

in ways that reflect a broader and richer history of technologies being assimilated to store, record, retrieve and, importantly, make visible experiences of loss, memories of death and the spectral presence of the dead” (2013, p. 32). Most often, social networking sites like Facebook, YouTube, Flickr, and Twitter are used by the bereaved to either construct profiles for the deceased or to memorialize existing ones.

Facebook is frequently used to create online tribute pages for those who have passed and to connect with communities who may offer support to the bereaved. The Facebook account of a person who died can also be memorialized through a request to Facebook. When a profile becomes officially memorialized, it can no longer be accessed or maintained by a user, but the content previously shared on it remains visible (depending on various privacy settings) and other users in the Friends list can share memories on the timeline. Hence, the account serves as a space where the bereaved can express both common and individual loss and create eulogies for the deceased.

Moreover, a memorialized Facebook account can provide a more elaborate picture of who a person was during their lifetime and construct something akin to a biography. Briggs and Thomas note that such profiles can create a vehicle that gives the bereaved the sense that they can continue the digital conversation with the deceased (2014, p. 131). Since many people maintain their social presence via social media, the practices of posting to and addressing the deceased through social networking sites similarly maintains the presence of the dead within the social circles of the living.

## **2.3 Memory and Digital Legacy**

Due to the ubiquity of technology in everyday life, people now leave traces of their existence even after death. Large amounts of personal information are stored in computers and on networked systems forming a digital legacy, meaning the digital information that is available about someone following their death. Those who are physically dead can still be socially alive as their digital legacy can evoke moments of reminiscence and connection to the bereaved. As recounted in the introduction of this thesis, SAM’s rediscovery of their friend’s high score in *Just Dance 4* (Ubisoft, 2012) is such an example. Another instance could be scheduled emails or posts on social media that appear after a person’s death, seemingly offering them a voice from beyond the grave.

Thus, online spaces appear to be inherently haunted. They are spaces where forgetting becomes nearly impossible and this changes the way people remember each other. Data left behind by the dead can play an important part in the grieving process and in the construction of personal memory. Gray and Coulton note about these pieces of information

that “like traditional material practices, they may help the bereaved to re-make lives, re-craft identities and re-draft personal histories after loss” (2013, p. 38). Both personal and collective memory rely on records of the past and on technologies and practices of remembering.

I use the term ‘personal memory’ to refer to autobiographical memory that involves the recollection of specific events from one's life. I use ‘collective memory’ to refer to memories shared by several individuals such as a family or a group of friends, but the term can also be viewed on a larger scale, for instance to reference national or public memory. The two are related to one another, as personal memory can be shared, leading to the creation of collective memory.

The digital information left behind by a person after their death constitutes their digital legacy. This can be formed by information found on objects like personal computers, phones, and data storage devices, but it can also include a person's digital footprint. Briggs and Thomas differentiate between four types of digital footprint (2014, p. 127):

- (i) publicly identified footprints comprising digital data that is explicitly linked to an individual by name and that is relatively accessible and identifiable;
- (ii) organizational footprints that include company documents, web pages, emails, and calendars;
- (iii) pseudonymous footprints, where the author uses a false name consistently, or anonymous footprints, where the author has attempted to disguise their contribution and which may become lost postmortem;
- (iv) private footprints that are typically held behind a password or other authentication mechanism or that are held on private machines.

The sites and services people access as well as their communications, content, and contributions on the Internet represent their digital footprint, or their unique set of traceable digital activities. Yet, a person's digital footprint serves as more than just a ghostly reminder of their existence. It can instead become a true legacy that can be passed down onto others. Therefore, technology must account not only for a user's activity during their lifetime, but also during and after their death.

## **2.4 Thanatosensitivity**

In bereavement studies, it is often underlined that the bereaved take on the role of custodians as they take responsibility over a plethora of things left behind by the deceased (Banks et al., 2012; Rumbold et al., 2020). Specifically, Briggs and Thomas mention the

psychological burden accompanying the inheritance of digital devices like phones and laptops (2014, p. 129). The data on these devices is frequently inaccessible, for instance due to password protection or because the information is scattered across multiple files or platforms. Nevertheless, this data holds material of strong emotional significance for the bereaved or the promise of uncovering new information, causing unnecessary frustration or hurt when they cannot be accessed.

For this reason, there exists a need for designing hardware and software that account for a user's death and enable the passing on of digital legacy. Value sensitive design as well as technologies for 'End of Life' offer insights into the social value of digital legacies and ways of honoring the wishes of the deceased while also acknowledging the needs of the bereaved. However, systems for appropriate management of data postmortem are rare.

Massimi and Charise introduced the concept of thanatosensitivity to describe HCI research and design that actively considers and integrates mortality, dying, and death into research and practice (2009, p. 2460). The authors argue that, as devices become more personal and individualized, they also become more difficult for others to decipher or employ in the event of death. Consequently, the concept of thanatosensitivity is a novel approach to HCI that recognizes and engages with death in the creation of interactive systems by facilitating and enabling remembrance, digital inheritance, and curation.

Thanatosensitive design is closely related to practices of memorialization and digital legacy. Facebook's legacy contact can be considered a thanatosensitive feature. A legacy contact is a person delegated by the user to look after their account if it becomes memorialized. The legacy contact is able to request the removal of the account, update the profile and cover photo, or pin a post, for example to share a final message from the deceased or provide information about a funeral or memorial service.

Similarly, Banks et al. (2012) propose the design of Technology Heirlooms. A Technology Heirloom is "a technological/digital artifact that is designed with the intent that it might outlive its owner and come to be passed on, and that in some way either materially or conceptually it might carry with it an imprint or impression of the previous owner" (Banks et al., 2012, p. 69). The authors relate that heirlooms are artifacts, passed down through generations, which provide a shared sense of history, heritage, and values. They also play an important role as triggers for personal memory. Thus, a Technology Heirloom is designed to preserve the memory of the deceased and also to facilitate remembrance and mourning for the bereaved.

