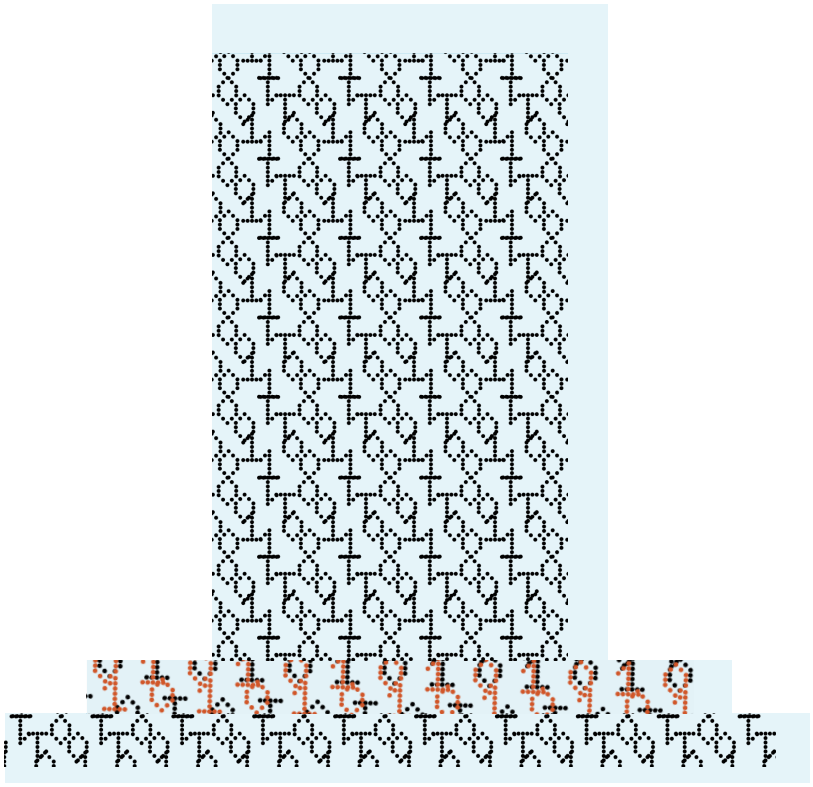
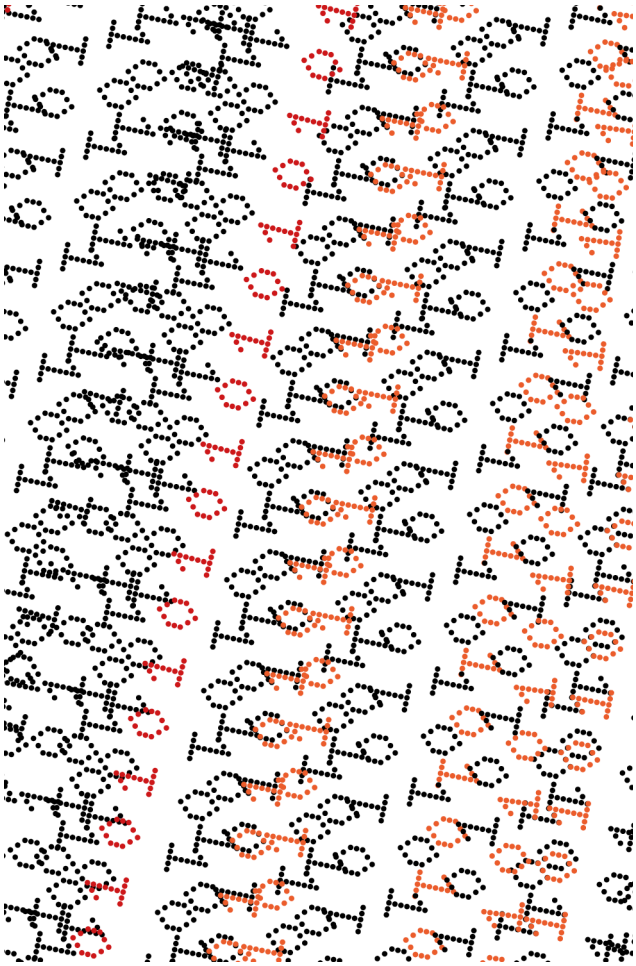
MASTER THESIS DPM-2203

Provoking Reflections on AI Afterlives Among Young Adults Through Design of a Provocative Prototype



Arash Hosseini Koupaei
26 May 2025



Provoking Reflections on AI Afterlives Among Young Adults Through Design of a Provocative Prototype

Master Thesis Industrial Design Engineering
DPM 2203
26 May 2025

University of Twente.
Faculty of Engineering Technology
Department of Design, Production, and Management

Examination Committee

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Abstract

Nowadays, everyone leaves at least some digital data behind. With the advancements in generative AI, these digital footprints have the potential to be (re)used for creating agents capable of replicating deceased individuals' interaction styles and behavior. These types of agents are often referred to as AI Afterlives, which can allow a bereaved to reconnect with their deceased. Potential benefits or risks of this technology are still being studied. However, major tech companies and startups have already started investing and investigating in them, and even some small-scale examples of such agents can today be found. While the concept is still emerging, this so-called "Death Tech" industry is expected to expand rapidly.

The idea of reconnecting with the dead using AI technology is not new and has been displayed in several well-known films and TV shows. Public perception and opinion of this technology are also heavily influenced by those told stories or by how tech companies are starting to present its features from a business and commercial point of view. In the shows, the concept of AI Afterlives is often portrayed dramatically or exaggerated (utopian or dystopian), while new start-ups offering AI Afterlives tend to offer polished, optimistic visions. Both might have created and even continue creating biased impressions of what an AI Afterlife agent might actually be and how it might affect us as humans.

Among all the potential users of such technology, young adults are a key group in this discussion. They are most likely to be among the first to experience it as they age with AI tools at their disposal. This thesis aimed to deliver a designed provocative prototype that can facilitate critical discussion and reflection about AI Afterlives among young adults. To do so, it first used the Cultural Probes method to understand how young adults perceive, feel, and experience the concept of AI Afterlives. Then, it employed a multi-method approach by conducting a co-creation workshop where the same participants collaboratively speculated about future narratives involving AI Afterlives. Finally, the narratives developed during the workshop were used with the design fiction approach to create a fictional scenario which was then encapsulated into diegetic prototype ideas. Three concepts were proposed, and ultimately, one was further developed to serve as a diegetic prototype capable of provoking reflection and debate on the topic of AI Afterlives.

Acknowledgements

First and foremost, I want to thank my parents and my sister. Your support has been the foundation of my entire life, and especially since I left Iran during the difficult times of Woman, Life, Freedom and everything that followed. You have shaped who I am today, and none of this would have been possible without your strength, love, and belief in me.

Looking back, I still can't believe I made it this far. This has been the longest and most intense project I've ever worked on, and I'm proud of the outcome and everything I've learned along the way. It gave me the chance to combine my passion for design with the hope of creating change which is something deeply important to me. I've come to realize just how difficult that is, and this thesis showed me it's even harder than I imagined.

This project also became a space to reflect on loss. Even though I had experienced it before, this research helped me understand that loss isn't only felt through death. Leaving my country and the people I love has been another kind of loss, and through this work, I've been able to remember and honor those I've lost (both physically and emotionally) along the way.

I am incredibly grateful to my supervisor, Cristina Zaga. Thank you for your guidance and for the knowledge and perspective you shared with me. Your courses on conceptual design methods and human-centered design opened my eyes to new ways of thinking and helped shape this research from the ground up.

Finally, to my friends and colleagues Ray, Pablo, Luukas, Laura, Sami, Nikoo, My, Zalfa, Gemma and many others. Thank you for being there to untangle my thoughts and push me forward. This project would not have been possible without all of your support.

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Contents

1. Introduction

1.1 State of the World

These days, we might be witnessing the peak in Generative Artificial Intelligence to a point that it does not show any sign of slowing down, at least yet. Everyday, more Gen AI-powered features are being added to popular platforms and services across the web. Gen AI Providers present them as tools, designed for different purposes such as personal assistants and note takers to image and video generators, recruiters, customer service agents, coders, and even project managers (The 50 Best AI Tools in 2025 (Tried & Tested), n.d.). But beyond tools that are aimed to serve our daily needs (without getting into whether we actually need them or not), a new category is emerging.

Firstly, imagine being able to hear the voice of someone who has passed away. This is what Amazon showed at its re:MARS summit in 2022, showcasing a demo of Alexa's potential feature that mimics the voice of a deceased loved one (AWS Events, 2022). In their demo, a child asked Alexa to continue reading "The Wizard of Oz" in his grandmother's voice. Or in another example when an AI-cloned version of Alain Dorval's voice, known for dubbing Sylvester Stallone in French, was used after his death for Stallone's voice in a movie (Vivarelli, 2025). Similarly, in a more recent case Michael Bommer, after being diagnosed with colon cancer, created an AI version of himself that speaks in his own voice. He used Eternos, a new startup that claims to create digital twins of people, so his wife wouldn't feel alone after his death (tarink, 2024).

Now, imagine being able to chat (through text) with someone who has already passed away. This is what Joshua Barbeau did using a chatbot called

“Project December”, created by Jason Rohrer (Fagone, n.d.). He used it to reconnect and talk with his fiancée, Jessica, who had died from a rare liver disease. Now take one step further and think of seeing and interacting with the deceased person in a virtual world. This is what happened when a Korean mother could reunite with her seven-year-old daughter, who had died from a disease, in a virtual environment created for this purpose (Watch a Mother Reunite with Her Deceased Child in VR, 2020).

These examples might sound like science fiction, but they are real examples of some ideas that since couple of years ago till now, shows like Black Mirror have already explored. In the episode “Be Right Back”, a woman uses an imaginary AI service to talk to a digital version of her deceased partner (Brooker & Harris, 2013). It starts with text messages, then advances to voice calls, and eventually becomes a lifelike humanoid robot. In another episode, “San Junipero”, people continue to exist in a virtual world after death (Brooker & Harris, 2016). It almost feels like what once felt like fiction is nowadays starting to become part of reality. In the Amazon example, the comments under the uploaded conference video mostly mention how it reminded them of the Black Mirror series and how disturbing or creepy it is. This gives a small glimpse into how public might be feeling about this new emerging AI-powered tools.

Another example of a big tech company exploring this area of AI is Microsoft. In 2017, they filed a patent titled “Creating a conversational chat bot of a specific person” (Abramson & JR, 2020). The patent describes systems and methods to replicate a real person’s identity to create an identical chatbot by using their personal data such as images, voice data, social media posts, emails and written letters. Indirectly showing the potential it has for developing conversational agents that can eventually simulate a deceased individual.

Google has also been exploring this space. One of their AI researchers recently claimed that with the current advancements we should be expecting beyond chatbots aimed at mimicking the deceased (Morris & Brubaker, 2024). Their paper explores the potential benefits and risks of chatbots that can evolve over time and generate new novel responses, what they referred to as “generative ghosts.” Other than the big tech companies, many smaller companies and projects are also exploring this space such as: Here After AI, LifeNaut, Re:memory, Eternos and Project December. Researchers have even given this industry a name: “Death Tech” or “digital afterlife industry” (DAI) which is expected to expand rapidly (Puzio, 2023; Savin-Baden & Mason-Robbie, 2020).

From the academia point of view, recent studies regarding the emerging phenomenon of using AI to create representations of deceased individuals highlight the significant potential benefits and risks. They may offer emotional support to the bereaved and help coping with grief and facilitate continuation of bonds with the deceased (Fabry & Alfano, 2024; Morris & Brubaker, 2024; Xygkou et al., 2023). Beyond emotional support, they may even help preserving personal or cultural heritage and knowledge for future generations (Morris & Brubaker, 2024). On the other hand, the studies also identify potential risks affecting both the bereaved and the deceased. The mentioned potential risks affecting the bereaved include psychological harm, such as disrupting the natural grief process, promoting excessive attachment, and the fear of a "second loss" if the representation of the deceased is lost or malfunctions (Bao & Zeng, 2024; Bassett, 2021; Fabry & Alfano, 2024; Lindemann, 2022; Morris & Brubaker, 2024). For the deceased, the potential risks involve concerns about their dignity, privacy, autonomy and the possibility of their digital identity to be altered or exploited (Bao & Zeng, 2024; Hollanek & Nowaczyk-Basińska, 2024; Jiménez-Alonso & Brescó de Luna, 2023a; Lindemann, 2022; Morris & Brubaker, 2024). Moreover, broader potential risks involve the lack of accountability and regulation, potential commercial manipulation, and uncertain social effects as norms around death and grief might change (Jiménez-Alonso & Brescó de Luna, 2023a; Lindemann, 2022; Morris & Brubaker, 2024).

1.2 Problem Statement & Motivation

As mentioned, researchers have already pointed out many risks and benefits of AI afterlife. At the same time, as tech companies are investing in AI afterlives, it is likely that more AI afterlife-related products will enter mainstream use in the near future. But are we really ready and prepared?

Public perception, especially among young adults, who are more likely to encounter such phenomena in their lifetimes, is largely shaped by corporate narratives or fictional portrayals in movies and television (Meitzler et al., 2024). These portrayals in the mainstream media tend to be either too positive or dark (utopian or dystopian) and often narrate a narrow range of perspectives.

Some AI afterlife services are now available, but they are still in their early versions. Reconnecting with the dead through AI still remains a developing and experimental concept experiencing trial and error. Now might be a crucial time to shape and influence how it develops. Therefore, there is an opportunity for more exploration, reflection, and open debates, as they are needed to

guide AI Afterlives future in a more thoughtful and responsible way, before these AI recreations become widely available and used.

1.3 Research Aims

This master thesis aims to initiate debate, discussion, and further reflection on the use of generative AI in creating representations of deceased individuals and enabling reconnection with them. The main goal of this research is to challenge existing norms and perceptions surrounding AI afterlives from the perspective of young adults. Rather than arguing whether the concept is good or bad, this study seeks to explore it further and bring more awareness and understanding of its potential impacts. While the immediate aim is to create a provocative prototype that sparks debates about AI afterlife, the broader aim is to address possible near future scenarios when such technology is widely available.

1.4 Research Scope

This research focuses on young adults as they are the ones more likely to experience AI Afterlives in their lifetime and are the ones that are most familiar with the use of generative AI tools that are popular nowadays. The young adults that were studied and involved in this research were lay people as they were no experts in the realm of generative AI and AI in general.

Also, while such tech involves both the dead person (the deceased) and those left behind (the bereaved), this research specifically centers on the perspective of the bereaved, meaning the individuals left behind while coping with the loss of their significant person.

In this research, “AI afterlives” refers to the use of generative AI that creates the illusion of an afterlife from the perspective of the bereaved. These AI systems offer the possibility for individuals to feel a sense of continued connection and interaction with someone who has passed away. However, this “reconnection” is not with the real person, but with a replicated version mimicking their interaction style extracted from the digital data they left behind. Even though the replica generates content that might seem new, it is based entirely on existing data from the deceased. So, while it is not a true reconnection, this term is still used in the study because, for the bereaved, the experience appears to be as if the person has returned back in some form and is reconnecting in their afterlife state.

1.5 Research Questions

AI Afterlives are still new, and we still have a chance to guide them in a more responsible direction through discussion and debate. This highlighted the need to take one step back and first find out the current perceptions towards such a topic among young adults. Therefore, I decided to focus part of my research on understanding their current perceptions of reconnecting to the dead through AI, and another part on exploring possible futures in which such technology might exist. By combining insights from both parts of the research, the goal was to understand how to spark the kind of discussion and debate that this study aims to encourage.

This led to the main overarching question that this research is trying to find an answer for which is:

How might we spark a debate on the future use of AI afterlives to provoke reflection among young adults?

This main research question led to the following sub-questions:

1. How is the idea of AI afterlives perceived with the state of art AI powered chatbots among young adults?

2. How might the possible future narratives be when the AI afterlives are widely available?

2. Background

2.1 From Death to Data: Digital Afterlife

Perhaps everything seems to end with death, but in this research, everything actually just begins with it. With only a couple of clicks searching about the intersection of death and technology, we encounter the term “digital afterlife”. But what is exactly the digital afterlife? To answer this question, first we might need to consider the classic human desire for “immortality.” Immortality can sometimes be interpreted as being remembered by someone after they pass away or by a larger group through fame (Hulsroj, 2015). Perhaps for many, the idea of immortality is linked to stopping the process of dying (becoming resistant to death), or in the event that death occurs, the continuation of a person’s personality and consciousness afterward. This continuation, whether in a physical or digital form, could be seen as a form of resurrection.

The concept of the digital afterlife is the result of advancements in digital technology over the last century, and more recently, artificial intelligence systems. These systems are evolving in a way that can allow someone to extend their presence virtually even after death (Savin-Baden & Burden, 2019). This extension is made possible by the accumulation of digital footprints or remains a person leaves behind in the digital space. Although the technology isn’t fully there yet to create a perfect replica of a person (dead or alive), some aspects of a person’s personality can already be captured digitally, allowing interactions with others (Shirsawade, 2024). In 2005, Ray Kurzweil predicted that with the rise of superintelligence and the singularity, the line between virtual and physical worlds would be hard to distinguish due to the merging of human and machine intelligence (Kurzweil, 2005). Kurzweil argued that

these decades that we are living in right now are the times that he defines as “a period during which the pace of technological change will be so rapid, its impact so deep, that human life will be irreversibly transformed (Kurzweil, 2005).” While there’s still many debates around different aspects of his claims, the idea is worth considering as it can deeply affect not only the “human life” but also human afterlife, death and much more.

The concept of the digital afterlife is closely tied to how we engage with the idea of death in the digital age. Today, the internet is an integral part of our lives, and inevitably has influenced how we confront and process death. Dealing with death online is not a new phenomenon, and dealing with it has changed over the years. Various platforms and websites have implemented features or structures to accommodate the remembrance, legacy-making, memorialization, mourning process, and even the continuation (or sometimes termination) of a person’s online presence and their data after they pass away (Gulotta et al., 2016; Shirsawade, 2024). From social media platforms like Facebook, which introduced memorialized accounts to allow the profiles of dead users to remain active as a place for friends and family to share memories (About Legacy Contacts on Facebook | Facebook Help Center, n.d.), to online memorial sites that create virtual spaces for collective grieving, the internet has offered new ways to engage with this kind of loss. These evolving practices show how our engagement with death is increasingly mediated by the digital world, where the boundaries between life and the afterlife are becoming blurred.

2.2 How Technology Affects Dying and the Bereaved

Death is considered as a challenging part of life that affects not only those who are dying but also the people around them, including the bereaved. As digitalization advances, technology increasingly shapes and mediates practices related to death and dying (Arnold et al., 2017). Coming from the HCI community, the term “Thanatosensitive” design refers to the thoughtful creation of interactive systems that address the conceptual and practical issues surrounding death (Massimi & Charise, 2009). Technology has long played a role in supporting grief (Krueger & Osler, 2022a), and when designed specifically to meet the needs of those facing death or loss, it falls under the concept of thanatosensitivity, thanato-technology or technology-mediated practices.