### 3 Problem

As discussed in the previous section of this paper, the digital age has deeply impacted the social and cultural construction of death and the spaces in which grieving is talked about and observed. Digital devices, online networks, and virtual worlds are now a part of contemporary practices of mourning and remembrance. Their use has changed our relationship to dying and commemorating the dead, giving rise to new methods of memorialization and legacy.

While still largely unexplored, previous research studies have begun to discuss various connections between technology and user death, particularly in the context of social networking sites and virtual memorialization. However, few academic studies turn their attention towards digital games. Nevertheless, I propose that due to their novelty, variety, and the unique interactive nature of the medium, digital games hold the potential to expand current understanding of commemoration and grieving in online spaces.

This paper aims to present, discuss, and analyze the potential role of digital games within practices of memory, bereavement, and inheritance. By asking how players employ games in the social context of death, I aim to understand how users experience games existentially and to explore how both the deceased and the bereaved may be accommodated within the design of digital games. This research is based on game studies scholarship and also on other multidisciplinary fields such as HCI, Thanatology, psychology, and anthropology.

The paper discusses how users inhabit game environments, how their in-game memories and identities extend into the real world, and what kind of digital legacy players may be leaving behind. Moreover, I use theoretical frameworks relating to memorialization and grief processing to look at how games can be actively employed in mourning and memorialization practices. This approach is intended to fill a gap in existing research and generate new discussion relating to game design and games user experience.

#### 3.1 Research Approach

The study is centered on the following research question: how do players use games in the social context of death? This question aims to describe and explore the characteristics of games that make them relevant and a viable tool in practices relating to memorialization, bereavement, and legacy. Since these issues pertain to social life and discussions of mortality and existential experience, the study takes on an anthropological focus, and views games as artefacts that hold social and cultural meaning and value in the life of both the deceased and the bereaved.

For this purpose, I use an Abductive logic of inquiry which is useful for producing understanding and providing reasons rather than causes for social life and social actors' behaviors and motives. As Blaikie and Priest explain "Abductive logic incorporates what Inductive and Deductive logics ignore – the meanings and interpretations, the motives and intentions, that people use in their everyday lives, and which direct their behaviour" (2019, p. 119). Therefore, this logic of inquiry is best fitted for this type of study due to its direct focus on social aspects that are oftentimes left out by other methods of answering research questions.

This type of approach relies heavily on idealist ontological assumptions which affirm that social reality is constructed through shared interpretations that are produced and reproduced by social actors (Blaikie and Priest, 2019, p. 121). Likewise, the study takes its epistemological assumptions from constructionism, maintaining that knowledge is obtained and accessed through an insider view, meaning that social reality has to be discovered from social actors themselves rather than filtered through the scientist's views and concepts (Blaikie and Priest, 2019, p. 122). Ethnomethodology is also employed as a paradigm to understand how individuals construct social phenomena and social order. As a result, the basis of this study relies mainly on the personal accounts of players and on previous studies that observed and engaged directly with the bereaved and the legacy of the deceased.

## **3.2 Method**

The qualitative research design of this study consists of two phases. Firstly, I employed an ethnographic methodology to observe virtual memorials, digital funerals, and other types of online mourning and commemoration practices in action. Secondly, I conducted field research by organizing an in-depth interview with a player who used video games in their grieving process after the loss of a friend.

### **3.2.1 Online Ethnography**

After establishing the theoretical foundation of my study by gathering knowledge and findings from existing literature, I proceeded to familiarize myself with the theorized concepts by conducting field research. I visited online memorial sites such as *healgrief.org* and *forevermissed.com* which allow users to view and create memorial pages, light virtual candles, and share condolences and mementos. Likewise, I looked at my own past interaction with several Facebook posts from three acquaintances who have shared messages about a loss in their family. I also watched videos from online funerals in massively multiplayer online role-playing games (MMORPGs) like *World of Warcraft* (Blizzard

Entertainment, 2004) and *Final Fantasy XIV* (Square Enix, 2013), visited in-game memorials, and interacted with characters modelled after deceased individuals.

This online ethnography allowed me to directly observe and, at times, participate in the mourning and remembrance practices that people create and engage with in different online environments. It gave me the opportunity to understand why and how people create online memorials and what kind of meaning, rituals, and sentiments are being shared by the bereaved to the public. A point of interest was to observe how the identity of the deceased was (re)constructed using digital material and how memory was used to reflect both individual and collective loss.

Ethnographic research usually consists of different types of observation and interviews, where the researcher can either participate or observe from a distance. Due to the topic of my study and ethical concerns that my research would become too voyeuristic or intrusive, I have kept my participation minimal. Instead, I opted to expand my understanding by interviewing SAM, the artist whose work I have come across while conducting field research on digital legacy.

### **3.2.2 Interview**

The interview was a short semi-structured qualitative interview conducted in April 2021 via instant messaging on the social networking platform Tumblr. This method was chosen for various reasons. Firstly, instant messaging enables researchers to conduct interviews with participants from diverse geographical locations, it bypasses the need for transcription, and is overall a timely and cost-effective tool. It exerts less pressure than face-to-face interviews as it is also dynamic, engaging the respondent to a greater extent than email interviewing (Fontes and O'Mahony, 2008, pp. 2-3). However, interviewing through instant messaging requires an understanding of the interviewee's communication etiquette. For this reason, the chosen platform was one familiar to both researcher and interviewee and the tone of language was semi-formal.

Secondly, instant messaging interviews are relevant to exploratory online ethnography. Fontes and O'Mahony state that the lack of visual and auditory cues creates a level of detachment between the interviewers and the interviewees, which is particularly useful when conducting research on sensitive topics (2008, p. 3). This aspect makes the method well fitted for a study that discusses issues of death, grief, and personal memory. Informed consent was also used to tackle the ethical considerations that may arise during such a discussion. At the start of the interview, I informed SAM about the topic and nature of the questions and gained their written consent.

## 4 Previous Research

Digital death practices have started to benefit from an increased critical attention in the past two decades as issues relating to the relationship between death and technology have become more apparent and gained importance in our daily life. Nevertheless, digital games are largely ignored from this area of research. This thesis represents a knowledge contribution to the field as few other studies have focused their attention on the way players use and experience games in the context of death.

Notably, Sabine Harrer's book, *Games and Bereavement: How Video Games Represent Attachment, Loss, and Grief* (2018), explores how games represent loss and how they can be designed to facilitate the expression of grief. Harrer (2018) criticizes the frivolous depictions of death in video games where most often death is represented as a failure (game over, loss of progress etc.). She looks at how five single-player games present interesting alternatives to the loss-as-failure paradigm and argues that, in order for games to be able to facilitate the expression of grief, loss needs to be coupled with attachment and care, not mastery and success.

Harrer also aims to "mobilise game design as an expressive modality for lived grief experiences" (2018, p. 11). To translate experiences of grief into systems which would resonate with the bereaved, she organized a game design workshop with four grieving mothers who were involved in the development of a game concerning pregnancy loss. Following this project, Harrer developed a framework for participatory grief-based design named Trauerspiel. This design method shares similarities with expressive arts therapy and allows game developers to involve the bereaved in the development process and facilitates the expression of difficult human experiences in interactive media.

Harrer's study demonstrates that games can incorporate designs that address issues of death and dying and, as such, it represents a valuable source of knowledge for my own research. However, unlike Harrer's study, my thesis looks beyond representations of death in video game narratives and instead tries to understand how players use game affordances to express their grief both in-game and in real life.

Another important study in the field is that of Anna Haverinen (2014a, 2014b) who has done extensive research on the topic of mourning in virtual spaces. Through autoethnography, she has studied her own experiences with online mourning after the loss of a Facebook friend, observing her grief in real-time and documenting it. She has also observed the rituals people perform on online memorials such as celebrating anniversaries, sharing pictures, leaving poems and prayers in the comment section, etc. Yet, her fieldwork deals not only with social

media and memorial websites but also with online gaming spaces such as *Second Life* (SL) and *World of Warcraft* (WoW). In her studies, she explores how death and mourning rituals are being transformed and reinvented in these virtual environments.



Figure 2. A memorial chapel in *Second Life*. Source: Haverinen (2014a).

In her paper titled “In-game and out-of-game mourning: on the complexity of grief in virtual worlds,” Haverinen (2014a) presents a case of online mourning among members of a role-playing community in *Second Life* (Linden Lab, 2003). She exemplifies the ‘Remembering Our Friends’ memorial chapel area (Figure 2) which has various wings and emulates a real-life chapel, featuring quotes, names, and pictures of the deceased and/or their avatars. The area was decommissioned in 2013, after 7 years since its creation, and no longer exists in the game. Haverinen (2014b) relates that the memorial materials were restored to their owners, but the chapels have now all disappeared. She notes that in SL any user can create their own memorial or request a memorial to be built in a public area. Typically, there are three types of memorials: for avatars, for players, and for family members of SL players. For the last type, the memorials are built inside the game world even if the family members were not active SL players themselves. Nevertheless, the mourning of these offline individuals is mediated through the game.

Haverinen (2014a) has interviewed a group of players who lost a member of their community, a user named Yokuren who died during surgery in 2008. Following her death, members of this community created a memorial in the cave where Yokuren's character used to reside. The memorial is a slideshow which displays screenshots of the character and photographs of the player. Although the other players have never met her in real life, the connection between them is evidently strong as Haverinen recounts that Yokuren wrote letters to her role-playing friends which were meant to be sent out to them in the event of her death.

In time, more memorials were added by the players to commemorate other lost friends and family members, turning the cave into something akin a crypt. Haverinen (2014a) argues that the cave became connected to Yokuren because of the role-playing lore, facilitating the expression of loss and bereavement that ensued after losing a fellow player and a dear character of the story. The author states that gaming spaces become meaningful in the same way as any other place in the offline world since the bereaved remember and experience the space through the memory of the deceased. As no physical objects are left behind for the bereaved to cherish, digital objects such as profile pages, chat logs, and screenshots become highly valued artefacts.

Haverinen's research represents a complex study of mourning practices in virtual environments and as such it provides a valuable source of theoretical material and empirical data for my own study. My thesis builds upon and expands the concepts raised by Haverinen, aiming to present a more elaborate picture of the types of memorials created by users in games. In addition, my research also discusses various elements that make games a viable tool for memorialization and digital legacy.

## 5 Analysis

The following analysis is based on the theoretical framework developed in the background of this thesis as well as on the field research I conducted through ethnomethodology. This field research includes an interview and online ethnography on virtual memorials and in-game funerals and avatar memorialization. In this section, I will relate the reviews, investigations, and interpretations of my research. I will begin by analyzing how games can be employed in grief processing and how players appropriate game affordances and include them in memorialization and mourning practices. I will then examine the relation between games and the creation of memory. Lastly, I will discuss whether or not games can become heirlooms and enable the passing on of digital legacy.

### 5.1 In-game Mourning

Studies like those of Anna Haverinen (2014a, 2014b) show that grief can be expressed in virtual worlds, and that in-game mourning acts as an extension of mourning in real life. Digital games and online gaming spaces are starting to be integrated in mourning and remembrance practices and should be analyzed through their relatedness to death and bereavement. Building on this, I argue that game memorials share commonalities with other forms of virtual memorialization, and that they can be similarly classified into grief-specific and non-grief specific spaces.

Much like memorial websites, grief-specific games tend to be biographical, emotional, and developed with the purpose of memorialization. For instance, in *That Dragon, Cancer* (Numinous Games, 2016), two of the developers, Amy and Ryan Green, reflect their experience with raising their son, Joel, who was diagnosed with terminal cancer soon after his birth. Amy Green relates in an interview about her son that “in a lot of ways his life will only matter if we make it matter” (Tanz, 2016). The game is meant to be meaningful and impact people, making the players understand the life and struggles of the child and his family. Therefore, the game serves as a tool of remembrance and legacy.