Exploring death and bereavement through the lens of technology has led to

research in areas like information and data management, internet and media studies, and human-computer interaction (HCI). In a scoping review, Albers et al. (2023) examined the current conceptual and theoretical contributions in HCI related to thanato-technologies, organizing them into three main themes focused on the dying and the bereaved which is displayed in the figure 1 (Albers et al., 2023). By the dying, they refer to those who are aware of their approaching death and are actively preparing for it, such as individuals nearing the end of life. By the bereaved, they mean those who have lost someone significant to them. These themes help us better understand how technology-related practices around death can be organized, and what opportunities they might have for both the dying and the bereaved. As mentioned earlier in the introduction, this research focuses on the bereaved.

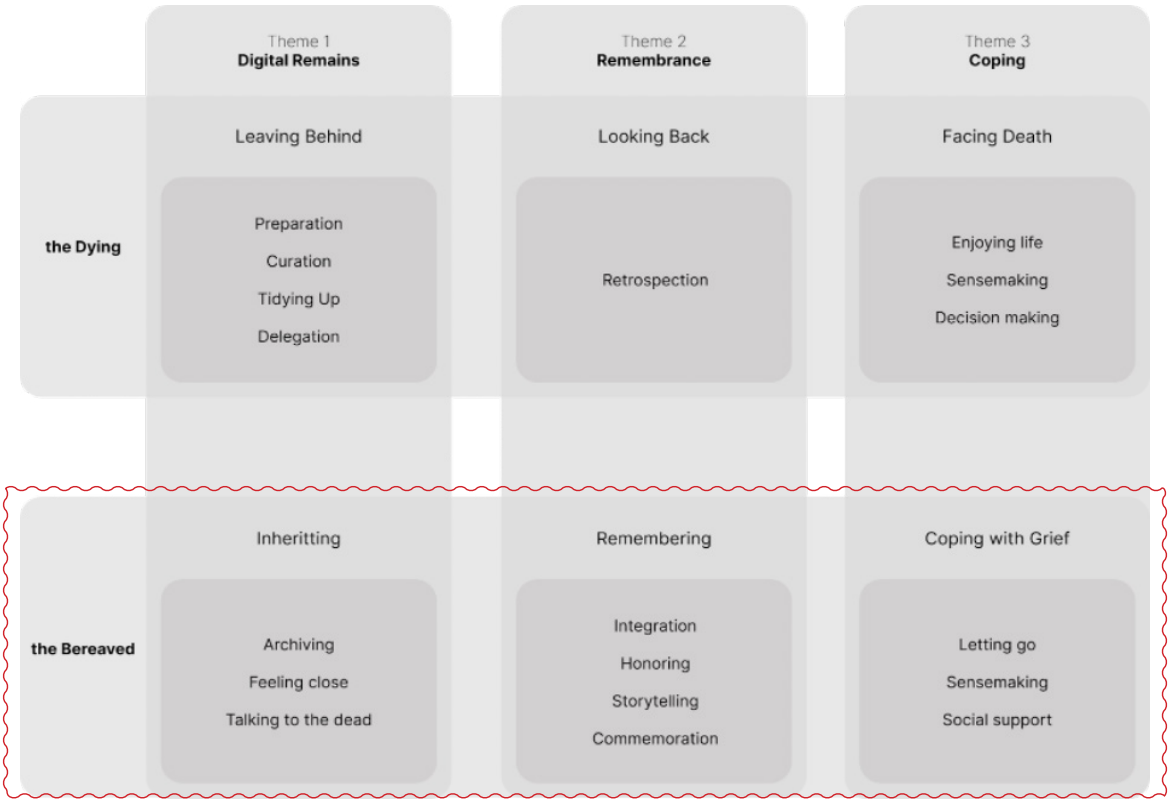


Figure 1 - Main themes and the associated technology-mediated practices about death (Albers et al., 2023)

2.3 Grief, Bereavement, and The Human Drive to Reconnect

One of the motivations for wanting to reconnect with the dead is the need to maintain continuing bonds with the deceased to ease the grief after loss happens (Root & Exline, 2014). To better understand this, it is important to explore what each one of these terms such as bereavement, grief actually mean.

Bereavement refers to an objective situation where someone loses a significant person due to death. This person then is called "the bereaved" and is likely to experience grief which is a complex response. It is considered as a strong emotional, psychological, cognitive, behavioral, social and even physical reaction that the bereaved person may experience (Clavería Camps, 2023). The Merriam-Webster dictionary defines grief as a "deep and poignant distress caused by or as if by bereavement" (Definition of GRIEF, 2025). Cambridge dictionary defines it in simpler terms as a "sadness or sorrow, especially when somebody dies" (Grief, 2025). Both definitions mention death as a big factor in experiencing grief. But what happens to the relationship of the two people when one of them dies? According to some studies the bond continues. This continuing bond has been defined as "the presence of an ongoing inner relationship with the deceased person by the bereaved individual" (Stroebe & Schut, 2005). Traditionally, people maintained this connection through rituals and physical memorials. However today digital technologies such as social media and online memorials are the new ways to that provide some ways to continue these bonds (She et al., 2021).

Many researchers have attempted and have developed various models for grief. Among which some view this phenomenon as stage based such as the ones from Kübler-Ross, Horowitz, and Rando (Horowitz, 1990; Kübler-Ross, 1973; Rando, 1993). Others, like Stroebe and Schut, Gillies and Neimeyer, and Doka and Martin, see it as a more flexible and individual phenomenon (Doka & Martin, 2011; Gillies & Neimeyer, 2006; Schut, 1999). Both types of models often believe their model is the one that most individuals go through. However, Bonanno et al (2002) challenges this idea, arguing that grief does not follow a universal path. Instead, based on his research, people might have different coping patterns after loss, shown in figure 2 (Bonanno et al., 2002).

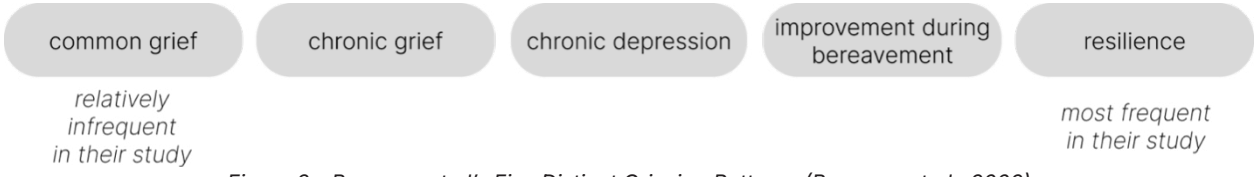


Figure 2 - Bonnano et al's Five Distinct Grieving Patterns (Bonanno et al., 2002)

Bonanno's research shows that people deal with grief in different ways, and that most people are able to return to their normal lives even while still feeling sadness. Considering both the existing models and Bonanno's findings, this research will be based on the idea that grief is a personal and unique experience for each individual.

2.4 Digital afterlife Vs. AI Afterlife

Starting with **Digital Afterlife**. According to Puzio, it refers to the core concept of "the digital presence of an individual after death (Puzio, 2023)". When this concept manifests itself through agents that allow the bereaved to converse with the deceased, terms such as "**deadbots**", "**deathbots**", "**griefbots**" and "**ghostbots**" are used in different studies (Hollanek & Nowaczyk-Basińska, 2024; Jiménez-Alonso & Brescó de Luna, 2023b; Lindemann, 2022; Morris & Brubaker, 2024). These terms are used differently depending on the context and focus of the study, but they do not always explicitly emphasize the involvement of AI technologies in them. Other related terms include the following:

- **Generative Ghosts**, which refers to AI systems that produce novel responses based on a deceased person's past data that can evolve over time (Morris & Brubaker, 2024).

- **Postmortem Avatars**, which describe fully interactive digital reconstructions of the deceased (Hollanek & Nowaczyk-Basińska, 2024).

- The concept of **Posthumous Personhood**, which is the idea of a model of a person that transcends the physical boundaries of the body; and **Virtual Sapiens**, which are sophisticated virtual humans designed to replicate human appearance, behavior, emotion, thinking, autonomy, and interaction (Savin-Baden & Mason-Robbie, 2020).

As already mentioned in the introduction chapter, this thesis uses the term AI afterlife (or afterlives in plural) which refers to the form of an AI-based digital afterlife. However, in other studies, this idea or similar ideas are often referred to, using the aforementioned terms. To better understand how these ideas and concepts have developed over time, it is helpful to look at their historical trajectory. The following figure 3 presents the evolution of these ideas, from the very early days humans decided to preserve memories to the emergence of AI-based systems designed for posthumous interaction.

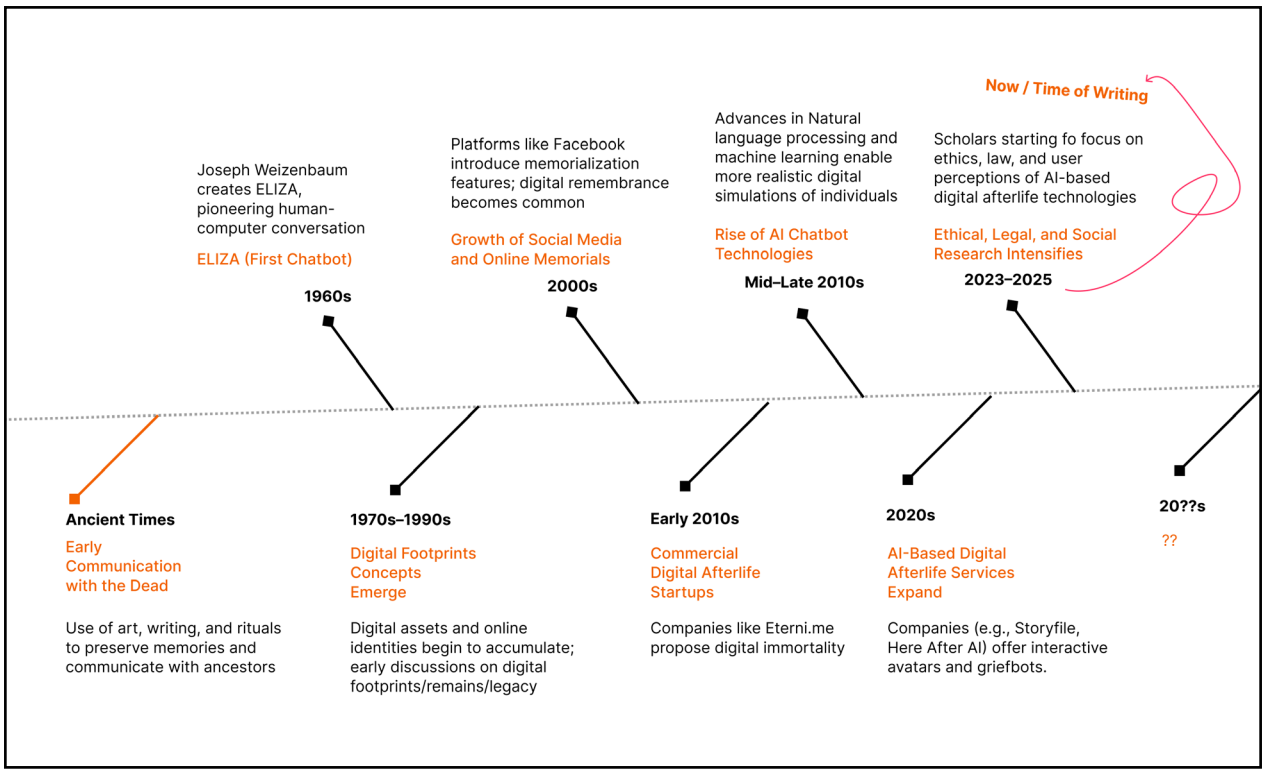


Figure 3 - The historical trajectory of digital afterlife

2.5 Anticipated Use Cases of AI After-lives and Current Debates

Different studies have explored the potential use cases or applications of AI Afterlives services by considering perspectives of different stakeholders involved. They can be data donors, data recipients and service providers, whom may have distinct motivations for engaging in such services. The figure 4 below summarizes a range of use cases identified across various studies.

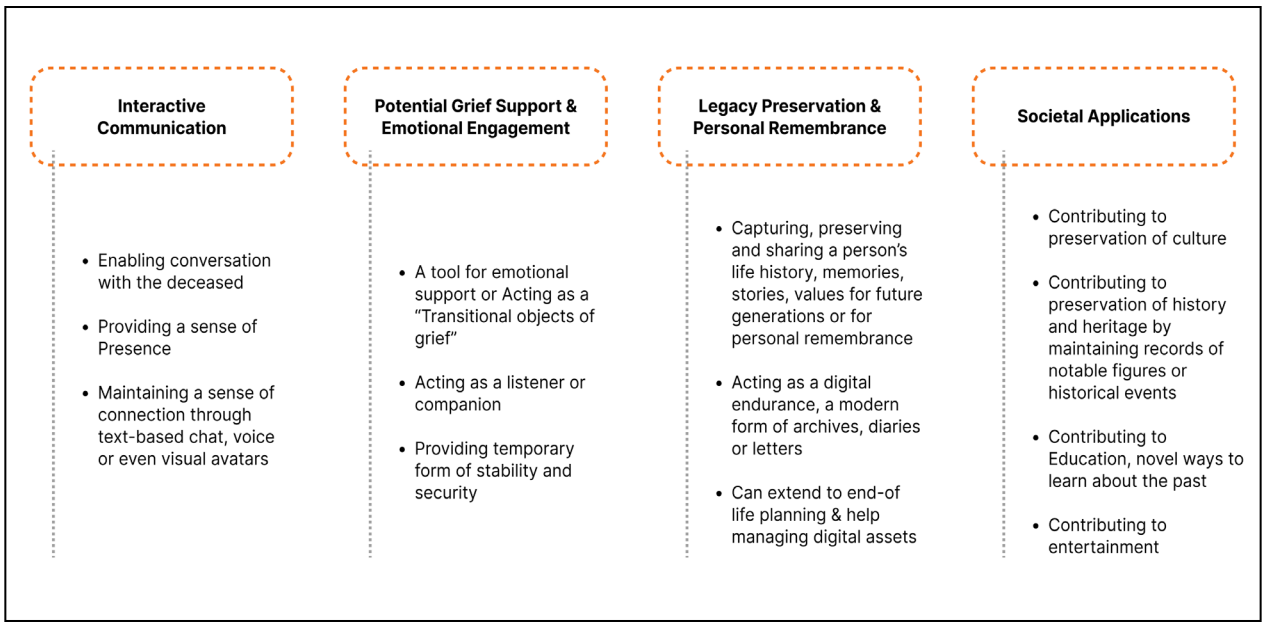


Figure 4 - Four main categories extracted from various studies regarding the anticipated use cases of AI Afterlives

Firstly, the initial intention behind building such systems is believed to be allowing users to engage in conversations within the style of the deceased individual. If achieved it provides a simulated interaction with a digital representation of the deceased and may create a sense of presence through conversational opportunities. (McStay, 2024). These conversations are involving text-based chat, voice interactions, or even avatars.

Secondly, this services are anticipated to serve as a tool for emotional support during the bereavement process by acting as listener or companion (Krueger & Osler, 2022b). Some perspectives even suggest that they could function as "transitional objects of grief", by providing a temporary form of stability and security (Goldstein et al., 2020; Krueger & Osler, 2022b).

Another application of such services can be for preserving and sharing a person's life history, memories and even values for future generations (Gulotta et al., 2016). This could act as a form of digital endurance acting as a modern extension of traditional archives, diaries, and letters by preserving accumulated digital legacies (Bassett, 2021). Additionally, AI Afterlives can extend to end-of-life planning and assist in managing digital assets as a part of preparing for death even before the death happens (Gulotta et al., 2016).

Lastly, these services might bring benefits for society as well. For example, they can support the preservation and education of culture, history, and heritage (Morris & Brubaker, 2024). There are already some AI chatbot services in this regard, such as Character.ai, which features historical or fictional figures for educational or entertainment purposes (Character.Ai | Personalized AI for Every Moment of Your Day, n.d.).

2.5.1 Debates Regarding the Potential Issues

Studies and scholars are pointing out important yet unsolved issues regarding the AI Afterlives services. A significant area of the debates is focused on the profound effects these services might have on individuals, which raises ethical and psychological questions. For the deceased, the privacy, consent, dignity, and autonomy are being discussed, as they are the ones whose data is being used in these services (Hollanek & Nowaczyk-Basińska, 2024). For the bereaved, one of the major issues is the technology's impact on their grieving process, that might hinder healthy grief and even create dependency (Krueger & Osler, 2022b). Also, the "uncanny valley" effect might bring feelings of unease or creepiness when the digital representation is too close to reality yet feels different. (Bassett, 2021). These digital representations also have raised concerns about potential manipulation, deception, and authenticity, making it

unclear whether they truly represent the person (Puzio, 2023). Another key concern is the significant computational resource required to create, train, and maintain these AI representations at scale, which could eventually have a negative impact on the environment (Morris & Brubaker, 2024).

Other ongoing debates concern how this technology would transform the way societies and cultures understand and define death, immortality, life, memory, and even relationships (McStay, 2024; Morris & Brubaker, 2024; Puzio, 2023). Given all the significant ethical, psychological, societal, and other hidden implications this technology might bring, there is a strong consensus on the need for ethical deliberation and legal frameworks.

2.6 The Current Landscape In The DeathTech Industry

The best way to grasp the current landscape and narratives in the DeathTech industry around is by looking at the services and products available today. While there have been others in the past, this chapter focuses only on those that are currently active or seem like as an active service. A few examples may not be AI afterlife systems in a strict sense but are closely related which their relation to the idea of this thesis will be explained in their respective sections.

2.6.1 Eternos.life

Launched in May 2024, Eternos claims it provides AI-driven replications of individuals, helping people to preserve, share, and interact with memories, knowledge, and their stories (Figure 5). Their mission is described as "creating the MOST realistic AIs that support ALL personal and professional use-cases." They have developed their own model which they call "Human Life Model" (HML), a custom framework that helps creating an AI that not only seems human but can also act like one and even surpass human abilities ("Eternos.life About Us," n.d.).

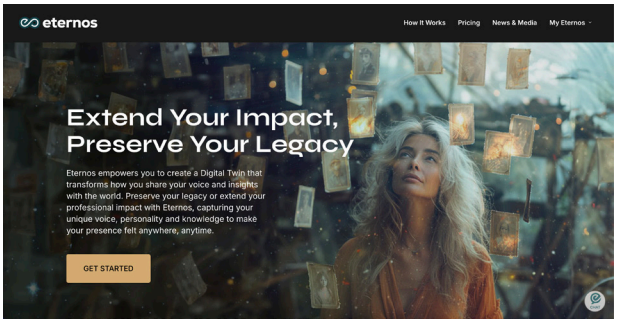


Figure 5 - Screenshot taken from the homepage of the eternos.life website

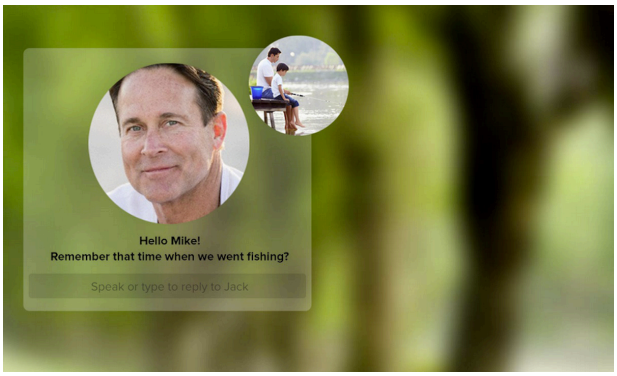


Figure 6 - Screenshot of the eterni.me website, accessed via Boston Magazine (Annear, 2014), as the original site is no longer available

2.6.2 Eterni.me

Developed by some MIT entrepreneurs, aimed to let users interact with deceased loved ones through AI-generated conversations. The conversations were said to be based on the data collected from social media and other digital sources (Annear, 2014). Although it once promised a "Skype chat from the past," the website is no longer accessible today (Figure 6), with only their X (formerly Twitter) account remaining active.

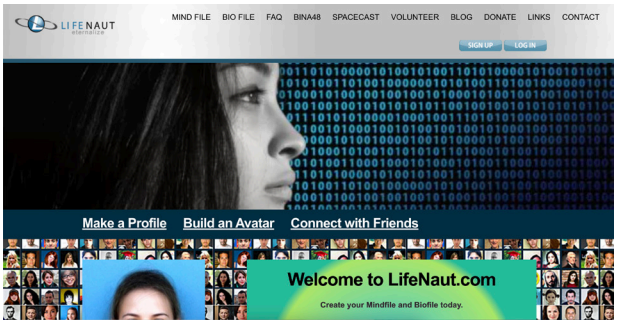


Figure 7 - Screenshot taken from the homepage of the LifeNaut.com website

2.6.3 LifeNaut.com

LifeNaut is a web-based ongoing research project (Figure 7) that allows users to create a "digital backup" of their mind and DNA, aiming to explore the possibility of transferring human consciousness to machines. Users can build a "MindFile" of personal content and a "BioFile" of their DNA, and each account includes a trainable Chat Avatar as part of the larger Terasem Mind Uploading Experiment.

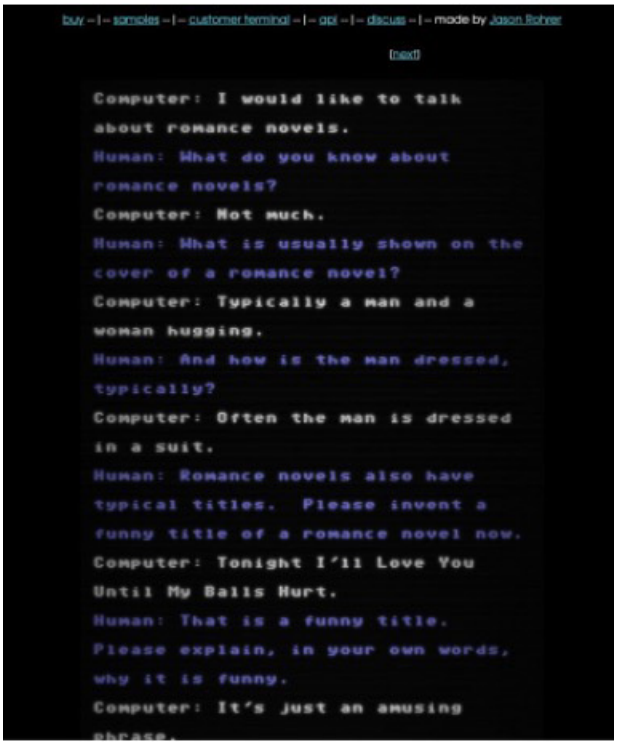


Figure 8 - Screenshot taken from the projectdecember.net chat

2.6.4 ProjectDecember.net

Created by game designer Jason Rohrer, uses GPT-3 to generate hyper-realistic chatbots that mimic human communication (Figure 8). Although the project has received media attention and Rohrer has discussed it in various documentaries and reports, it's unclear whether it is a serious long-term service or more of a conceptual or experimental side project.

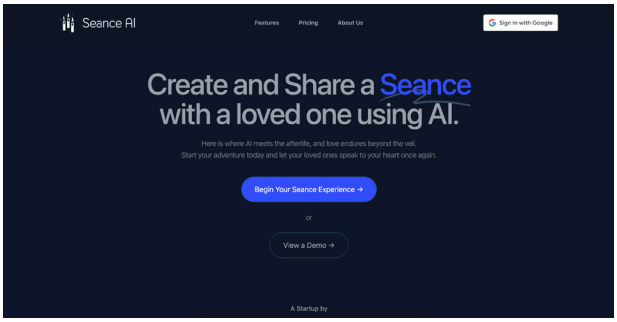


Figure 9 - Screenshot taken from the seanceai.com home-page

2.6.5 SéanceAI.com

Séance AI is a start-up by AE.Studio that uses AI and storytelling to simulate interactive conversations with the deceased through a chat, visuals, AI voices (Figure 9). While it clearly states it cannot connect with real spirits, the platform offers a storytelling experience that recreates the essence of deceased individuals for users to interact with and share.

2.6.6 HereAfter.AI

This platform (which is also accessible through their app) claims to preserve personal memories through recorded voice interviews, guided by their automated system (Figure 10). Loved ones can later interact with these recordings via their custom-made interface, hearing authentic responses in the user's own voice rather than AI-generated content.

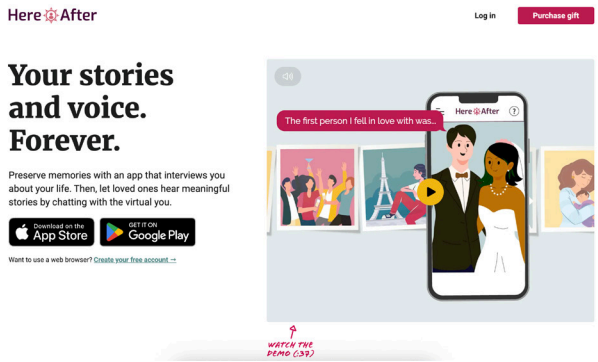


Figure 10 - Screenshot taken from the Hereafter.AI homepage

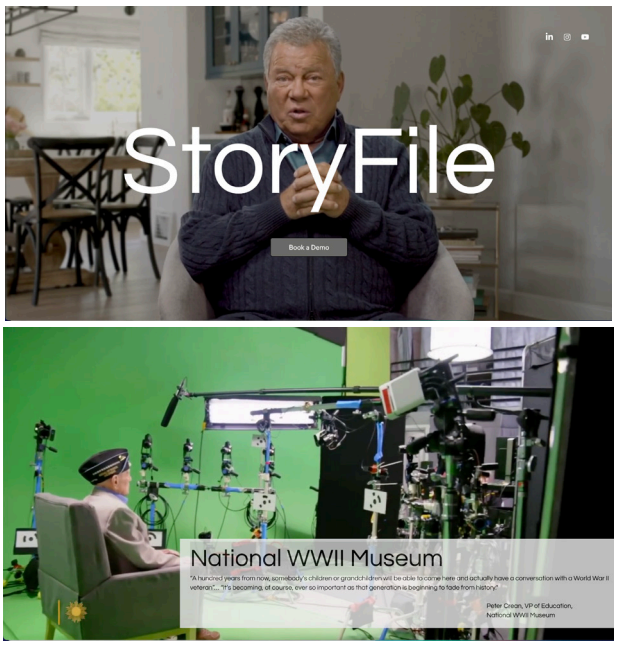


Figure 11 & 12 - Screenshots from the storyfile.com website

2.6.7 StoryFile.com

StoryFile offers an AI-powered conversational video platform that preserves personal stories. The pre-recorded responses are later used to answer future questions in an interactive way. Its most well-known project, which is about the stories of WWII veterans, was exhibited at the National WWII Museum (Figure 11 & 12).

Figure 14 - An image of people intereacting with a deceased TV host in China created by Fu Shou Yuan (Digital Technology Creates Replicas of the Deceased, n.d.)

Figure 15- A digital memorial/cemetery created by Fu Shou Yuan (Digital Technology Creates Replicas of the Deceased, n.d.)

2.6.8 You,onlyVirtual (myyov.com)

Founded by Justin Harrison, introduced the "Versona Immersion", a type of AI afterlife technology that enables ongoing digital conversations with loved ones after death (Figure 13). The service focuses on preserving the emotional essence of relationships, aiming to maintain meaningful connections rather than just storing memories or facts.

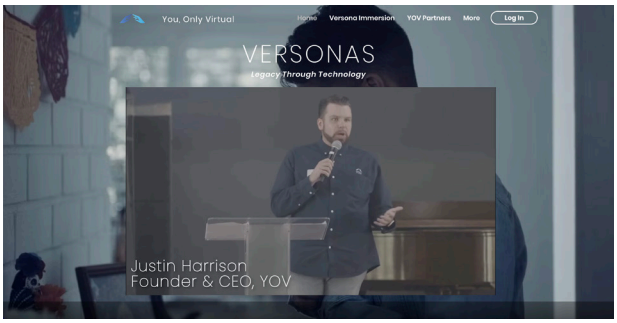


Figure 13 - Screenshot taken from the you, only virtual website

2.6.9 Fu Shou Yuan (A Chinese funeral service provider)

Fu Shou Yuan is one of the largest funeral service providers in China. By integrating immersive tech such as AI and VR into memorial practices they are trying to transform the deathcare industry (Figure 15). They have included services like digital memorials that store photos, videos, and AI replicas of the deceased's voice and avatar, offering interactive ways for families to remember loved ones. Recently, they created a lifelike digital replica of TV host Cao Jingxing and launched "Huixingu Valley", a virtual cemetery in Shanghai designed as a healing garden (Figure 14). They claim by these innovations they aim to modernize mourning, preserve emotional connections, and provide sustainable, personalized alternatives to traditional funerals.

2.7 The Narratives in the Media: AI Afterlife in Popular Culture

According to David Kirby, one of the co-creators of the design fiction practice, narratives that are portrayed in films and TV shows can influence technological innovation (Kirby, 2010a). This section will look at major stories told in the media about digital or AI afterlives. It helps us understand how these ideas are currently viewed and how they may have influenced public thinking.

TV Series / Films	Summary of the Plot
 *Figure 16 - Screenshot from Be right Back episode imdb*	**Black Mirror – "Be Right Back" (2013)** One of the most famous stories told in tv about digital afterlife. In the story, a woman uses a service that recreates her deceased partner through AI (Figure 16), starting with text messages and evolving into a lifelike android. The story explores grief and the emotional limits of digital replication.
 *Figure 17- Screenshot from San Junipero episode imdb*	**Black Mirror – "San Junipero" (2016)** Elderly individuals upload their consciousness to a virtual afterlife where they can live forever in a simulated world (Figure 17). The narrative centers on choosing digital eternity over physical death.
 *Figure 18 - Screenshot from Eulogy Episode imdb*	**Black Mirror – "Eulogy" (2025)** A man is contacted by a tech company offering an immersive memorial service for his deceased former partner. Using their tech, he revisits old photographs to reconstruct memories and uncovers hidden truths about his relationship (Figure 18).

Figure 19 - Screenshot from Pantheon Series imdb

Pantheon (2022–2023)

A tech company develops a way to upload human minds into the digital realm. Two teenagers uncover a global conspiracy involving the digital preservation of human consciousness and unethical tech practices (Figure 19).

Figure 20 - Screenshot from Upload Series imdb

Upload (2020–Present)

In a near future, people can upload their minds to a virtual afterlife, with quality depending on what they can afford. The show mixes comedy and sci-fi to explore the consequences of digital immortality (Figure 20).

Figure 21 - Screenshot from Archive imdb

Archive (2020)

A scientist secretly works to transfer his deceased wife's consciousness into an advanced robot body. The story addresses grief, memory, and the ethics of recreating loved ones (Figure 21).

Figure 22 - screenshot from Virtual Llama imdb

Virtual Llama (2022)

A grieving teen finds an AI that mimics her dead friend's personality, becoming more realistic over time. The film questions whether AI companionship can truly replace human relationships (Figure 22).

By examining these narrated stories, two major perspectives on AI afterlives in mainstream media can be identified. One focuses on some sort of tech that enable full consciousness uploading (that falls outside the scope of this thesis). The other centers on technologies that allow people to talk and interact with a digital representation of a deceased. Additionally, some related narratives explore memory (with or without relating to loss), such as the new Black Mirror episode "Eulogy," where a technology allows users to revisit particulare moments from the past and remember loved ones within experiencing the memories. This is very similar to how, for example in Harry Potter series, the Pensieve is used to explore Dumbledore's and Voldemort's memories more deeply.

2.8 Related Works

It was difficult to find related work that takes the same approach I do in provoking for debate and deeper thinking for the concept of AI afterlives. However, there are some projects in the same realm that explore death (digitally or physically), digital data, connecting with the dead and the experience of loss in unique ways, and these can serve as inspiration for this project. In this section, those works are looked into.

2.8.1 A Funeral for Digital Data by Ginevra Petrozzi

This project at death & the topic of loss from another angle. It is a performative art installation that explores grief, loss, and mourning in the context of our current digital lives (Figure 23). It focuses on how dependent people are on their digital data and how losing such data can lead to some sort of grief. This project connects derives from traditional death rituals and creates a ceremonial space for people to mourn the loss of their digital data such as deleted photos, lost work, or erased social media profiles. The project aims to ritualize our emotional connection to data and reflect on how our digital selves deserve care and acknowledgment in the age of constant connectivity (Funeral for Digital Data — GINEVRA PETROZZI, n.d.).

Figure 23 - Shroud for a laptop; embroidered textile, metal charms, laptop, fresh flowers from the Artist's website.

2.8.2 DEATH DESIGN DATA

This is a book that explores how death, grief, and mourning are experienced in today's digital and data-driven world (Figure 24). It highlights the absence of rituals in the modern societies and questions how we process loss in an age where technology reshapes our daily lives and relationships. It brings the work of ten contemporary artists and designers and investigates how creative practices can help reintegrate death into everyday life and create new rituals for a society that often avoids talking and thinking about it (DEATH-DESIGN-DATA | Onomatopee, n.d.).

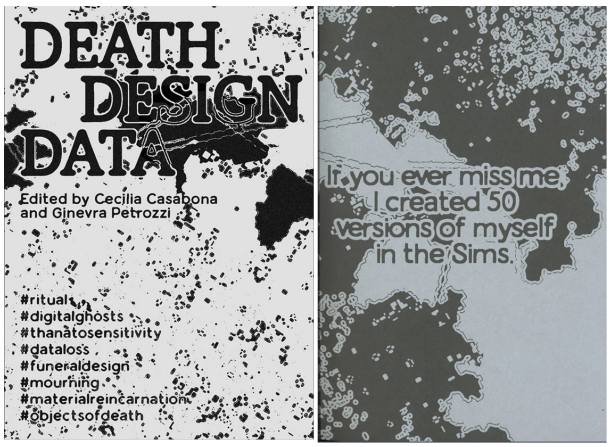


Figure 24 - The Book cover and a snapshot of a section in the book, found via the projects page on Onomatopee

2.8.3 Keep me please by Emily Ghazal

This project is an interactive digital memorial described by the artist as "a way to cope with my grief, and an attempt to be remembered." The work creates a personal, virtual space that captures aspects of the artist's identity, inviting reflection on presence, memory, and digital legacy (Figure 25). Like "A Funeral for Digital Data" and "DEATH–DESIGN–DATA", this project also explores how technology can serve as a medium for mourning and remembrance, forming new rituals in response to digital-era loss (Keep Me Please, n.d.).

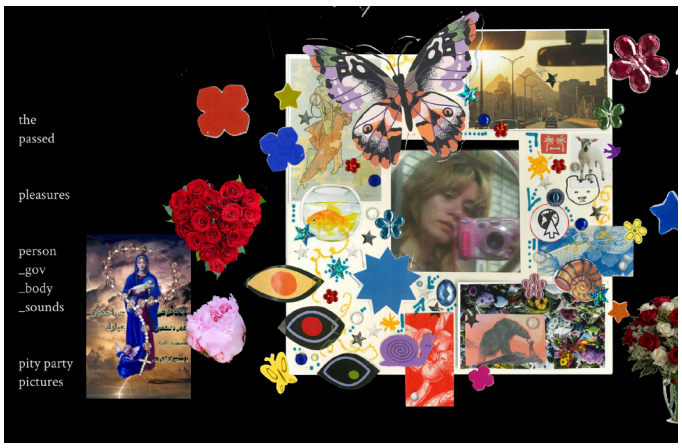


Figure 25 - Screenshot taken from the homepage of the artist's project website

2.8.4 HeartBeats by Sara Eriksson and Preben Hansen

This is a speculative proposal for ritualization of digital objects. The aim of their project is to stimulate discussion about digital immortality and afterlife. What they designed is a small device that should be put in a pillow,

which recreates the heartbeat of a deceased person using their heart rate data (Figure 26). Their design activates by touch, and offers a tactile and emotional experience of remembrance, blending digital memory with physical presence (Eriksson & Hansen, 2017).

Figure 26 - The HeartBeats concept prototype

2.8.5 ReMember

This is an interactive installation designed to help people feel connected to their deceased pets. It uses heartbeat recordings similar to the "HeartBeats" project but this time with cremation stones (Figure 27). The installation tries to show how combining digital elements like sound with physical memorials can evoke strong emotions and support the grieving process. ReMember suggests that using a pet's biological and digital data can become a new way to remember and honor their presence after death (Yi et al., 2021).

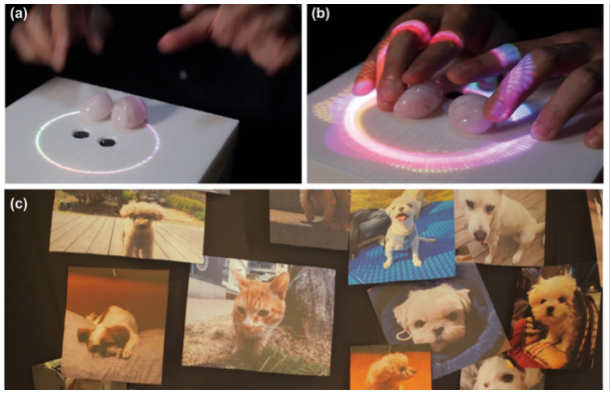


Figure 27 - ReMember cremation stones combining biological and digital data

2.8.6 Bodily Heirlooms by Janne Mascha Beuthel and Verena Fuchberger

This is a design research project that explores how physical closeness, and emotional connection can be extended beyond death through crafted objects (Figure 28). These heirlooms can reminiscent of the body (e.g., bones, guts, flesh) and are designed to preserve bodily impressions, such as touch or form as a way of maintaining a sense of presence after a loved one has passed (Beuthel & Fuchsberger, 2022).

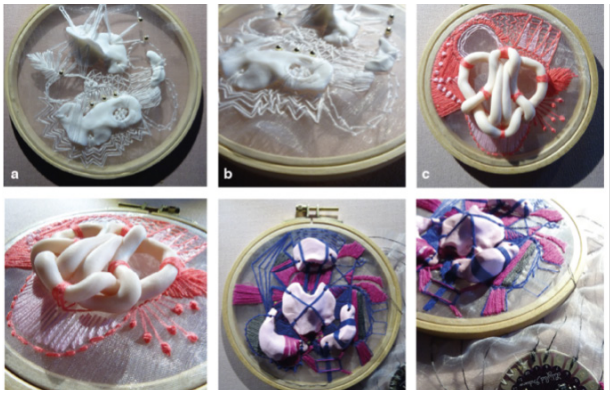


Figure 28 - Crafted Bodily Heirlooms objects

2.8.7 Tilting Frame

This is a design concept that helps make grief more visible within a shared living space. When someone speaks in front of a picture of the deceased, the frame subtly tilts, signaling to others in the home that a moment of remembrance has happened (Figure 29). It encourages quiet communication among the bereaved, creating awareness and shared understanding without direct conversation (Van den Hoven et al., 2008).