The player takes on the role of the parents and can interact with the child and other characters. The game is built around certain moments in the family’s life, showcasing fragmented memories, photos, voice recordings, and crucial events. These same elements commonly appear in online memorials where the bereaved include stories and information about the life and achievements of the deceased. Including these thanatosensitive elements into the design of the game allows players to repeatedly contribute to the process of memorialization through their play and facilitates the construction of a digital legacy.

Ryan and Amy Green state that working on the game was an important outlet to explore their grief and to keep the memory of their son alive (Tanz, 2016). Although the child and his parents are represented in an abstract way as faceless characters, the game memorializes his life and the bond he had with his family. The game is essential in the parents' grief processing which adheres to the 'continuing bonds' model, wherein the social presence of the deceased is maintained even after death. Thus, the game allows the parents to mourn both inside and outside of the game world.

However, grief-specific games are uncommon and are not the only spaces where in-game mourning can occur. In my interview with SAM, the artist also expressed that playing *Just Dance 4* (Ubisoft, 2012) contributed to their mourning and grieving process. Albeit the game is far removed from death and is intended as a party game, SAM states that "it was there the entire time i was mourning and trying to heal" (SAM, 2021). SAM recounts their grieving process, relating that "there was an actual progression of me avoiding playing the song [*Oh No!* by Marina and the Diamonds], to playing it and putting the remote down so i couldnt get a score, to playing it a bit and putting the remote down, etc etc" [sic] (SAM, 2021). After the loss of their best friend, the game provided a space where SAM could revisit their friend's memory, which was marked by the high score on Marina and the Diamonds' song. This reflects that games have the capacity of serving as tools of remembrance regardless of their relatedness to topics of death. In this case, a rhythm game acts as a memorial that provides comfort to the bereaved and helps them confront their loss.

Yet, memorials reflect not only individual but also collective loss. Grief is frequently expressed in games that have a large following or tight-knit communities. *World of Warcraft* (Blizzard Entertainment, 2004) is an MMORPG with large communities that often organize commemorations for deceased players. Haverinen (2014a) notes that memorialization activities in WoW began very quickly after the launch of the game, and she discusses the case of an in-game virtual funeral hosted by WoW players in 2006. A more recent event happened in 2020, when a remarkable number of WoW players from across multiple servers gathered inside an in-game landmark called the Cathedral of Light to pay their respects to Byron Bernstein, also known as Reckful, a popular Twitch streamer and professional esports player.

Online gaming environments are deeply social worlds inside which players create their own digital cultures. Players spend many hours together, have joint interests, and may choose to include or share details about their personal lives. Losing a member from this type of community creates a similar senses of loss and bereavement as losing any other relationship (Lagerkvist, 2013). In-game virtual funerals are a way of memorializing this loss. They share

many similarities with traditional funeral practices while also incorporating aspects of the game story and culture. Generally, players gather in spaces that are seen as meaningful in the world of the game, as in the case of the Cathedral of Light which resembles a real-life church. They may choose to dress in a certain way, perform a certain action like kneeling, or leave tributes that are deemed symbolic or valuable.



*Figure 3. Players participating in a funeral procession in Final Fantasy XIV. Source: Elliott (2020)*

In-game memorials are also often the only way the community can give tribute and remember a deceased player. They allow members of the community to come together despite geographical or social location and share their loss with others in a familiar surrounding. In April 2020, during the COVID-19 quarantine, *Final Fantasy XIV* (Square Enix, 2013) players organized a virtual funeral for a fellow gamer who succumbed to the virus. Unable to travel and meet each other, a group of online friends decided instead to meet on the game's Zalera server. To their surprise, they were joined by hundreds of other players who, as seen in Figure 3, logged on at the same time, equipped their digital avatars with black clothing and umbrellas, then marched in a funeral procession through the online fantasy world. While not all players personally knew the deceased, the death was perceived as a loss to the community, as expressed in the funeral announcement: "One of our own was

lost to COVID-19. Now's the time to show up and show out for a fallen Zalera player ... Remember the fallen, or no one else will" (Elliott, 2020). The procession lasted for approximately an hour and ended near a large tree where players shared their final goodbyes.

Therefore, in non-grief specific game spaces, players appropriate existing game elements and confer them a new meaning that accommodates their need to express grief. They adopt ritualistic procedures that mimic established death practices and address loss both emotionally and socially. In the absence of a physical body to be mourned, virtual funerals and in-game memorials act as rituals that honor the deceased and symbolize lost relationships. Like other digital or physical memorials, in-game memorials bring comfort and closure to the bereaved and create a space where the bereaved can gather and strengthen their bonds with not only one another, but also with the deceased.

## **5.2 The Role of Avatars**

It is important to note that in-game mourning extends to both the player and their character or avatar. The avatar is seen as an extension of the player. In the game world, the avatar represents the player's progress which reflects their skill, the time they invested playing, their preferred aesthetic, and so on (Mazzeo and Schall, 2014, p. 197). In MMOs, it also represents a certain role within the world of the game and it enables the player to establish a reputation and connection to others. Consequently, the death of a game user inevitably brings about the metaphorical death of their character and is perceived accordingly as a loss both within the realm of the game and in real life.

Players tend to identify with the character or avatar they control in a game. Klimmt et al. describe identification as a "temporarily increased activation of associations between players' concept of 'self' and concepts that describe the [...] media character" (2009, p. 357). They argue that identification is important for game enjoyment and that it is visually cued, as players are looking into the game world through their character's eyes, particularly in games played from a first-person perspective. Sibilla and Mancini (2018) also highlight that identification is increased when players are given the ability to customize their avatars.

Sibilla and Mancini (2018) list two types of user-avatar identification: actualization and idealization. Through idealization, players associate with character attributes that they would like to have rather than with those they already possess. Klimmt et al. (2009) indicate that players tend to identify more with characters that represent their "ideal self." However, some players prefer to create actualized avatars which correlate with their own appearance, personality, and other attributes.