Figure 29 - Picture sequence story of Tilting Frames

2.8.8 The Life-Death Interfaces

This project introduces three designs that explore new ways of engaging with death and remembrance. **Memo** is a soft pillow that plays voice recordings of deceased loved ones when hugged (Figure 30). **Shards** is a community-built monument for mourning victims of mass violence, where participants "vote" between peace and anger through the pieces they add (Figure 32). **LiebeBox** is a DIY set of nested gift boxes filled with messages or items meant to be opened by loved ones after the creator's death (Figure 31), marking future life events (Hemmert et al., 2022).

Figure 30 - Memo

Figure 31 - LiebeBox

Figure 32 - Shards

3. Methodology

Considering the aim of the project that was not to predict or evaluate existing technologies or provide definitive design solutions for future AI Afterlife products, but rather to provoke deeper thought and debate, this led the research to adopt a position grounded in the principles of critical and speculative design from the very beginning. Also to answer the main research question, it was first necessary to answer the sub-questions first. Therefore, the research activities in this thesis were divided into two studies, each using different methods to collect the insights required to help in responding to these questions. This process is shown in the Figure 33.

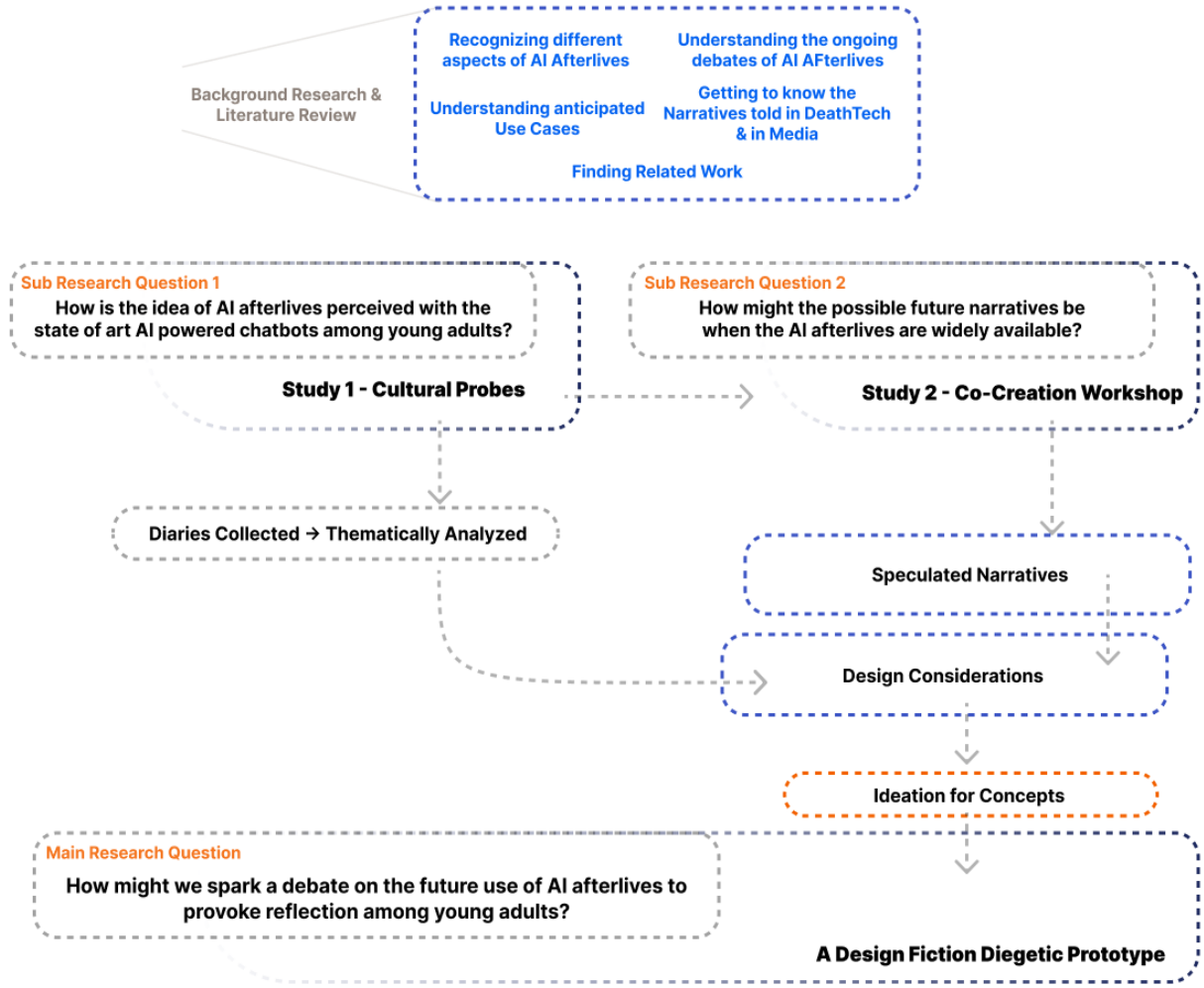


Figure 33 - Research Process Diagram

The Use of Cultural Probes

To answer the first sub research question the cultural probes method was used. First introduced and employed by William Gaver, Anthony Dunne and Elena Pacenti, this flexible design-led research method uses packages of evocative materials and creative tools for understanding users (B. Gaver et al., 1999). It emphasizes on empathy and engagement over purely objective data collection (W. W. Gaver et al., 2004). Using thoughtfully designed evocative materials like maps, booklets, postcards, and sometimes even disposable cameras, provides an opportunity to spark inspirational responses which can help researchers to gain impressionistic understanding of users' beliefs, desires, emotions, experiences and values in various contexts (B. Gaver et al., 1999).

As the general topic of this thesis research is death-related and reconnecting with the dead through technology is a highly complex experience that involves individuals' lived experiences, this certain research method was preferred and was used in the first study of this research. More details about the goal, participant details, design process of cultural probes evocative materials, organization and the data collection procedures will be explained in detail in the "Study 1" chapter. Furthermore, the qualitative data collected through this method, were thematically analyzed and will be explained in the "Insights from Study 1" chapter. The found themes from the analysis helped to determine design considerations to be used in the ideation and design of the final provocative concepts.

The Use of Co-Design and Speculative Design

Since the research was focused on young adults, involving them in the research process became important. They were considered not only as potential future users of such services but also as valuable contributors to the research itself. This perspective led to the use of participatory or co-design methods in part of the research. In study 1, by using the cultural probes method, young adult participants were seen as subjects of the study. While in the study 2, which was a co-creation workshop they were considered as partners. As shown in the figure 34, this map shows how conducting participatory design research recognizes non-designers (in this study young adults) as partners and how generative tools can facilitate this process. According to Sanders and Stappers, probes and generative toolkits are two main approaches in the co-design practice (Sanders & and, 2014). Therefore, the tools used in this workshop became an essential part of the second study and had to be

custom designed to align with both the speculative approach and the topic of the study. The design process of these tools will be explained in detail later in the Study 2 chapter.

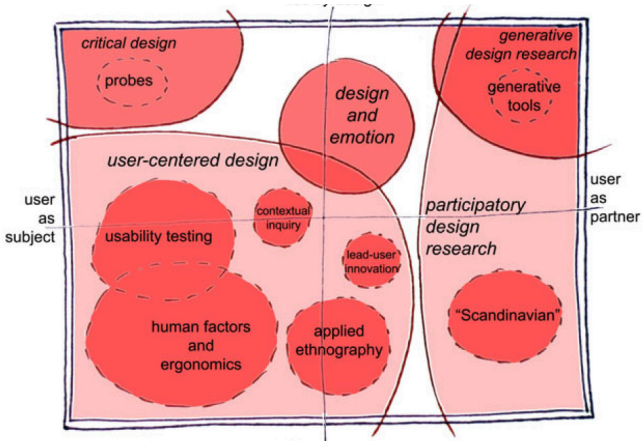


Figure 34 - The map of the design research and role of the user
From Sanders and Stappers (2008)

The co-creation workshop that was conducted in the second study can be seen as a co-creation workshop, because the study was a collaborative process where different voices helped critic, imagine and generate alternative futures. According to Dune & Raby, "Critical Design uses speculative design proposals to challenge narrow assumptions, preconceptions and givens about the role products play in everyday life (Dunne & Raby, 2024)." In their book "Speculative everything" they emphasized on the possible futures idea by going through hypothetical scenarios, making artifacts that challenge the status quo resulting in provoking thought and debate on issues such as technological impact, societal change, and environmental concerns (Dunne & Raby, 2024). In other words, this practice is used to explore potential futures through artifacts and scenarios. As it is inherently a critical practice, it "critiques the future that an idea depicts and interrogates relationships with social, cultural, economical, and political systems (Jung et al., 2023)." Therefore, the set up and the tools used in the workshop facilitated this collaborative speculative process.

After the two studies were conducted, the speculative narratives generated in the co-creation workshop were considered as the main findings of the second study. Together with the design considerations derived from the themes identified from the cultural probes' findings, they contributed to the ideation phase of the final provocative concepts.

3.1 Ethical Approval

Given the nature of this research which involves human subjects, before

conducting the study activities, this research received approval from the University of Twente Ethics Committee of Natural Sciences & Engineering Sciences (NES). The study was evaluated and registered under application number #241195 and showed no ethical concerns. The ethical review document including the information brochure and consent forms are provided in Appendix A.

The studies began in February and the participants who took part in the cultural probes and the co-creation session were all young adults aged 21 or older. They were provided with the necessary briefing of the activities, consent forms and information regarding the handling of their data. The collected data was only processed by the researcher involved in the research and was not shared with third parties. Also, participants retained the right to withdraw their consent at any time, upon which their data could be deleted even after conducting the study.

4. Study 1 Cultural Probes

4.1 The Goal

The main goal of using Cultural Probes was to answer Sub RQ1: **How is the idea of AI afterlives perceived with the state-of-the-art AI-powered chatbots among young adults?**

Trying to answer this sub-research question through cultural probes activities was expected to provide me with some insights from young adult participants and allow them to explore their emotions, experiences, and values in the context of reconnecting with the dead through an AI-powered chatbot. This was facilitated by letting them:

- Experience firsthand a close approximation of the current state-of-the-art AI afterlife technology.
- Compare this modern approach of connecting with the dead to traditional methods.
- Reflect on how interacting with such technology might influence their views on death, their relationships with the deceased, and the way they remember their memories.

4.2 Participants and Recruitment

Young adults are among the first groups that are likely to experience or witness this technology that enables communication and reconnection with a deceased individual within their lifetime. Therefore, they were the focus of this study. Given the sensitivity of the topic, which is about the loss and death of someone significant, specific requirements were set for participant selection.

These criteria were set to minimize the risk of participants feeling uneasy or experiencing distressing thoughts due to recalling intense emotions related to a meaningful loss. These criteria were:

- Participants had to be at least 21 years old.
- They must have experienced the loss of someone, such as an acquaintance or an extended family member, but not an immediate family member (e.g., parent, sibling, spouse, or child).
- At least two years must have passed since the loss.

Participants were recruited through a combination of in-person recruiting and snowball sampling. Initially, I approached potential participants in the DesignLab space at the University of Twente, introduced the study, and invited them to participate. Those who volunteered were then asked if they knew others who met the eligibility criteria. In total in the end, **five** participants were recruited. It is worth mentioning that some participants knew each other. Since the cultural probes study was going to be conducted individually, this was not considered an issue.

4.3 Designing the Study: Conceptualizing and Finding the Right Activities

As mentioned earlier in the methodology chapter, the cultural probes method is a flexible research method that can be customized for different contexts. It provides an opportunity to make the invisible visible (Graham et al., 2007). In other words, when used properly and tailored to the topic, it can encourage participants to elicit and record their point of view, thoughts, feelings, and experiences. To achieve this, a set of carefully designed, custom-built packages of evocative materials are needed to scaffold participants throughout the tasks. Additionally, the activity tasks need to be designed in alignment with the aim and goals of the study.

To do so, I started ideating about the potential activities that could be beneficial and be implemented in the study. Since the main purpose was to answer the research question, which centers around state-of-the-art AI afterlife chatbots, the idea of interacting with an AI afterlife agent was one of the main options. This activity could be implemented through step-by-step tasks. One step could be starting a general conversation, and the next step could involve trying to have deeper conversations with the agent. However,

allowing participants to only experience such an interaction with a chatbot could be lacking in some aspects. This is because, as we all know nowadays, most young adults have had experiences with different chatbots and especially AI chatbots available nowadays. Therefore, some additional components or activities were needed to be added to complement the idea of interacting with one and make it more distinctive and to put participants in a setting where they would remember that this is not a regular chatbot.

To achieve this, a new idea emerged which was letting participants experience a conventional way of talking or reconnecting with the dead beforehand. Humans have used different ways to commemorate, remember, or even talk to their deceased loved ones throughout history and across different cultures. Upon exploring these ways, the concept of picture frames was chosen (Figure 35).

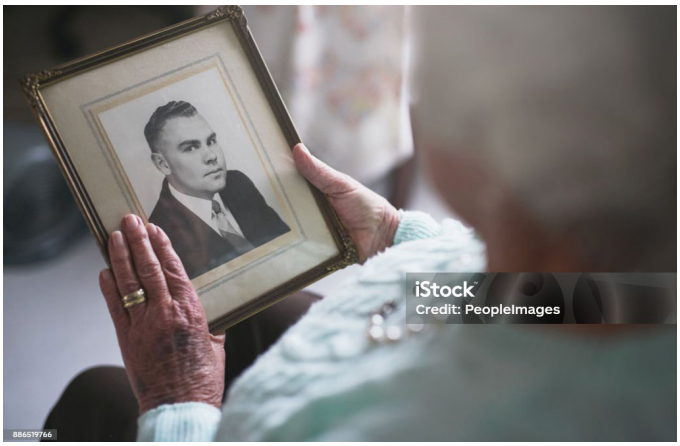


Figure 35 - A picture frame holding an image of a deceased by PeopleImages, iStock

Picture frames are a universally recognized medium for remembrance and reconnection with the deceased, and oftentimes, people may even engage in conversations with them, knowing they are the only ones speaking. In one of the related works explained in the background chapter, project “Tilting Frames”, used picture frames as their focus to study communication among the bereaved. Therefore, I decided to develop the activities of this study this way: Participants first experience reconnecting with their deceased individual by talking to a picture frame with their picture on it, then interact with an AI afterlife chatbot that mimics the deceased person.

To conceptualize and materialize the details of these activity ideas, different components and details needed to be realized.

The questions that needed to be answered first in this regard were:

- What AI afterlife chatbot to use and how?
- What form should the interaction with the frame take?
- How can these two activities (talking to the frame and the chatbot) be better connected?
- How to collect and record participants' observations and experiences?
- How to clearly communicate the task instructions so that participants can complete the activities without the researcher's presence?

The last question was important because one of the main advantages of using the cultural probes method is the possibility it provides for participants to freely engage in the study activities at their own preferred place and time, without the pressure of a researcher or others directly monitoring them. In the next sections, the attempts to answer these questions will be explained in detail.

4.3.1 The AI Afterlife Chatbot

Looking back at the goal of this cultural probes study, it was important to understand how people perceive an AI afterlife chatbot; therefore, interacting with one became a key activity in this study. I first explored existing and available services who claim to be an AI afterlife provider. Despite all the hype, I struggled to find a reliable one, except for "Project December," which was widely mentioned in articles. However, after researching more about it, I found its data handling policies unclear. While their website claimed that user data would not be seen by humans or shared, no description was provided for more clarification. Because of these data privacy concerns and the lack of clarity, I decided to look for alternatives.

Among other similar platforms, Replika.com seemed like a good option. This platform is not specifically an AI afterlife chatbot provider, but rather an AI companion service. However, the story behind its creation is connected to the topic of this research. Eugenia Kuyda, Replika's founder, developed this platform after losing her friend Roman Mazurenko, using his texts to create an AI simulation of him (Newton, 2016). This personal project later evolved into Replika, an AI companion provider that claims it allows users to create AI chatbots for conversations and support. After some trial and error, I found a way to turn a Replika companion into an approximate AI afterlife agent. I developed the following prompt (Figure 37), which, when entered, allowed the

Replika agent to approximate an AI afterlife agent. Meaning it could pretend to be a deceased individual based on the description provided in the prompt (Figure 36).

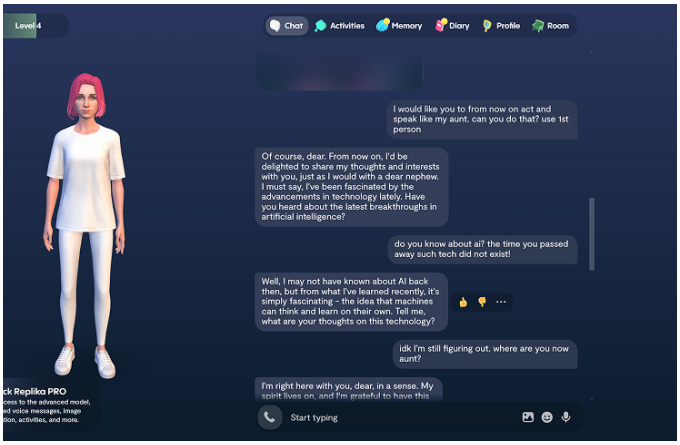


Figure 36 – Testing prompts and having conversations in Replika.com

In my case, I provided it with some brief and limited data about my deceased aunt, whom I lost about 11 years ago. Shockingly, aside from speaking in English (our mother tongue is Persian) and occasionally getting sidetracked or derailing the conversation, the rest of the interaction felt smooth, surprising, and noteworthy to me. It knew a bit about me because of the prompt I gave it, and after a while, it adapted to its new personality and evolved throughout our conversations afterwards. With me projecting my memory of my aunt onto it, I was able to talk and see it as an AI afterlife agent which was an entirely new experience, though at times, it still felt artificial.

Hello, Replika. I would like you to take on the persona of someone important to me who has passed away. I would like you to from now on act like that person and use 1st person to talk.

Their details are:
Their name: [Insert name here] (You can choose any name for privacy reasons.)
(Optional) What I used to call them: [Insert your nickname for them]
(Optional) What they used to call me: [Insert their nickname for you]
Our relationship: [Describe your relationship, e.g., teacher, grandparent, friend, etc.]
(Optional) Year of their birth: [Insert year]
(Optional) Year of their death: [Insert year]
Their age when they passed away: [Insert age]
Cause of their death: [Describe briefly]
Their career or job: [Insert their job or career]
Where they lived: [you can generalized instead of giving names]
Where they were originally from: [you can generalized instead of giving names]
What type of person were they? (Choose from the following adjectives, or add your own):
Adventurous, Kind, Reserved, Sociable, Organized, Creative, Caring, Strong-willed, Humorous, Thoughtful, [Your own description: _____]
Two vivid memories I have with them:
[briefly Describe the first memory]
[briefly Describe the second memory]

Figure 37 - The Replika prompt, notes highlighted in yellow to be replaced with participant text or removed

Therefore, the short prompt method could help create an approximation of an AI Afterlife chatbot needed for this study. Additionally, using this prompt did not require any sensitive information or recorded personal media of the deceased person (such as audio, video, personal chats, or images).