Whether realistic or idealized, the avatar is an extension of the identity and personality of the player. It reflects various facets of the individual behind the screen. Consequently, avatars are commonly used in processes of virtual memorialization. In WoW, the non-playable character (NPC) Caylee Dak memorializes a user named Dak Krause who died of leukemia in August, 2007. Albeit an idealized character, the NPC is an exact replica of the avatar once used by Krause, bearing the same gear as well as the same pet, Dusky, who was also added as an NPC. Fittingly, the character serves as a quest ender to a mission that features a poem about the transcendence of death.

Following his passing in July, 2020, Twitch streamer Byron “Reckful” Bernstein was similarly memorialized through the addition of an NPC based on his character. A Rogue Trainer named Reckful (Figure 4) can now be found in the Cathedral of Light, the place where players gathered to mourn Bernstein after receiving news of his suicide. The NPC has a line of dialogue that alludes to Bernstein’s achievements in WoW, and players can respond to it by saying “it was good seeing you again.” Additionally, users can perform certain actions such as hugging or waving to which the NPC responds. All of these features commemorate Bernstein and allow other gamers to pay their respects, share their grief, celebrate his accomplishments, and keep his memory alive.



*Figure 4. World of Warcraft NPC commemorating Reckful. Source: Blizzard Entertainment (2004)*

The abovementioned characters were both introduced in WoW by the developers at Blizzard Entertainment, yet most often it is the players themselves who employ avatars in

memorialization processes. Bainbridge discusses the creation of Ancestor Veneration Avatars, or characters created in memory of someone – such as a relative – who passed away (2014, p. 218). He exemplifies one of the characters he created in WoW, a priest named Maxrohn, which was modelled after his deceased uncle, Max Rohn, who had been an Episcopal priest. In this case, the character serves as an emulation and can be viewed to some extent as an actualized avatar because it is meant to represent a part of a real person's identity.

Bainbridge also talks about “Bridgebain,” another avatar he created in memory of his late grandfather (2014, p. 215). The name he chose for the character is based on his grandfather's telegraph cable address which to him symbolized his grandfather's passion for science and technology. He recounts that his grandfather's adventurous and innovative spirit fit well into the world of *Tabula Rasa*, the MMORPG in which he created the avatar. Bainbridge states that “in Bridgebain and through him, I could reexperience my grandfather in adult terms, although I was only seven years old when I said goodbye to him as he lay on his deathbed” (2014, p. 217). By embedding his grandfather's characteristics into the avatar, the author was able to reconnect with his deceased relative and negotiate his loss through a reconstruction of his memory that conferred him a new understanding of the person his grandfather used to be.

Therefore, the avatar gains a new meaning and function both inside and outside the world of the game. Avatars can be used to preserve the connection players have to a person they lost. Actualized avatars can be compared to funerary portraiture, showcasing a visual representation of the person who passed away. Idealized avatars are more abstract but they still reflect facets of a player that are representative and identifiable. I would even argue that, similar to the way memorialized accounts on social networking sites are used to build a more elaborate picture of the deceased, avatars can be used for the same purpose. In online memorialization practices, the biography of an individual can be constructed through the combination of narrative bits that are available on a social networking sites, for example photographs and status updates. While less informative, a player's avatar still contains elements that can be used in the crafting or recrafting of an individual's identity, as they can embody certain traits, professions, or emulate physical characteristics that are representative of the deceased.

### **5.3 Games and Memory**

Because players interact with each other mainly via their characters, avatars also serve as a tool in the construction of memory. Users immersed in mediated narratives are likely to

develop a strong sense of connection or familiarity with characters encountered repeatedly or continuously over time (Klimmt et al., 2009, p. 353). In role-playing games, in particular, the avatar has a significant social role. As Haverinen explains, RPGs transform an avatar into a character which represents “both the story of the role-play and the personal interests of the player” (2014a, p. 157). She also states that “the communal spirit is usually strong among players who have played together for hundreds of hours and often even years. They have shared their personal lives with each other, and have ‘lived’ together in the story they have created for the game” (Haverinen, 2014a, p. 157). Thus, as an extension of the player, the avatar is tied to certain memories that players develop together in the game and it can become important in practices of memorialization and remembrance.

Likewise, other elements of the game or even the game itself can contribute to memory-making. Of particular interest in this case are personal and collective memories. In my interview with SAM, the artist recounts: “there was a period in time where we had a week-long sleepover shortly after our birthdays (we have the same one) and for a good chunk of that time we would play just dance. i still have the wii and cd actually” [sic] (SAM, 2021). In this case, *Just Dance 4* (Ubisoft, 2012) is part of a collective memory shared by SAM and their best friend. It acts as a reminder of an event that was significant in their friendship.

SAM’s mention of the game CD and Wii prompted me to ask a series of follow-up questions, which led to the following exchange:

ME: Is there any reason why you still keep the wii/cd?

SAM: my little sister occassionally plays on it, so there hasnt been a need to sell it yet! if we were to though i think i would take a few moments to just come to terms with it

SAM: i have a small wallet with objects of memories of her, and the cd holds a similar sentiment

SAM: the idea of parting with it comes a lot easier than it would have, say, 7 years ago, but i still like it as a memento you know? like a small reminder to not forget her entirely

ME: Yea, I definitely understand. [...] As far as I gather, you avoided playing the game after your friend passed away? Can you tell me a bit about that?

SAM: i still played the wii, just not that one song in particular! its been a long time ago so im not sure of my reasoning, but to past me i was fine playing other wii games and songs as long as they werent oh no!.

SAM: i do remember her being happy with the high score, so when i would see the song and her name on the menu i would be reminded of her victory in that way

(SAM, 2021)

After their friend's passing, the game gained a new meaning in SAM's personal memory, becoming a symbol of the connection they had to their friend. This new meaning extends to both physical and digital elements related to the game.