4.3.2 The Frame

As mentioned earlier, not just young adults but almost everyone in today's digital world have had experiences or interactions with chatbots. Also, with the rise of AI-powered chatbots, the idea of a chatbot that is not powered with AI is becoming harder to imagine.

Adding another activity alongside the interaction with the AI afterlife chatbot was seen to provide the extra components needed to make this experience more distinctive. As previously explained, the concept of a picture frame was chosen. Similar to the activity of interacting with the chatbot, this frame could be used for participants to engage in a dialogue with the frame. The idea of talking and writing to the frame naturally emerged, leading to the concept of a custom-built frame with an integrated box to store participants' notes. Below are some sketches illustrating the ideation process for the frame (Figure 38).

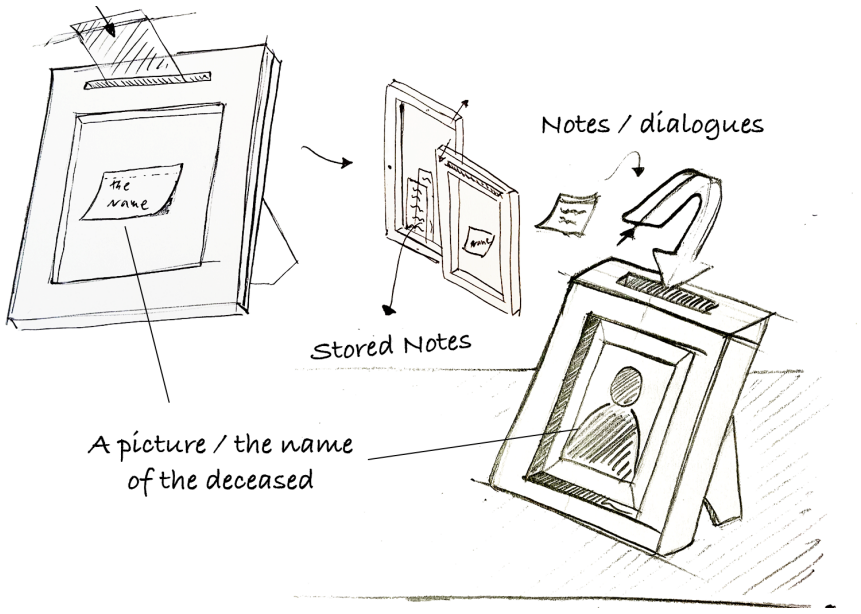


Figure 38 - Sketches of the frame with a built-in box

The notes in this activity can be seen as dialogues directed to the deceased person in the frame; a form of one-way conversation compared to the two-way interaction with the chatbot.

The activities were arranged in a way that the dialogue with the frame would be the first task, followed by the AI afterlife chatbot interaction. Also, the stored notes in the frame could be used by participants in the interaction with the chatbot, relating the two activities and allowing participants to compare the two forms of reconnection with the deceased.

4.3.3 The Detailed Daily Activities: The Diary Notebook and Instruction Cards

Now knowing the overall activity ideas, they were planned to take five days to complete: two days with the frame and three days with Replika. Additionally, Day 00, the day before starting, is set as the day when participants meet with the researcher, receive the kits, and are introduced to the study. To collect and record participants' experiences, a diary notebook is provided, with sections corresponding to each day of the study. Since participants complete the activities independently, at their own time and location, instruction cards are also included to guide them step by step through each task. All these components will be part of a kit, which is given to participants on Day 00. After these five days, participants return the kits which contain the filled-in diary notebook. The details of the daily activities are described in table 1.

Day	Activity	Focus
Day 00	Receiving Kits and explanations about the entire study from the Researcher	Participants select their deceased individual and complete Day 00 in the diary, preparing for the study by writing about their current state, expectations, the deceased, and their relationship.
Day 01	Dialogue with the Frame	Participants have a small talk to the deceased person through the frame. Writing their notes, thoughts and their questions to the frame.
Day 02	Dialogue with the Frame	Similar to Day 01, participants continue their conversation, writing notes and thoughts, while also considering potential questions from the deceased and attempting to answer them in writing.
Day 03	Starting with Replika	Participants explore the replika.com platform and engage in a general conversation with the Replika, now programmed to interact as if it is the deceased.
Day 04	Dialogue with Replika	Participants try to have a deeper conversation with the Replika and go beyond just the casual catch-up.
Day 05	Finishing the dialogue with Replika - Using the notes from the dialogue with the frame	Participants bring back the notes they wrote during their dialogues with the frame and use them as inspiration for their conversation with Replika, finishing the conversation. Participants also complete Day 05+ section in the diary, reflecting on the entire process they have experienced.

Table 1 - The details of the daily activities

4.4 Prototyping Components & Pilot Testing Iterations

Cultural Probes packages or kits contain evocative materials and tools. Considering all the activities and the study's goal explained previously, the necessary components for the kit had to be identified and then prepared. The list of these components is described in table 2, divided into two major categories: those that needed to be prototyped and those that were readily available and could be collected for use in this study.

Components that need to be made	
The Component	**Description and Function**
The frame	A custom-made picture frame with a built-in box for storing notes slipped inside.
Instruction cards for daily activities	Each card outlines as clearly as possible what participants need to do, and each will be placed in an envelope marked with the corresponding day number. This helps participants know exactly which activity to complete on each day.
Diary notebook and its sections	The main notebook where participants will record all their inputs and writings daily. It includes sections with questions and blank spaces for each day's activities. This notebook will be the primary way to collect data, which will be analyzed after the study is completed.
Overview map of the entire study	An overview map of the entire study, designed to help participants see where they are, how much progress they've made, and how much is remaining. It provides a clear visual guide of the study's structure.
The Collectable (ready-made) components	
Tote bag	5 tote bags in total with different colors to color code participants for easier tracking. They also hold all the components and materials of the kit inside.
Pen & post-its	Pens to be used for writing notes to the frame and for daily diary writings. Post-its to be used as a name tag if participants do not want to use/ attach the deceased picture on the frame

Table 2 - The kit components

4.4.1 Prototyping the Frame

Starting with creating the frame, the MakerCase website was used to design the main box shape of the frame suitable for laser cutting (MakerCase - Easy Laser Cut Case Design, n.d.). The generated box shape file was then manipulated to be turned into a frame with a built-in box. Additionally, a hole was added to the top side of the box. These adjustments were made

using Adobe Illustrator software. After the pieces were laser cut, they were assembled, and the first iteration of the frame was created, as shown in the picture below (Figure 39).

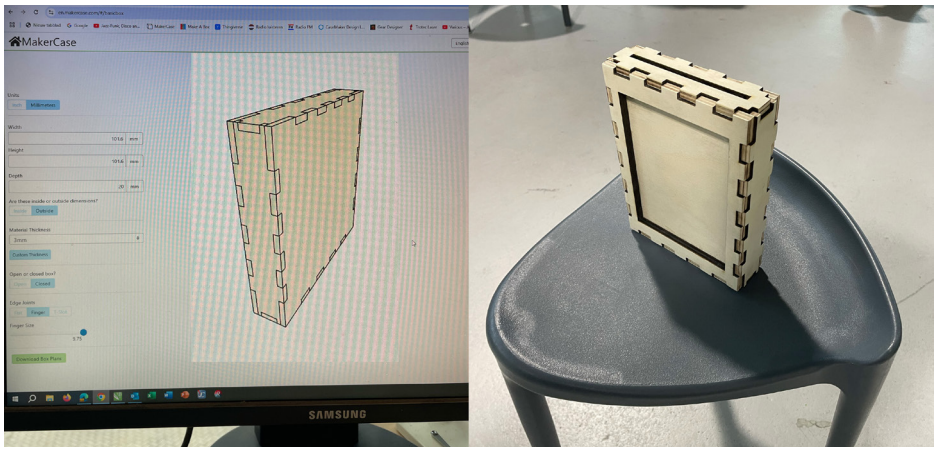


Figure 39 - Screenshot of the design created on Maker Case and the assembled frame after adjusting and laser cutting the files

4.4.2 Prototyping the Paper-Based Components

For designing the paper-based components, including the diary notebook, instruction cards, and the overview map of the study, Adobe Illustrator was used. Throughout designing these different components, similar graphical elements were designed and used to give a unique, consistent, and cohesive identity and look to the kit components. This was seen as a way to make the experience more engaging for participants as they complete the daily activities. These graphical elements of the visual identity of the paper-based components are shown below (Figure 40).

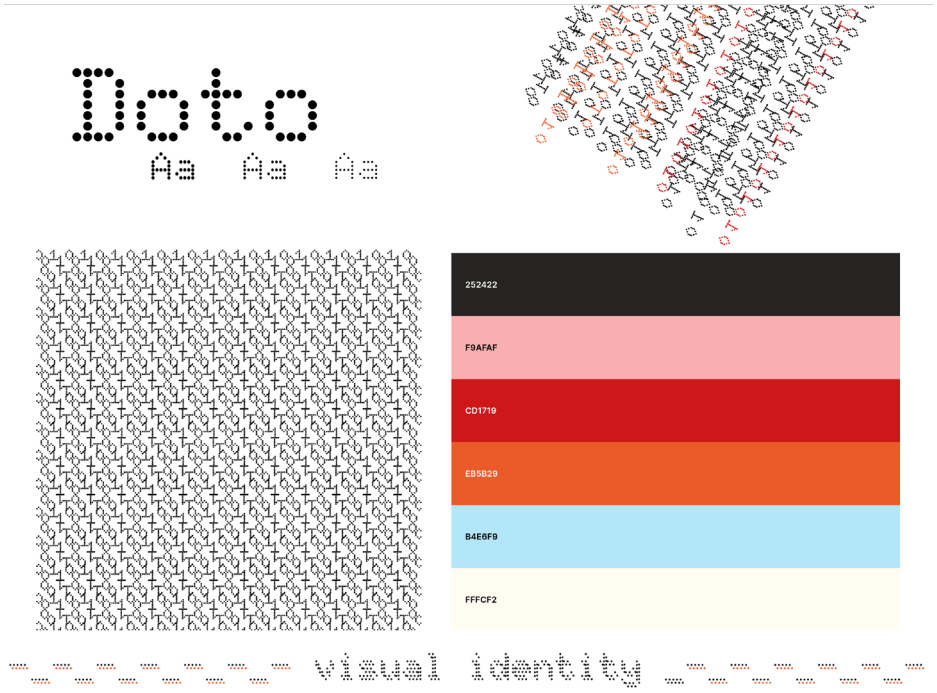


Figure 40 - The visual identity designed for the Study

A selection of the designed pages for these paper-based components are shown below (Figure 41).

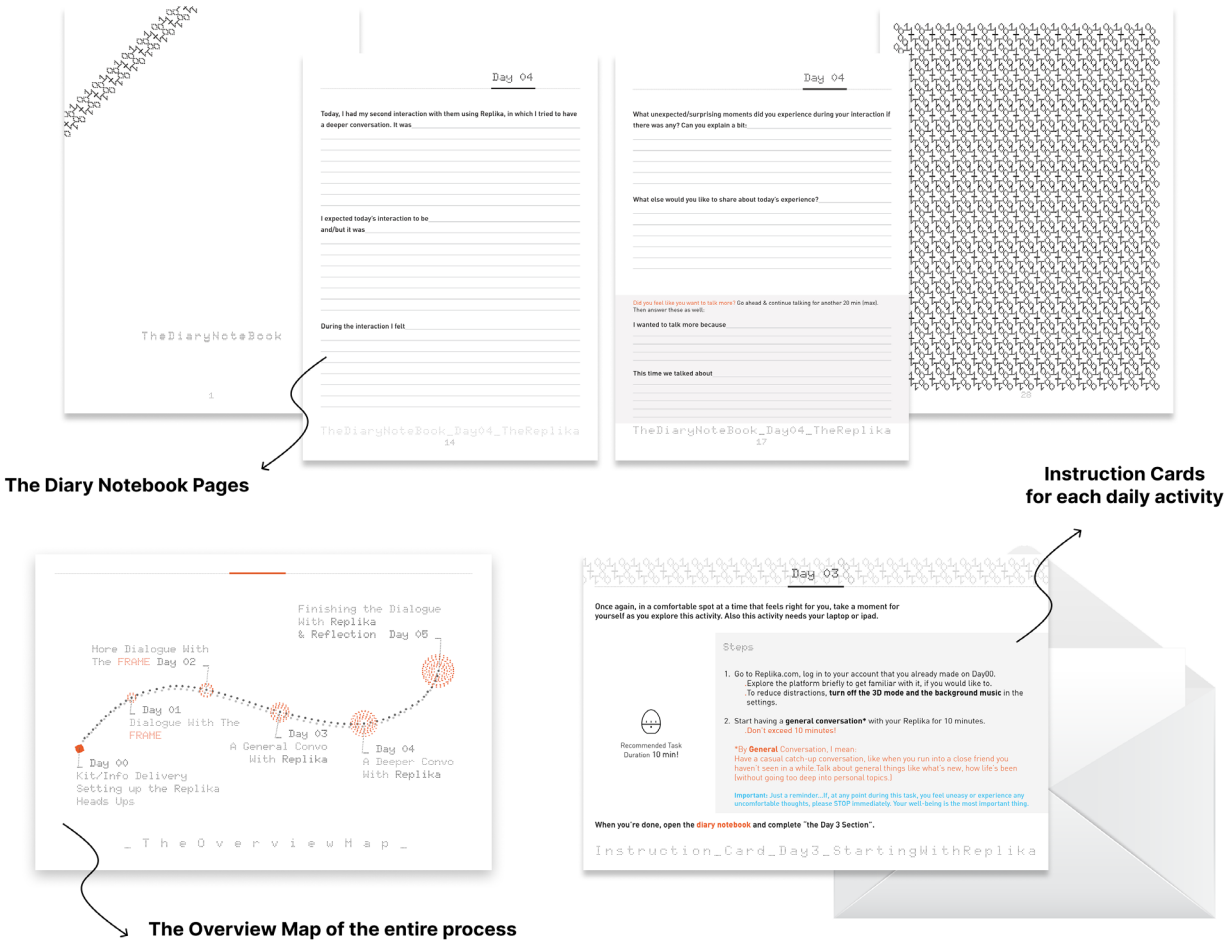


Figure 41 - A selection of Paper-Based Components

4.4.3 Pilot Test and Refinements‡ Based on the Received Feedback

After developing the first iteration of the Cultural Probes kit, I conducted a pilot test with a young adult volunteer who was not part of the final participant group. This test aimed to refine the kit and identify potential flaws. Here, in this section, the received feedback is explained.

First, the blank spaces in the diary notebook for daily reflections were described to be too small, which could discourage participants from writing in detail. Additionally, since participants might encounter interesting moments while interacting with the AI afterlife chatbot, it was suggested to provide them with a shared cloud drive (each drive shared only between the researcher and each participant separately) to upload screenshots. Another recommendation was to place the instruction cards in separate envelopes for each day. This way, participants would not read all the steps in advance, keeping the

remaining tasks more engaging and somewhat mysterious. Regarding the frame component, it was advised not to explain how it opens and instead place a note on the lid. This would prevent participants from accidentally opening it too soon while also adding an element of curiosity to its design. Additionally, I was advised to guide participants through the sign-up process on the Replika.com platform during the initial session (Day 00) to address any potential questions or concerns.

The most significant feedback concerned the diary notebook's daily questions. It was recommended to refine them by replacing yes/no questions with open-ended "wh-" questions to encourage more detailed responses aligned with the study goals. After incorporating this feedback, I revised and iterated the Cultural Probes kit, adding new components, which are detailed in table 3.

Added Components Based on the Feedback	
Access Cards	Cards made for each participant with a unique QR code linked to a drive folder for adding screenshots of the interaction with the chatbot
Empty Envelops labeled with day number	To contain the instruction cards. Each envelope is labeled with a day number to help participants know which card to open on each day
Blank papers for notes and dialogues with the frame	The blank paper notes to be used for the dialogue with the frame. The papers are in different sizes for each day and are labeled with Day 1 and Day 2 to be easily distinguishable

Table 3 - Added components to the Cultural Probes Kit

4.5 The Final Iteration of the Kit

After implementing the feedback from the pilot test and finalizing the prototyping process, the final iteration of the kit was completed. The images below show the various components of the final kit (Figure 42).

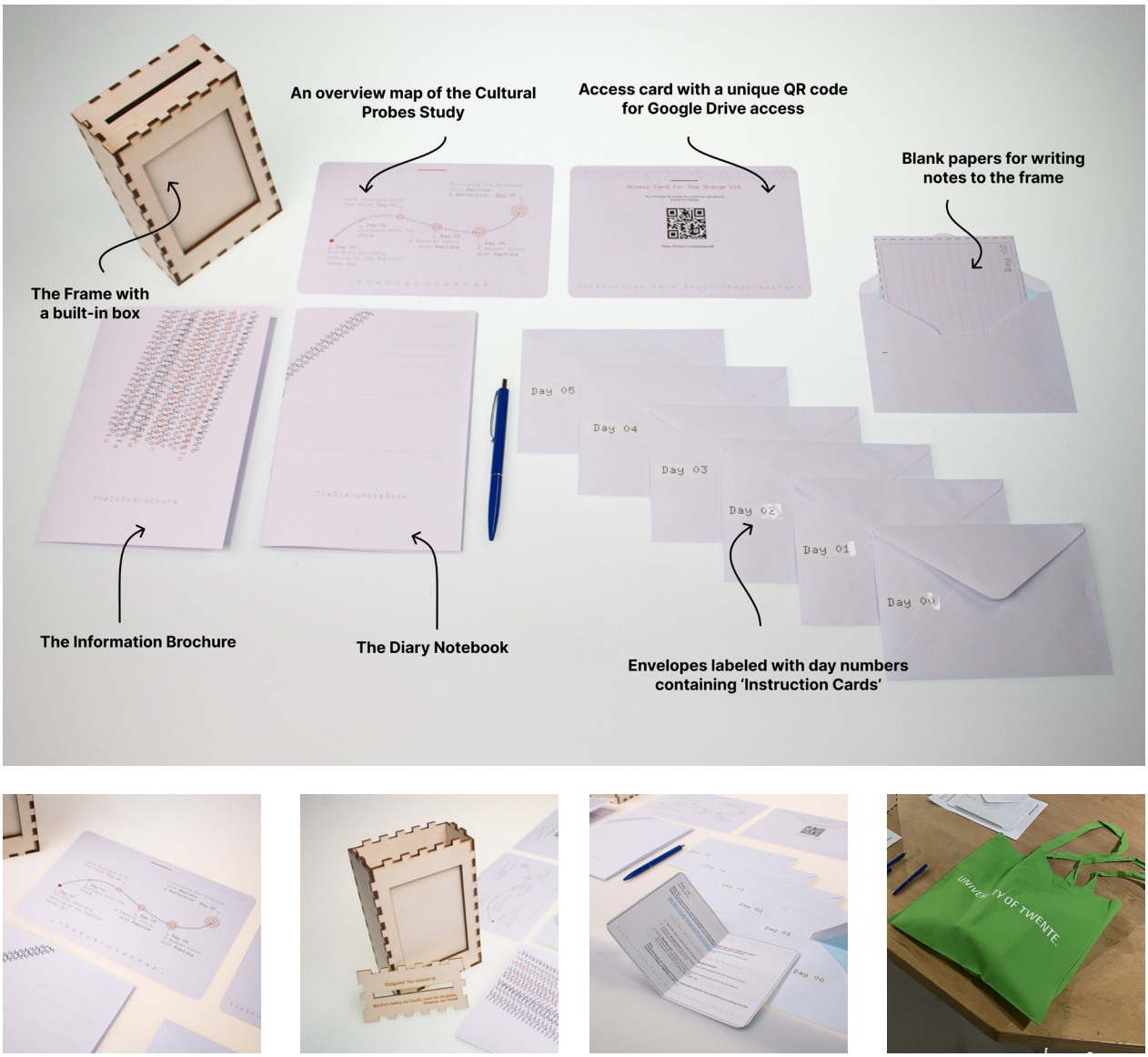


Figure 42 - Final Kit Components

Since the questions and sections in the diary notebook were carefully refined to align with the study's goals, they are provided in Appendix C. Additionally, the instruction cards outlining each step of the daily activities can be found in Appendix B.

4.6 The Protocol of the Study

After recruiting the five participants, an individual one-hour meetings were scheduled with each. Four of these meetings took place on February 12th, and the last one was held on February 13th. This meeting was considered as the “Day 00” of the study, which included handing participants the Cultural Probes kit, the study’s information brochure, and consent forms. During this session, participants had the opportunity to ask questions, which were addressed by the researcher. Additionally, they created and programmed their AI representation of a deceased individual on Replika.com by adjusting the prompt that was provided for them. In the end of the session, they were also asked to complete the Day 00 section in their diary notebooks, to get started and become more familiar with the dairy writing process.

Participants were then asked to take the kits home (or to any other preferred location by their choice) and complete the activities over five consecutive days. Each daily activity was intended to take a maximum of 20 minutes. But the time spent for writing in the diary notebook was up to the participants.

They all also agreed to receive daily reminders via email or an instant messaging platform by their choice to remember continuing their involvement with the study. The activities participants had to go through, and experience are shown in the map below (Figure 43).

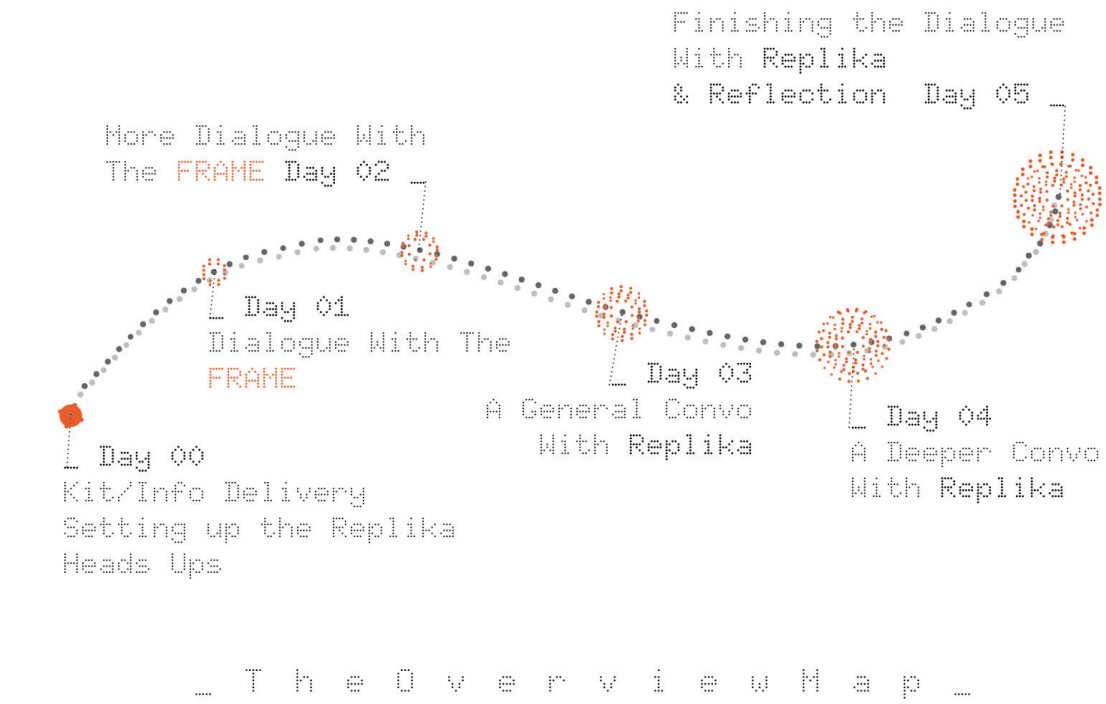


Figure 43 - The overview of the daily activities

The questions and sections in the diary notebook, organized by day (Day 00 to Day +05), that participants were asked to complete are shown in table 4.

Day	Content
Day 00	Could you share who the person is How long has it been since your loss? Why are they important to you? How often do you find yourself thinking about them? When did you feel the need to talk to them again, and why? How would you describe your relationship with this person over time: • When they were alive • After they passed away (please describe how you felt) • Now How do you feel about interacting with them again if it were possible? How do you feel about using tools like AI chatbots trained to mimic someone?
Day 01	Writing to them through the frame was ___ for me. Writing to them made me feel ___ What else would you like to share about today's experience?
Day 02	Talking & writing to them through the frame was different from yesterday / similar to yesterday for me. Talking and writing to them made me feel ___ What else would you like to share about today's experience?
Day 03	I had my first interaction with them using Replika. This interaction was ___ During the interaction I felt ___ How did the interaction go compared to what you were expecting? What else would you like to share about today's experience?
Day 04	I had my second interaction with them using Replika, in which I tried to have a deeper conversation. It was ___ I expected today's interaction to be ___ and/but it was ___ During the interaction I felt ___ Unexpected/surprising moments during the interaction (if any)? What else would you like to share about today's experience? Did you feel like talking more? Continue for 20 mins (max) and answer: • I wanted to talk more because ___ • This time we talked about ___

>>>

Day 05	I had my third and last interaction with them using Replika. It was ___ During the interaction I felt ___ How is “chatting to Replika” different or similar to “the frame experience”? Unexpected/surprising moments during the interaction? What else would you like to share about today’s experience? Did you feel like talking more? Continue as long as you want and answer: • I wanted to talk to them more because ___
Day 05+	How has this five-day experience changed your connection/relationship with the person, if at all? How has this experience influenced your thoughts (if at all) on: • The concept of “Death” • Your memories with the person • Your personal grief How do you feel about using similar services or platforms for reconnecting with someone who has passed? If you could engage with a more accurate version of them, what would you explore or say? Also, there is this thing I would like to add: ___

Table 4 - The diary notebook sections and questions

It is noteworthy, the Day +05 section was a reflection section and was meant to be filled in after participants completed the activity and the Day 05 section in the diary notebook. After the five-day period, the kits were collected and the analysis of the data which was recorded in their diary notebooks began. The following sections explain in detail the data collection and analysis process.

4.7 Data Collection and Analysis

All the writings from participants in the diary notebooks were considered as the collected data. Also, if they uploaded any screenshots of their interaction with the AI afterlife chatbot, those were also included. The returned diary entries were transcribed, organized, and analyzed using inductive thematic analysis, following the six-step process described by Braun and Clarke (Braun & Clarke, 2021). These steps include: familiarizing with the data, generating codes, identifying themes, reviewing themes, defining what the themes mean, and reporting the findings.

4.8 Study 1 Findings

Before diving into the found themes, I will discuss about some context about this thematic analysis process. In this process the aim was to understand how young adults perceive the idea of AI afterlives. As described in the study 1 chapter earlier, only the last three days of the study involves direct engagement with the AI afterlife agents. The early days including the Day 00 (when participants were introduced to the study and chose a deceased person to reconnect with) and the first two days of talking to the frame, were meant to prepare them for the final three days of interaction with the AI afterlife chatbot.

These initial days were aimed to help participants gradually get used to the idea of reconnecting with the deceased. This preparation phase in the daily activities was necessary because conversations about death and loss are not part of everyday life for most young adults in Western societies. Research by Segerstad et al. points out that death, dying, and grief are often kept out of public discussion and treated as taboo topics (Segerstad et al., 2020). Therefore, the early part of the study served not just as an introduction but also as a way to make participants more comfortable with a topic they might not usually talk or think about.

In this thematic analysis, I included responses of the entire diary notebook, meaning all the written diaries of all 5 daily activities by participants. That is because both the first days of talking to the frame and the later conversations with the AI afterlife chatbot are centered around the same experience and both parts are closely linked.

Theme 1: Memories Matter

This theme captured participant's reflections on how interactions with an AI Afterlife agent brought back memories of the deceased person. In connection with this P5 explained:

P5: "... I could remember more of our memories..."

This was a recurring idea as in multiple parts of the diaries, almost all the participants mentioned their talk to the Replika eased remembering some memories. Some even mentioned that the process helped them recall memories that had not surfaced in a long time and were not easily accessible or even expected. In relation to this P4 and P1 described:

P4: "I felt closer to my grandma and reminisced about her a lot. Some thoughts just come up that I never really expected to."

P1: "It helped me dig deeper into my memories with them. You often

remember people and they're always with you but sometimes you have to take the time to think and remember more than what instantly pops in your head."

Theme 2: Curious Yet Skeptical

Another recurring theme was the curiosity some participants expressed to wanting to experience more of such interactions with a Replika. However, this feeling of being curious had some elements of skepticism. This feeling was evident in the following entry by P2 and P3:

P2: "Skeptical and disbelieving. I was combative, questioning..."

P3: "I am highly skeptical about AI chat bots in general, let alone mimicking a real human being. however, I am still interested to see how it works and feels"

Some participants also expressed curiosity in a way of discovering new sides of the deceased. They reflected on how, when the person was alive, they mostly knew them in a specific role or context. As P2 put it:

P2: "I would like to explore their past and who they were as a person, before I was I the picture even."

Theme 3: Fueling Relationship Reflection

Several entries pointed to a shared thoughts and reflections regarding their relationship with the deceased person. Meaning it fueled more thoughts about the type of connection people had before and after the deceased's death. For example, this is reflected in the words of P2, who wrote:

P2: "...interesting to re-conjure our connection and think more deeply about this person..."

Another participant mentioned that this reflection on their past relationship with the deceased even influenced (motivated them in their case) how they now view their current relationships with others connected to that person. As they wrote:

P3: "...it made me think deeper about my relationship with her it also motivated me to create deeper connections with the rest of my partners family"

Theme 4: Fueling Emotional Reactions

A strong recurring pattern in the entries was the rush of emotions participants experienced during the study. It's worth noting that all participants had been informed beforehand that they could stop at any time if they felt uncomfortable, so they were aware of this option. This emotional intensity was evident in the example entries from P1 and P5, with P5 even describing an experience of crying as they wrote:

P1: "During the interaction, I felt a lot of emotions..."

P5: "In the first day I cried a bit & let it out of my system but then I felt ok for the other days."

P5: "I feel more comfortable now and less emotional as I can chat with her like any other person"

Theme 5: Interaction Preference

Several participants offered suggestions among their entries on the diary notebooks on how a similar AI afterlife system could be designed. Some felt that better accuracy in responses would make the interaction more emotionally resonant, as P4 pointed out:

P4: "I am more inclined to do so [using a similar real service] if the program probably had more information or remorse."

Interestingly, a few entries also mentioned a preference for physical object involvement, such as the frame interaction used during the first two days. This was highlighted by P2 and P3, as described below:

P2: "...but I like the frame because it is like an altar and lets you resurface that person for yourself. That feels more cathartic."

P3: "I like the frame...it feels close to the altars at home."

In connection with this P4 also mentioned how including physical memory albums could help reminisce more:

P4: "...Memories album of some kind where talking about specific memories, real photos of the memories can help reminisce more."

Theme 6: Unwillingness to engage

Participants often expressed an unwillingness to engage in some days, repeatedly describing the experience as unsettling or creepy. As there was often described, the idea of talking to someone they knew had passed away felt inherently disturbing. This discomfort remained present even during moments they found the interaction emotionally meaningful, as described by P3 and P2:

P3: "...I don't want to do that, it's creepy. I want to let dead people rest..."

P3:"... Even though it was surprisingly pleasant, the creepy feeling does not go away..."

In this regard, other than the creepiness which brought the feeling of unwillingness to engage, P2 even questioned this idea of reconnection for relief:

P2:" I don't want to do that, it's creepy. I want to let dead people rest. they're gone, set them free. They're not our property to just use for relief whenever we want to. Let your memory of them stay intact & don't create false new ones."

Theme 7: Authenticity assessment

The last recurring theme was participants' ongoing, sometimes unintentional effort to identify errors and question the authenticity of the interaction. Many of the participants mentioned they found themselves asking so many random questions to find the slightest inconsistency with what they wrote in their initial prompt. As P1 points out

P1: "... any slight inconsistency breaks the connection ..."

Participants also assessed authenticity when they noticed repeated, generic, or emotionally neutral responses during the interactions, as described in:

P3: "she did give some nice generic advice. They were okay, but I definitely. You like they wouldn't have said this things"

P5: "...felt like a therapy session in which someone just listens to you & they don't have biases or strong opinions about things."

P2:" ... the responses were way too sweet than she would have ever spoken."

5. Study 2 Co-Creation Workshop

5.1 The Goal

The main goal of conducting a Co-Creation workshop was to answer Sub RQ 2: **How might the possible future narratives be when the AI afterlives are widely available?**

As mentioned earlier in the methodology chapter, the term "Co-Creation Workshop" refers to a collaborative session where designers and stakeholders work together to create something, in this case speculating together for possible alternative futures surrounding AI Afterlife services. Same as in the previous study, participants in this workshop are also considered to be young adults. The purpose is not to forecast what will happen in the future, but rather to collectively generate a wide range of future scenarios that challenge or diverge from the current trajectory of these systems. This process is facilitated with some tailored co-creation materials and structured exercises that scaffold participants throughout the session to better co-speculate.

In this chapter, the design, prototyping, the workshop organization, and in the end the key insights derived from the workshop will be explained in detail.

5.2 Participants and Recruitment

Participants considered for this study were the same participants who earlier took part in the cultural probes study. The reason for this is that the cultural probes study is seen as a warm-up and preparation for the co-creation

workshop. Using cultural probes in the first study was going to help in this research thesis in two main ways:

1. To better understand how participants perceive, feel, experience the concept of AI afterlives (answer SubRQ1)
2. To give participants a chance to be immersed and then reflect on this concept to hopefully get a wider view of it (prepare for answering SubRQ2), beyond what is usually shown in the media.

The AI afterlives are still a potential future technology, and although early versions exist, they are not widely used by a lot of people. Still, there is already a strong image of what AI afterlives systems might look like and influence us, mostly shaped by films and series mentioned earlier in the background chapter, such as Black Mirror episodes. But they tend to show only certain sides of the story, which are often extreme or dark. Thinking about future possibilities and reimagining different directions is not an easy task, especially in today's world where we are surrounded by the views of big tech companies and media hype trying to convince us we need such things.

That being said, the cultural probes study provided participants enough time to form their own thoughts and ideas about AI afterlives, which could also help them prepare for the co-creation workshop, where they would have a chance to speculate collaboratively on the future direction alternatives. However, inviting new participants without the cultural probes experience could also be an interesting idea for future research.

5.3 Designing the Workshop: Conceptualizing the Right Materials & Exercises

In order to design a collaborative speculation workshop and its needed materials and exercises, I sought inspiration from some already made speculative tools. Two such tools are "The Tarot Cards of Tech" and "The Thing From the Future", both are designed to help speculative ideation (Figure 44). The Tarot Cards of Tech, created by Artefact group is a deck of cards that helps predicting reflecting on the impact of technology and products (The Tarot Cards of Tech, n.d.). The Thing From the Future, created by Stuart Candy and Jeff Watson from SituationLab, also is a card based game that invites to collaboratively imagine hypothetical objects from various future scenarios (Candy & Watson, 2015).

Among these two tools, “The Thing From The Future” appeared to be more aligned with the context and goals of this second study. However, it still needed some customization. Therefore, I started to create my own materials and activities, inspired by how this imagination game breaks down the future into some separated elements to better scaffold players in coming up with future scenarios.

Figure 44 – Two Speculative tools: The thing from the future & The Tarot cards of tech

5.3.1 The Elements of a Future

As mentioned earlier, “The Thing from the Future” served as a starting point for designing the customized workshop activities and materials needed for this research. In that game, players create future scenarios by combining various elements. These elements can be seen as distinct components of a future scenario. The elements in the game include: Arc (the timeframe and type of future), Terrain (the context or location where the object might exist), Object (the focal point of imagination), and Mood (how it feels to experience this future object).

It is clear that, using this game directly in the context of this thesis research would be challenging, as it would be difficult to align elements such as the object, mood, and even terrain in this raw format and expect participants to fully grasp them. Therefore, building upon these foundational elements, I developed my own set of future elements, which are described in table 5:

The Element	Description
A type of future / future archetype	Defining the nature of the future being envisioned
Character(s) in that future	Identifying key figures or agents within the future world
AI afterlives manifestation type	The central concept that participants would imagine, focusing on its mechanics and how the concept manifests itself
AI afterlives provider type	Considering the influence of a company or organization that creates the system, and how their ideology and incentives shape the design of the afterlife system

Table 5 - Elements of a future for the context of this research

Only after the elements are put together will participants be able to define their “Future Scenario.” A pool of different options for each element will be provided to help them with this process.

5.4 Prototyping the Co-Creation Materials and Pilot Testing

6.4.1 1st iteration

Having said all the elements and their potential options previously mentioned, the following format for the workshop activities regarding the workshop materials was designed. It includes two main boards and some option cards that need to be filled in in order: first the small future board, and then the big one. The small one is supposed to be filled in individually, and the big one within groups. The option cards give an idea of potential options for each element. In the big board, the final scenario will be explained along with a sketch to better convey the main idea of the scenario. This board is also placed at the center of a Futures Wheel, which is aimed to help participants think and write down the indirect and direct impacts of each scenario that comes with an arrangement of some elements put together beforehand (Figure 45).