Along with other objects, the CD acts as a memento, an artifact that holds sentimental value and evokes memories. The creation and curation of materials that embody an association with the deceased is often part of the grieving process, since artifacts play a major role in the construction of memory and they also facilitate mourning. Artefacts are defined by their materiality and, in that sense, they are similar to physical memorials which allow the bereaved to locate the deceased and confront their loss through their own spatial proximity to the memorial (Arntfield, 2014; Rumbold et al., 2020). The CD provides a physical connection to the memory of a person who passed away and its potential removal from SAM's proximity is perceived as a loss.

Similarly, the high score on Marina and the Diamonds' song has a particularly strong link to the memory of SAM's friend, evoking an event that marked her success in the game. *Just Dance 4* (Ubisoft, 2012) can be viewed as a scoring game in which the main goal is to achieve the most valuable score within the parameters of the game world in a single iteration of gameplay. This score is a representation of the player's progress in the game. In scoring games, progress and enjoyment are directly connected, as players typically aim to achieve a personal best, the best score on a given machine or the best score amongst a group of peers (Mazzeo and Schall, 2014, p. 199). The achievement of this goal leads to enjoyment and the player emerges from the gaming experience with a greater sense of fulfilment. Therefore, the high score memorializes the progress and success of SAM's friend in the game world, which in turn affected her experience in the real world, leading to the creation of a personal memory surrounding her victory and the enjoyment she felt.

## 5.4 Games as Heirlooms

Objects hold meaning and memories attached to them, becoming imbued with the histories of their owners as they change hands. After experiencing a loss, it is common for the bereaved to take on the role of custodians, taking responsibility over the things left behind by those who have died. These things do not have to be solely physical objects, but can also be digital, for example in the case of someone's digital legacy. A person's digital legacy contains

information about them and reflects many different facets of a person. Subsequently, it may constitute something of value for those close to them.

Because of the connection between game elements and personal memory, the erasure of the high score is equated to the erasure of the deceased's social presence. SAM explains:

SAM: i think beating that high score seemed rude? i remember my parents holding a party and the other kids avoiding playing that song after seeing her name on it as well, but i remember their reasoning being "shes dead and its rude"

SAM: which is what it was to kids on a surface level i think, but at the same time i associated beating her score with \*not caring\* about the memory we had at that time

SAM: kind of like taking a photo of a deceased family member off the wall. its rude, but you keep it up there because they still have a place [sic]

(SAM, 2021)

While less detailed than a family photograph or a social media account, a game element such as a high score can still show a person's skill, progress, and success. A high score is an indexical trace of the player and a testament to their prior presence. It memorializes the player and offers a connection to the past. In that sense, the game element acts as an heirloom because it extends beyond the life of the player and sustains the social relationship between the deceased and the bereaved.

Banks et al. state that many sentimental items are kept so as to protect them, since the bereaved are often compelled by a sense of obligation or the desire to honor the deceased and their wishes (2012, p. 75). Therefore, removing elements that evoke their memory can be seen as disrespectful or inappropriate. On the other hand, keeping those objects plays a major role in grief processes where the bereaved wish to continue their bonds with the deceased and maintain their social presence.

In addition, Rumbold et al. also mention that the sharing, storing, and dispensing of objects that have belonged to the deceased mirrors an inner renegotiation of relationship with that person (2020, p. 6). SAM and those close to them have kept the game for seven years after their friend's death but, ultimately, SAM beat the high score as part of an ongoing grief process. Nonetheless, *Just Dance 4* (Ubisoft, 2012) still acts as an heirloom: it is something that SAM shared with their friend in the past, something that still has meaning in SAM's personal memory, and something that SAM currently shares with their younger sibling and other people.

Heirlooms and other artefacts of sentimental value are generally preserved for three primary beneficiaries: the owner themselves, a known other for whom items are kept to bolster a sense of shared connection, and an “unknown” other for whom items are preserved as a form of legacy (Banks et al., 2012, p. 69). The previously discussed case of *That Dragon, Cancer* (Numinous Games, 2016) is a good example of this. The game was created by the developers to memorialize their lost son, as Amy Green explains: “we’d love for it to impact people and for it to be commercially successful. But there’s a piece of me that says, maybe it’s just for us” (Tanz, 2016). The Green family are the known others for whom the game acts as a connection to Joel and his memory, while the players are the unknown audience to whom the game reflects Joel’s legacy. Similarly, SAM also preserves the game for themselves and for known others such as their other friends and relatives.

Briggs and Thomas identify three main activities connected to the preparation of a digital legacy (2014, p. 130):

- (i) curation, the active process of taking personal records and annotating them so that someone else can make sense of them;
- (ii) creation of mementos by collating those curated materials in order to produce an artifact such as a scrapbook;
- (iii) active reminiscence where people tell stories about the past based on their own memories.

As shown throughout this section of the paper, digital games can be used in all of these three activities. Games like *That Dragon, Cancer* (Numinous Games, 2016) are constructed from biographical material such as personal memory and family records. These materials are curated to accommodate both the bereaved and the deceased. The game allows the Green family to grieve and reminisce while it also memorializes their lost son and makes sense of these personal materials in order to tell his story to a wider audience.

Game elements can also be used as mementos. Bainbridge (2014) used game avatars to collate characteristics of his deceased relatives and create a virtual representation of them in the form of Ancestor Veneration Avatars. In this case, the avatars act as a scrapbook where the author collects aspects of the deceased that he deems representative or memorable. Similarly, SAM also uses elements like game CDs and high scores as mementos. These elements attain new meanings as they become connected to someone’s memory and allow the bereaved to reminisce about the deceased and renegotiate their relationship with them.

Games can sustain social relationships and bolster ideas of shared memories, history, and values. Therefore, they can be used in memorialization and mourning practices. This also

indicates that they may accommodate thanatosensitive design, which would account for a user's inevitable demise by considering and integrating aspects relating to death and bereavement. Consequently, games have the potential to be part of someone's digital legacy and become Technology Heirlooms.

## 6 Conclusions

### 6.1 Summary

In conclusion, the online medium has profoundly impacted the social and cultural construction of death, as well as the environments in which dying occurs. Digital media are now a part of contemporary mourning and memorialization practices, giving rise to new ways in which grief is expressed. In these virtual spaces, death is made visible through new patterns of commemoration, ritualization, sociality, and publicness.