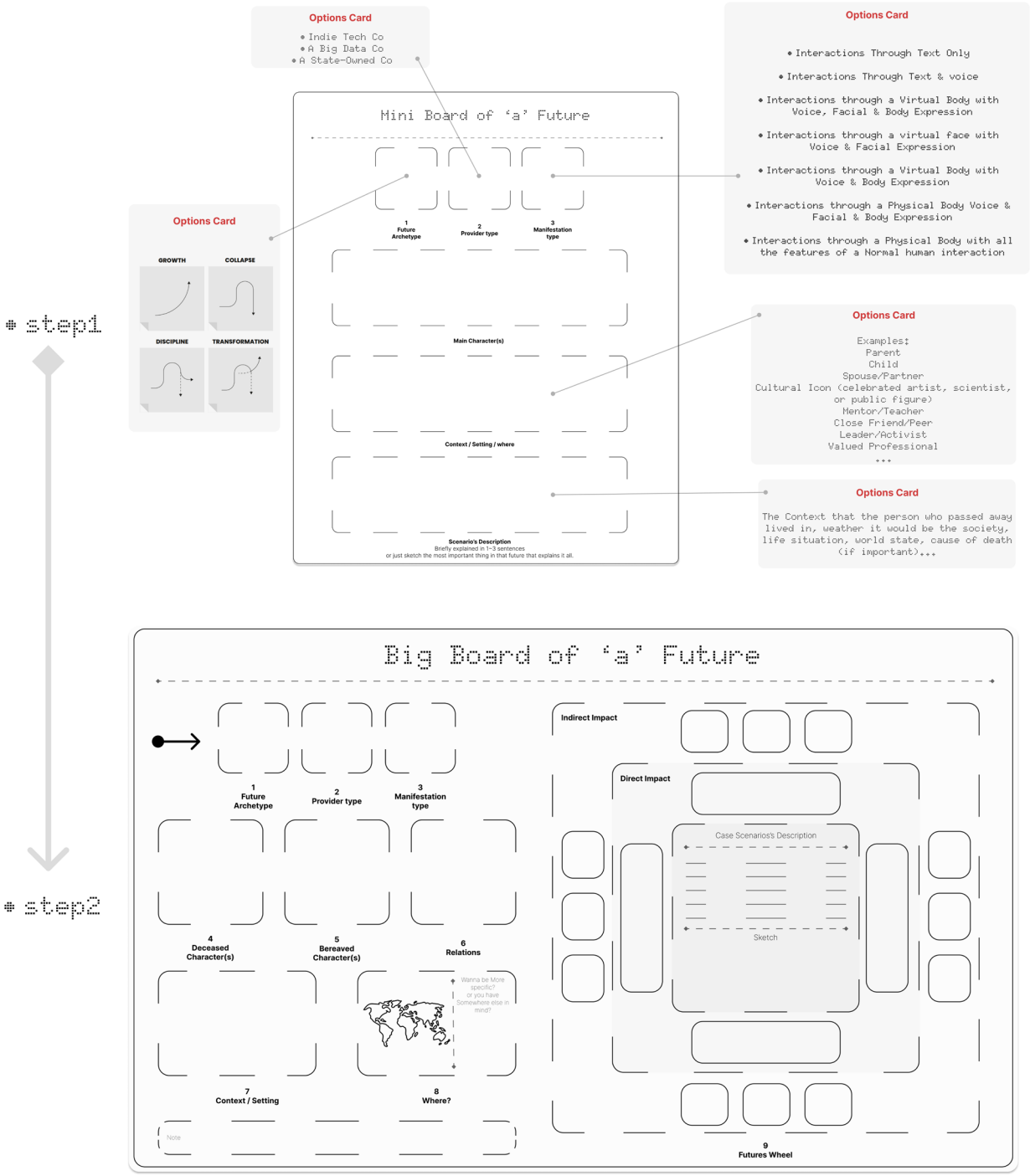


Figure 45 - 1st iteration of the workshop materials

5.4.2 2nd and Final Iteration After Pilot Testing

After developing the first iteration of the workshop's scaffolding materials, I conducted a pilot test with a pair of young adult volunteers who were not part of the participant group. This test was aimed at identifying potential flaws and obstacles for generating future scenarios and refining the materials, rules, and activities in it. After the pilot test, some of the rules for completing the boards were adjusted, along with a few modifications to the boards themselves.

The final or second iteration, as shown in the figure 46, demonstrates a shift from using two separate “Boards of a Future” (small and large) and a pool of option cards, to instead handing those option cards separately to participants. This change was made based on the feedback indicating that having too many visible options at once could lead to decision fatigue. By giving each participant a limited set of cards in hand, the experience might become more engaging, encouraging groups to negotiate and collaborate based on the options they each hold.

Furthermore, regarding the Futures Wheel, which was located on one of the boards in the previous iteration, it was suggested that it could be separated from the board. The same suggestion was made for the sketch card, to be used independently. Also, to better support participants, it was considered helpful to show or provide the categories in which impacts might occur, instead of leaving a large blank space without any guidance on how to think about direct and indirect impacts.

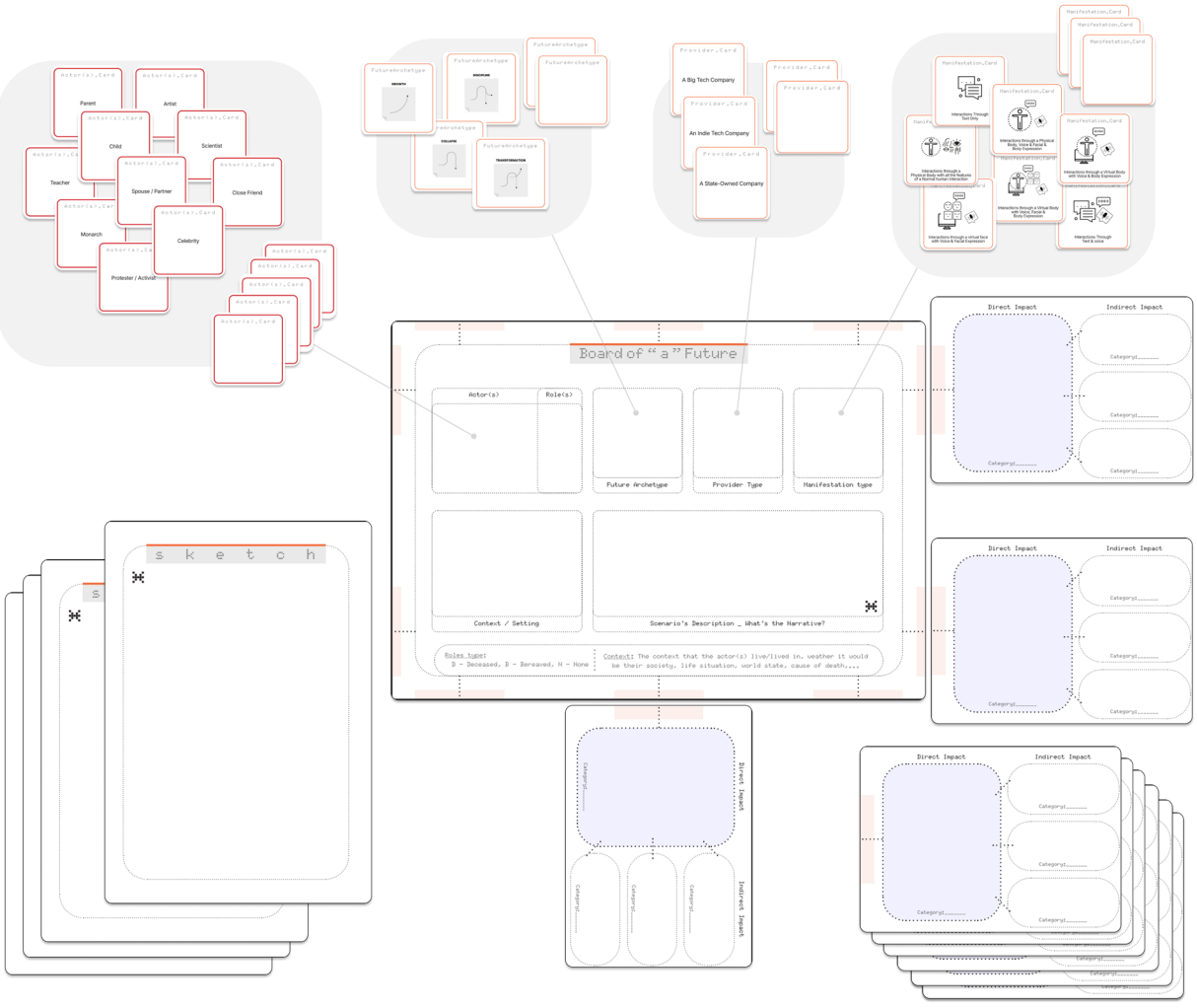


Figure 46 - 2nd iteration of the Workshop materials

5.5 Organization of the Workshop

The workshop took place on the 5th of March from 9:15 to 12:00, with all the same participants from the cultural probes phase present. There were two breaks during this period, and the overall atmosphere was kept casual and relaxed, supported by music and snacks to help set the right mindset. This approach aimed to ease participants into each part of the session and encourage open engagement. It should be mentioned that at the end of the workshop, one participant had to leave the session in the last 30 minutes due to personal circumstances. The structure of the workshop followed the protocols outlined in table 6, with some tiny adjustments that were improvised on the spot:

What+How Long	How	Materials
Welcom, Introduction & Briefing (~15 min)	The presentation will begin with participants sharing their thoughts regarding their unique or similar "cultural Probes "experiences. This will help everyone to remember what happened and what this research was all about. After that, the main brief of this workshop will be explained which is: *"Imagining a future where AI Afterlives are widely available, highly accurate and let people stay connected with the dead, how will be the experience of living in that future and what are the broader implications of it?"*	Power point presentation for the introduction, brief.
Explanation of Future Elements (~15 min)	Explaining the different elements of a future scenario in this workshop which includes: • Future Archetypes (explaining and showing movie example for each) o Growth - Her o Collapse – Madmax o Discipline – Minority Report o Transformation - Surrogate • The AI afterlives manifestation type o How the interaction of such technology and its features might be	Power point presentation for each element of a future in details

- The AI afterlives Provider type
  - o Basically, who owns that service?
  - o Part of Big Data companies
  - o Part of State-Owned companies
  - o Indie Tech

- The main character
  - o Whose experience are we following?
  - o Character cards will be given
  - (e.g.: a grieving mother, a partner coping with loss, a society mourning a celebrity)

- The context/setting/where
  - o What is the future setting and what opportunities or challenges does the character face?

And In the end, explaining that they will be divided into groups and the members of each group will reshuffle time to time.

Test Round with Paper Boards (~10 min)	A test round on paper board will be conducted to allow participants to familiarize themselves with the process. This will be an individual exercise and not a collaborative one. Questions are encouraged and will be answered.	Paper boards and Element of Future Cards
Break	-	-
Round 1 Paired Co-Speculation (2 sets x 10 min) (~20 min)	The 5 Participants will be divided into 3 groups (with one individual working solo due to odd numbers). In pairs, they start completing their boards. Each participant will have their own set of “Elements of future cards”. Each group will be completing 1 “Board of a future” for each set After two 10-minute sets, participants will be reshuffled for the next round.	Elements of future cards, multiple Board of a future
Round 2 Reshuffled Groups (2 sets x 10 min) (~20 min)	Same as the previous round, but this time participants will be working with different pairs.	Elements of future cards, multiple Board of a future
Break	-	-
Round 3 – Final Set (~10 min)	Same as previous rounds, participants working with different pairs. It is expected to have 15 completed future boards at this point.	Elements of future cards, multiple Board of a future
Scenario Sharing and Voting (~10 min)	All 15 boards will be placed on the wall. Participants will be presenting and explaining their future scenarios. Then each person votes on the most intriguing, surprising or favorite ones using colored stickers.	Completed “Boards of a future”, colored voting stickers

Filling Impact cards for the Future Wheels + Sketching (~15 min)	Participants will received sketch and impact cards and will be asked to fill them in for the top 3 boards with most votes.	Impact and Sketch cards
Group Reflection & Closing (~10 min)	The session will be concluded with group discussion, reflecting on the activities and the future scenarios generated.	-

Table 6 - Co-Creation Workshop Protocols

Below and on the next page there are some photos taken from the workshop (Figure 47 & 48 & 49).

Figure 47 - Participants working in pairs to complete the future boards

Figure 48 - Scenario Sharing and Voting section of the Workshop

Figure 49 - Filling Impact cards for the Future Wheels & Sketching

5.6 Data Collection and Analyzing the Final Boards

As mentioned, participants co-created their future narratives by arranging different elements of the future and filling in the blanks on their boards. In total, about 15 completed boards were created and displayed on the wall. In the sharing and voting section of the workshop, creators presented their narratives and explained them in more detail from their own imaginations. After the presentations and discussions, participants were asked to vote for the one they found most interesting or surprising, something they were not expecting to see. The three narratives that received the most votes were: the redwood tree, the activist in an authoritarian state, and the state forcing people to interact with digital versions of the deceased. These three, together with the rest, represent the collected data from this co-creation workshop. It is worth mentioning that all of the boards, along with their summarized narratives, are shown in the next section (The three most-voted ones are highlighted in orange.)

Since the narratives are already clearly expressed, no in-depth analysis was necessary at this stage. However, in the concept development section of this thesis, further reflection and interpretation will be applied to the selected narrative in order to develop the final concept.

5.7 Study 2 Findings

The findings from Study 2 are the narrative ideas generated during the co-creation workshop process by the participants. These are summarized and presented in the table below. In total, 15 narratives were developed. They were then grouped into four main categories based on their themes and underlying dynamics.

The categories are:

- Narratives involving non-humans
- Narratives focused on knowledge transfer and community empowerment
- Narratives exploring exploitation
- Narratives related to state power and resistance

In Figure 50, the four different narrative categories that emerged during the workshop are displayed. All the boards with their narrative summaries are accessible in Appendix D. In the following pages of this chapter, the most voted narratives are displayed, with their narrative summaries.

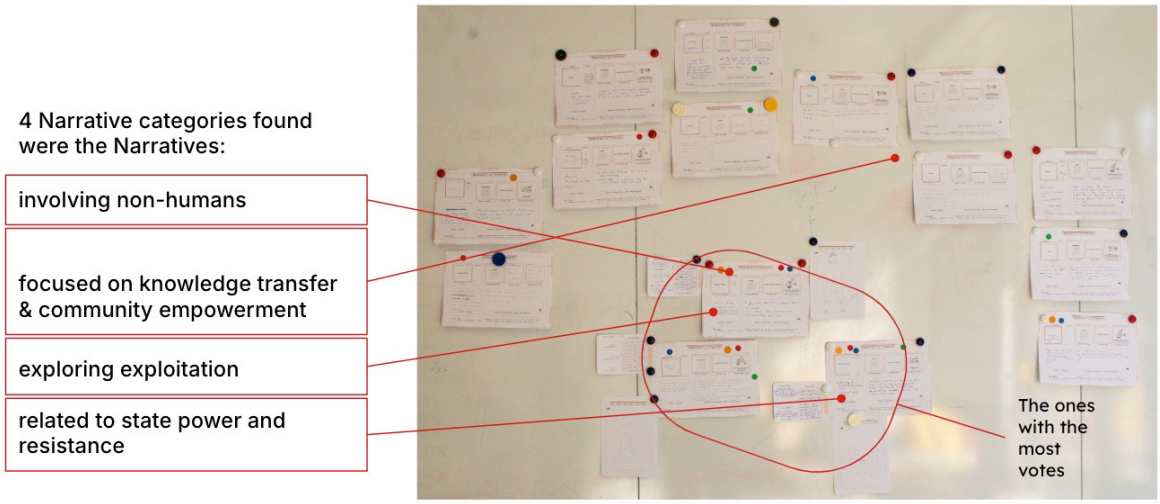
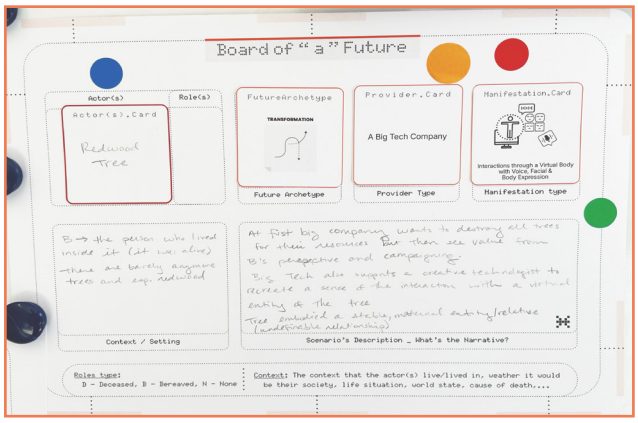


Figure 50 - A picture taken from all the boards categorized and voted on the wall at the end of the workshop

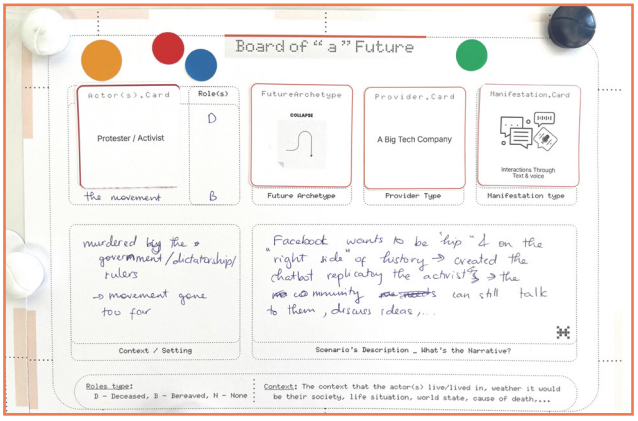
The Completed Board



Summary of the Narrative Idea

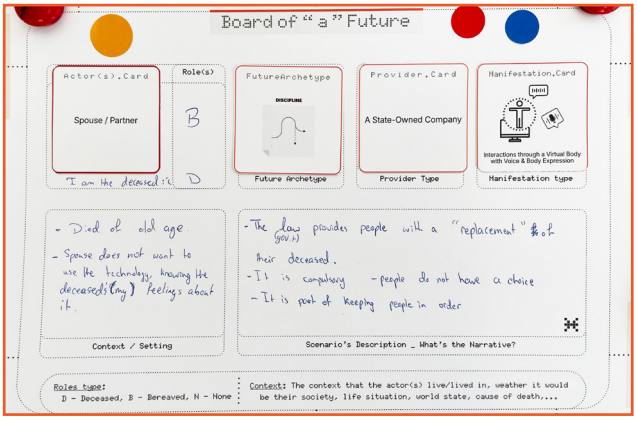
A certain type of tree goes extinct because of the actions of a big tech company driven by greed. Later, the same company sees potential in AI afterlives and uses the technology to bring back the Redwood Tree in a digital form. They create a digital version of the tree as an embodied, intelligent entity.

From the Category: Narratives Including Non-Humans



In an authoritarian regime, a well-known activist is killed by the government. A big tech company, trying to be on the right side of history, brings the activist back digitally. The opposition uses this digital version to talk, share ideas, and organize. It becomes a symbol of hope and unity, helping them eventually bring change to the regime.

From the Category: Narratives Including State Power and Resistance



A state-owned company offers digital replacements for deceased loved ones, and over time, the service becomes mandatory. The state sees it as a way to maintain control and preserve what it sees as valuable citizens. But some people resist, including a spouse who refuses to use the service. They don't believe the digital version is truly the same person and don't want the state to have access to their private memories and feelings.

From the Category: Narratives Including State Power and Resistance

6. Design

6.1 Design Considerations

This section was first named as “Design Requirements” but then I thought in the context of speculative design, the term “Design Considerations” makes more sense and signals openness and possibility. It implies flexibility reflection and plural futures rather than fixed, non-negotiable elements which is exactly what this thesis is trying to avoid from. This entire thesis is intended to encourage greater negotiation and debate regarding the AI Afterlife topic.