This thesis has discussed various digital death practices, focusing especially on memorialization and grief processes. In this paper, I propose that digital games can be used in these processes and that they can accommodate both the memory of the deceased and the needs of the bereaved. Thus, players experience games existentially, using them to express their grief, seek support, and make sense of the new social role they might have to assume after experiencing a loss.

This type of research can prove useful in understanding the largely unexplored potential of digital games during and after the life of their users. It also discusses new dimensions that games could take on: they can act as artefacts or be part of a digital legacy. I suggest that, given the implementation of a more thanatosensitive design, games can become Technology Heirlooms in their own right and establish new practices of digital memorialization and mourning.

### 6.2 Discussion

Massimi and Charise affirm that “today, we are as likely to inherit a loved one’s collection of hard drives, USB keys, SD cards, and email accounts as we are collections of papers, journals, and photographs” (2009, p. 2459). I would argue that, in the near future, video games may be added to this list. As previously discussed in this paper, digital games can foster a wide range of mourning and memorialization practices. They can also become artefacts connected to personal and collective memory or be part of someone’s digital legacy. Yet, in order for games to become fully fledged Technology Heirlooms, a few issues need to be addressed.

Digital footprints can be used actively by a user to share information about themselves, however, passive information is also stored, often unknowingly to the user. This aspect raises questions about the possibilities of digital legacy. What happens to our data after we die? Who gains access to it? What can be accessed and what remains hidden? This type of

data can be exceedingly complex and can raise numerous issues relating to ownership and accessibility, as individuals do not always own the rights to their own data.

Oftentimes, a console, computer or mobile are the only physical manifestation of a game and its data. Yet, as Banks et al. (2012) mention, these manifestations can feel quite conceptual to individuals since people may not always know how to access them. A game's save file, for example, can be hard to trace, especially if it is on someone else's device. A person's game collection can be spread out on multiple platforms like Steam, Origins, Epic Games, and so on, or they may have multiple accounts. Access to this data is tied to passwords, remote hosting or even biometrics, and it may become totally inaccessible in the event of the owner's death. In cases like these, a thanatosensitive feature like a legacy contact could prove useful to ensure that the data can be accessed, managed, and passed down onto others, similar to the way a legacy contact can memorialize a Facebook page.

Another issue stems from the fragmented and dynamic nature of the digital medium. Arntfield comments that the wide accessibility and instantaneity of digital memorials comes at the cost of durability and stability (2014, p. 90). Virtual memorials, including games, are vulnerable to loss of data, deletion, failure of function, file corruption, etc. While physical memorials are traditionally built to endure the test of time, digital memorials are immaterial and often ephemeral. Bainbridge talks about the loss of his avatars – including the one modelled after his grandfather – that ensued after the MMOs *Star Wars Galaxies* and *Tabula Rasa* permanently shut down their servers (2014, p. 216). He highlights the fact that currently there exists no way to revive MMOs and other online virtual worlds once they have been closed down. Perhaps a solution to this may come from game conservation and archiving efforts. Institutions like the UK-based National Videogame Archive or the forthcoming Embracer Group games archive aim to preserve games and their history.

However, MMOs in particular represent a challenging case for conservation and archiving since they depend on not only software, hardware, and network dependencies, but also on complex and variable social interactions which are difficult to formally model. Celia Pearce offers an insight into how MMO communities may be brought back to life. In her book, *Communities of Play* (2009), Pearce researches a group of *Uru: Ages Beyond Myst* players who relocated to other virtual worlds like SL after their game closed down. The players, who were at first ostracized from these spaces, eventually became community leaders, creating hybrid cultures that integrated aspects from their former game to the new platforms they migrated to.

Lastly, not all games can or should be seen as potential Technology Heirlooms. Briggs and Thomas discuss the importance of systems that can both forgive and forget, proposing that

technologies used to support our digital selves should also support the act of forgetting (2014, p. 129). They also state that there are times when a digital legacy seems inappropriate. Perhaps a game containing highly violent or pornographic content is not something a user would want as part of their digital legacy. For this purpose, self-curation can be a better alternative to memorialization. In other words, the user can be responsible for the curation of their own legacy prior to death. Massimi and Charise add that, once deceased, what defines the user in terms of their interactions with technology slips out of their grasp: they no longer have control over what data relating to them continues to be produced after their death (2009, p. 2464). Therefore, self-curation would provide the users with more control over their legacy and the way they wish to be remembered.

### 6.3 Future Work

The current research has revealed a wide range of contemporary digital death practices that reflect combinations of old and new practices coexisting and/or overlapping in the virtual environments of digital games. However, the dynamic medium of games has the potential to generate new design ideas and research directions. The inclusion of thanatosensitivity in game design processes may lead to the creation of new systems, technologies, and devices that may allow games to accommodate death in their design, supporting the needs of both the deceased and the bereaved.

Games could become heirlooms and be inherited just as commonly as digital files or photographs. They could be used in grief counselling, funerary services, memorials or, as shown in Harrer's (2018) study, in expressive arts therapy. This is particularly relevant during times of crisis such as the current COVID-19 pandemic, when death is encountered in all socio-cultural aspects. Now, games can provide a much needed tool for remembrance, commemoration, and connection with one another. As illustrated by the *Final Fantasy XVI* (Square Enix, 2013) funeral procession organized by a community of players, games have already started to be employed for this purpose and further research can uncover new forms of practice and perhaps a wholly new genre of games. During the pandemic, games like *Wash Your Hands* (Dean Moynihan, 2020) and *Wear a Mask* (Nic M, 2020) were created to memorialize all the lives lost to the virus and they may offer insights into what a memorial genre could look like and what such a game could entail.

Games have simply not existed for long enough to be fully understood in the context of memory, bereavement, and inheritance. Yet, it is my hope that this paper has opened up a new field of discussion relating to how users experience games and how they can be employed not only during our lifetime but perhaps even after it.

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# Appendix A - Interview Transcript

12 April 2021, Tumblr

ME: Hello! It's me, conducting serious research through Tumblr DMs ☺☺ Thanks a lot for agreeing to do this! You're a huge help

ME: Just to make sure I got this right, the game you mention in your comic is Just Dance 4 (2012)?

SAM: its no problem! im happy to help and yeah, it was just dance 4

ME: Neat! So I'm writing about if games can be used as virtual memorials so the first question I'd like to ask you is: is the game connected in any way to the memory of your friend?

SAM: absolutely! there was a period in time where we had a week-long sleepover shortly after our birthdays (we have the same one) and for a good chunk of that time we would play just dance. i still have the wii and cd actually

SAM: the connection to the song oh no! in particular was because i had the game for a long time prior to that, and had a lot of max high scores. oh no! was the only song we hadn't played much and was one she got the new high score in

ME: Is there any reason why you still keep the wii/cd?

SAM: my little sister occasionally plays on it, so there hasn't been a need to sell it yet! if we were to though i think i would take a few moments to just come to terms with it

SAM: i have a small wallet with objects of memories of her, and the cd holds a similar sentiment

SAM: the idea of parting with it comes a lot easier than it would have, say, 7 years ago, but i still like it as a memento you know? like a small reminder to not forget her entirely

ME: Yea, I definitely understand. It has sentimental value and memories attached to it.

ME: As far as I gather, you avoided playing the game after your friend passed away? Can you tell me a bit about that?

SAM: i still played the wii, just not that one song in particular! its been a long time ago so im not sure of my reasoning, but to past me i was fine playing other wii games and songs as long as they weren't oh no!.

ME: I see!

SAM: i do remember her being happy with the high score, so when i would see the song and her name on the menu i would be reminded of her victory in that way

SAM: i think beating that high score seemed rude? i remember my parents holding a party and the other kids avoiding playing that song after seeing her name on it as well, but i remember their reasoning being "shes dead and its rude"

SAM: which is what it was to kids on a surface level i think, but at the same time i associated beating her score with \*not caring\* about the memory we had at that time

SAM: kind of like taking a photo of a deceased family member off the wall. its rude, but you keep it up there because they still have a place

ME: Do you wish there was a way to preserve her highscore while still being able to beat it? Or do you think that erasing it is better in the long run?

SAM: oh thats a good question! im not really sure. preserving it is definitely better if id like to keep the memory, but in terms of grieving and healing i think erasing it could have been a part of the process

ME: Do you feel like the game contributed in any way to your mourning or grieving process?

SAM: yep! it was there the entire time i was mourning and trying to heal. there was an actual progression of me avoiding playing the song, to playing it and putting the remote down so i couldnt get a score, to playing it a bit and putting the remote down, etc etc

SAM: its significance was far from purposeful but its one of those things that you realize played a big part when you look back on the big picture

ME: In your comic, you talk about memories passed down through stories and memories stored in digital form, and you mention that digital ones are "permanent by choice." Can you tell me more of your thoughts on that?

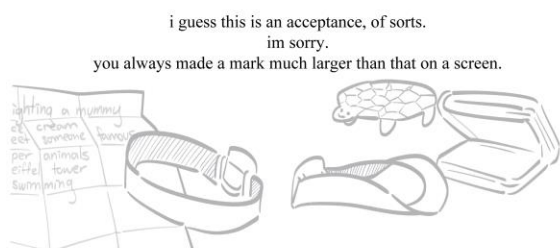
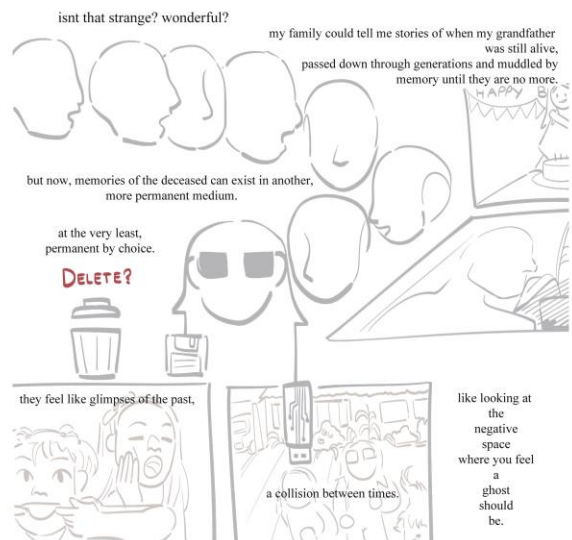
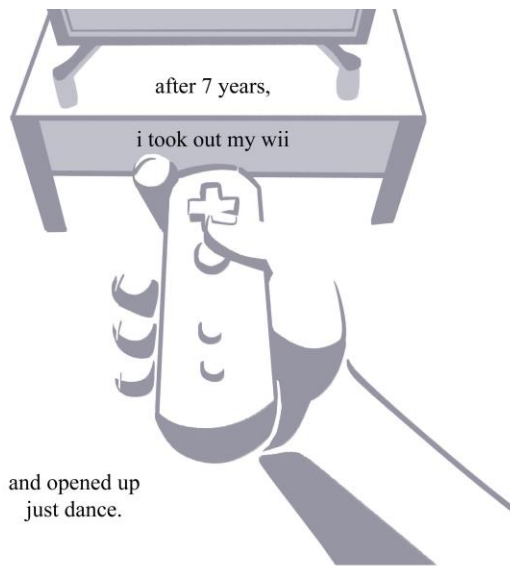
SAM: i was mostly thinking about how pictures can be so easily deleted! my mom posts her pictures to facebook, so i still have the pictures of me and my best friend that i would have lost

SAM: choosing to play the game with her high score on it was a choice to risk erasing it, deleting something that could have been permanent

ME: I see! That was all I had in mind for now. Thanks a lot for the answers! And thank you for sharing!!

SAM: thank you! i dont mind sharing stories, thanks for listening!

## Appendix B - *digital ghosts* webcomic



(@notedchampagne, 2020)