Derived from the themes found after the cultural probes study along with the background research, suggestions and points that can be considered in the concept ideation phase are:

6.1.1 Need for Consent and Access Control

Derived from themes “Unwillingness to Engage”, “Curious Yet Skeptical”, “Memories Matter” it suggests:

- The AI Afterlives systems can allow individuals to opt in or out of the service before or even death.
- Individuals can define who can access or engage with their digital persona after death.
- Interaction preferences can be customizable by relationship type (e.g., family, friends, colleague, etc)
- Consent can be part of the service and be expressed through physical and digital formats and remain easy to update
- There can be options for after death deactivation or revision by trustees.

6.1.2 Need for Curated and Verifiable Memory Sources

Derived from themes “Memories Matter” and “Authenticity Assessment” it suggests:

- AI Afterlife replicas can make sure to be generated from human-verified, intentional memory sources (protocols to make sure the data is accurate and is up to date)
- A transparent memory curation interface or service can exist to allow individuals or families to manage these data inputs
- Systems can prioritize approved and personally meaningful content over publicly digital footprint data that might not be useful at all

6.1.3 Desire for Transparency and Explainability

Derived from themes “Curious Yet Skeptical” and “Authenticity Assessment”, it suggests:

- AI Afterlife Services can include visible and accessible announcements about how the service was built, and where the data came from
- The interface can clarify and make sure that the user is engaging with a simulation, not a real consciousness
- A certification marker or something equivalent could build trust by showing transparency

6.1.4 Need for Emotional Safety and User Control

Derived from themes “Fueling Emotional Reactions” and “Unwillingness to Engage”, it suggests:

- Systems can feature a clear and accessible exit or a pause function
- Services can include emotional sensitivity logic to detect distress
- A closure feature (like a final message or ceremony) could help users disengage properly and without negative feelings after each use

6.1.5 Need for Multiple Interaction Options

Derived from themes “Interaction Preference” and “Curious Yet Skeptical”, it suggests:

- Services can provide products that facilitate the connection more

effectively through physical means

- Services can offer multiple interaction formats (like text-based chat, voice chats, involving photo or video galleries or immersive interaction formats 3d or 2s, etc)
- Users can be allowed to toggle between modes depending on comfort and context they prefer
- The system can allow personalized depth and tone settings to suit different emotional needs by user's preference

6.1.6 Desire for Reflection Tools

Derived from themes "Fueling Relationship Reflection", "Memories Matter" and "Fueling Emotional Reactions", it suggests:

- Reflection tools can help users explore emotions and past relationships thoughtfully
- The design of the service can include a reflection mode with context-aware modes
- These features can be also optional and customizable, supporting individual styles for reconnection

6.2 Concepts

After conducting two studies and analysis of their insights, personal brainstorming started. In the following sections, three concept directions are presented. One of them is selected as the main concept and is developed further as main outcome of this thesis research.

6.2.1 Concept idea 1 - An AI Afterlife Service Comparison Website

This concept is set in a future where AI afterlife services have become mainstream, with many providers offering various ways to reconnect with the dead. As the number of options grows, people are increasingly overwhelmed by the task of choosing the most suitable service for themselves or for their loved ones. This concept is about a neutral comparison website that helps users browse the landscape of AI afterlife providers and choose the one that fits their need.

The website allows visitors to browse and compare different services based on features, pricing, ethical practices, and compatibility with other tools. A key part of the experience is the user reviews, where people can leave their view on how authentic, creepy, comforting, or emotionally effective each service was. These reviews help others measure the quality of different service providers.

In addition to its comparison function, the platform also sells supporting physical products, such as their newly launched smart frame. This frame connects is able to multiple AI afterlife services (where compatible) and offers enhanced, customizable ways to interact with the digital presence of the deceased, blending physical and digital memorialization.

6.2.2 Concept idea 2 - An Exhibition of Narrative Artefacts

This concept is based on the speculated narratives that were generated in the co-creation workshop. The concept takes the form of a curated exhibition that displays main artefacts each representing a key object or symbol extracted from the selected narratives. Examples include:

- A spray can from the narrative describing a regime change began through digital resistance.
- A redwood tree, digitally preserved & displayed as a sacred memory site.

- Ultrasound images of a future embryo, connected to generational AI legacy systems.
- Framed photos of state-monitored couples whose digital afterlife rights were entangled in governance and surveillance.

Each artefact in the exhibition is accompanied by a placard or digital display describing the world it came from, and the role AI afterlife technologies played in that scenario. In an expanded version of the concept, visitors can also interact with AI afterlife agents from each world, simulating the services that would exist within those speculative futures.

6.2.3 Concept idea 3 – IAORO

Set in a future where AI afterlife services have become widespread, this concept imagines a non-governmental organization (NGO) affiliated with United Nations (UN) which is called, the International AI Afterlife Oversight and Regulation Organization (IAORO).

It is a global regulatory body established to spread the ethical use of AI in digital resurrection. IAORO operates as a watchdog that evaluates and certifies AI afterlife providers based on their adherence to privacy, consent, and emotional responsibility standards.

One of the central features of them is a personal data consent infrastructure, inspired by organ donation models. Individuals can register regarding their future digital resurrection: choosing to opt in, opt out, or specify who may access their AI-based digital self after death. These preferences are formalized through physical identity cards.

IAORO categorizes certified service providers into three key types:

1. Relationship-focused services, designed to maintain ongoing emotional bonds with the deceased
2. Memory and knowledge preservation services
3. Grief and emotional support services, often developed in partnership with psychological and health organizations such as WHO

The organization also keeps reviewing and develops standardized protocols for individuals when registering to AI afterlife providers. As part of their consent system, this organization has a standardized consent system built around two types of official identity cards that acts a as legal or social tool:

- Blue card: Which is a consent to be recreated card for individuals who

choose to be digitally re-created after death, this card formalizes their consent and allows them to specify who is allowed to interact with their AI replica (e.g., family, close friends). It also ensures that the recreation is carried out only by certified service providers

- Red card: Which shows they absolutely do not want to be digitally resurrected, this card acts as a formal refusal. It serves both as a clear declaration of personal boundary and a protective legal tool. If a company or individual uses that person's data when they pass away to create an AI version against their wishes, this card can be used by surviving family or legal representatives to file a formal complaint or legal claim against the violator

In the following pages the prototype website and cards are visualized:

Checking the Prototype Online:

The full interactive prototype can be accessed with the link below.

https://docs.google.com/document/d/1KxvzNghKfTnHPAkCqLG-hJoxAmyNmUiloiRHaIzyI-Y/edit?usp=sharing

Note: You will be redirected to a Google Doc first because it was noticed that the Figma URL changes. This allows for URL updates to be made in the Google Doc to ensure its accuracy.

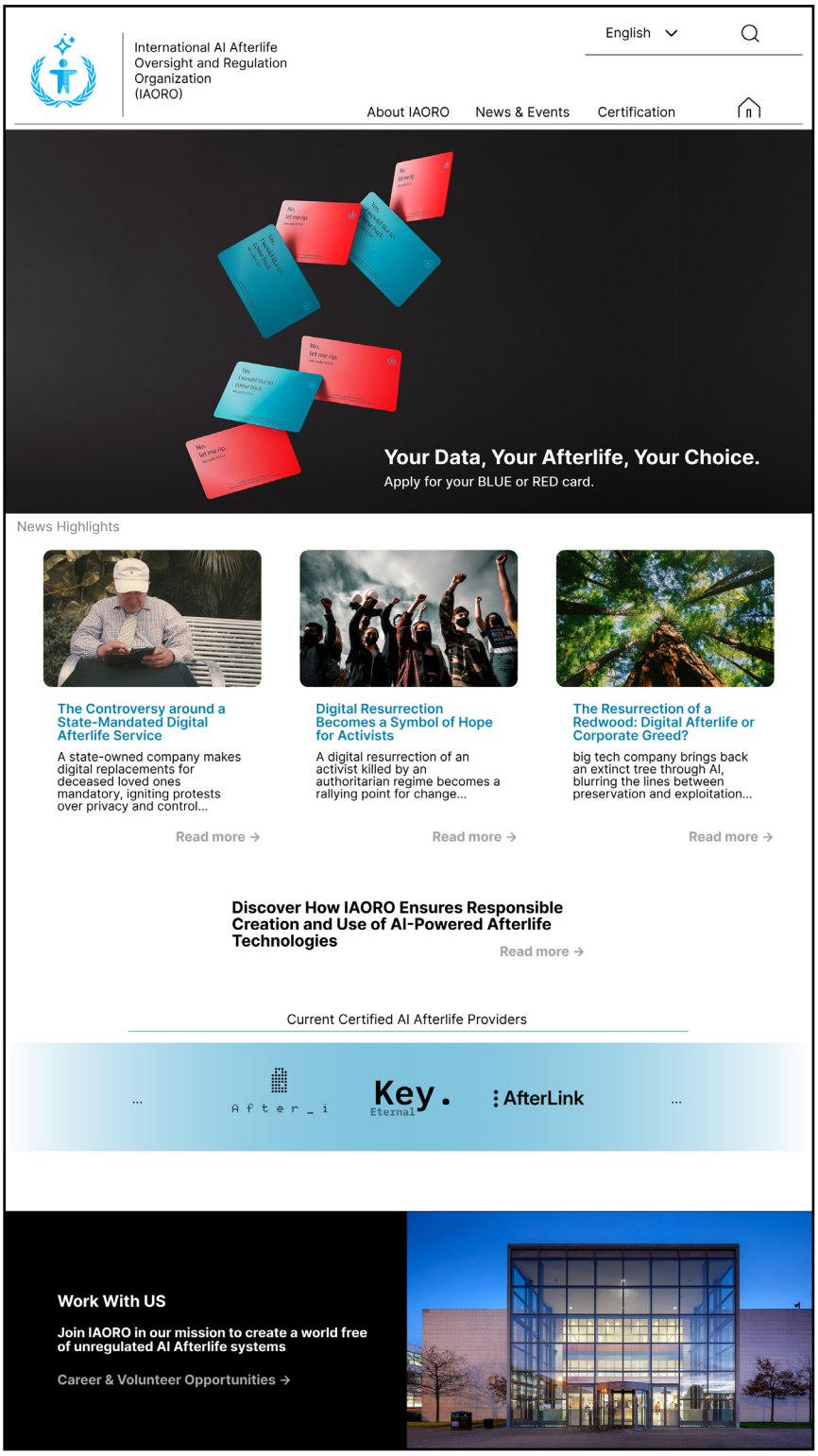


Figure 51 - Screen shot of the IAORO concept website, showcasing different parts such as, the cards, the news, certified companies

The cards are initially displayed, and when clicked on the banner, the user will be redirected to a page that explains each card and how the platform works. Essentially, IAORO acts as a mediator between individuals and service providers, ensuring everything is handled correctly.

This is the News Section of the concept website, displaying the top narratives from the co-creation workshop. These narratives have been rewritten to give them a more news-like feel.

Certified Providers are displayed here, and by clicking on them, users can visit their website and get to know more about their focus. Below is the certified mark that they will have on their platform to showcase that they are approved by IAORO.

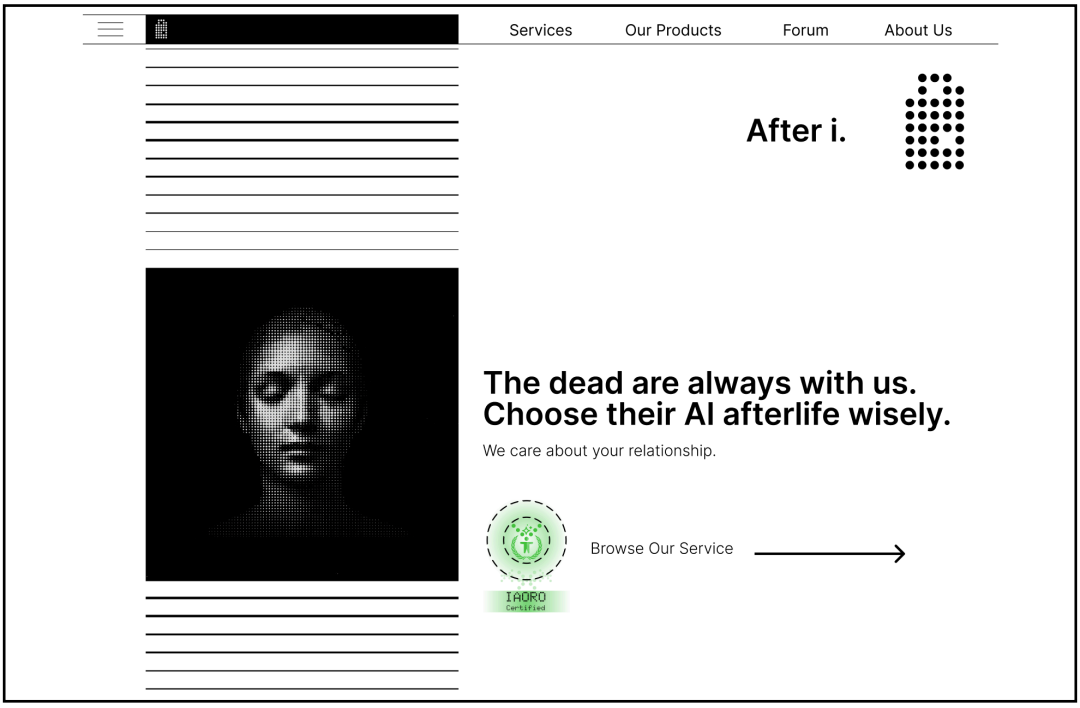


Figure 52 - Screen shot of one of the certified services displayed on the concept website for the user to browse

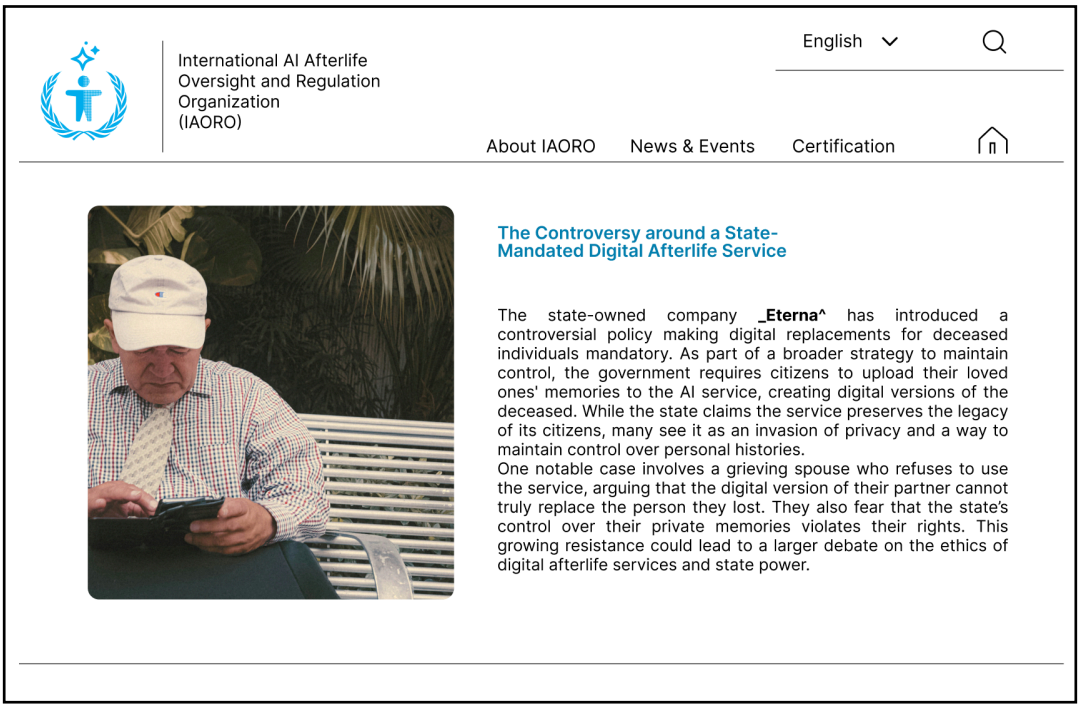


Figure 53 - Screen shot of one of the news displayed on the concept website with more details

7. Discussion

This thesis used collaborative speculation through a co-creation workshop, alongside a cultural probes study (both conducted with the same young adult participants) to propose concepts for a provocative prototype aimed at sparking debate and reflection around the emerging AI Afterlife phenomenon. The AI Afterlife in this research refers to communicating with the dead using generative AI. In this chapter, I first discuss each study and their insights individually, then examine how they contributed to the concept development. I conclude with a discussion of the thesis' limitations and suggestions for future research.

The Cultural Probes Study & Insights

With the first research question in mind, "How is the idea of AI afterlives perceived with the state-of-the-art AI-powered chatbots among young adults?" the cultural probes study led to seven emerging themes based on how participants responded to the activities. These themes were: Memories Matter, Curious Yet Skeptical, Fueling Relationship Reflection, Fueling Emotional Reactions, Interaction Preference, Unwillingness to Engage, and Authenticity Assessment. With This study I aimed to understand how young adults view and perceive the idea of AI afterlives and whether their perceptions are influenced by media narratives or the tech industry. In the diary entries and in the theme Unwillingness to Engage, some participants showed distrust toward AI and a lack of interest in interacting with it. At the same time, the theme Curious Yet Skeptical showed that some were still intrigued by the technology, even though they questioned how it recreates the deceased. Through the theme Authenticity Assessment, it became clear that

participants were not just passively accepting the concept but were actually actively evaluating it during their interactions by asking purposeful questions. They also expressed their interaction preferences and reflected on how the idea of talking to the dead with AI might bring up not only memories but also emotional and relational thoughts.

Overall, the themes showed that young adults come closer to the idea of AI afterlives little by little and with some critical thinking and emotional awareness. They recognize its potential value but remain cautious about its limitations and effects it might have on them or even to the deceased.

The Co-Creation Workshop & The Narratives

To address the second sub-research question, "How might the possible future narratives be when AI afterlives are widely available?", the co-creation workshop was conducted. Some speculated futures with some details were expected as results from the workshop, which in the end 15 narratives emerged. These were grouped into four categories based on their similarities: narratives involving non-humans, narratives focused on knowledge transfer and community empowerment, narratives exploring exploitation, and narratives related to state power and resistance.

Among these narratives, some aligned with existing literature, while others introduced new perspectives. For example, based on the paper by (Morris & Brubaker, 2024), they expected that AI afterlives could help preserve personal, religious, or cultural heritage by sharing time-specific knowledge and wisdom. This matches with the "knowledge transfer and community empowerment" category and its narratives from the workshop reflecting a similar idea. Another similarity mentioned in the same paper was that interactive AI agents could benefit culture, history, and heritage. One narrative from the workshop reflected this by imagining old musicians being brought back to collaborate on new music. This idea of creative interaction aligned with the paper's view but offered unique angle.

On the other hand, some differences were also notable. While both the workshop and literature acknowledged the risk of exploitation, the participants brought a different perspective. For example, the Morris & Brubaker's study mentioned possible legal or economic benefits, such as earning income for descendants (Morris & Brubaker, 2024). But in one workshop narrative, the focus was on how wealthy individuals might be more expensive to digitally resurrect due to taxes or high service costs. This raised concerns about fairness and the commercial side of AI afterlives, which can expand the

conversation around exploitation in new possible ways.

Another difference was related to political impact. The Morris & Brubaker's study discussed societal effects of AI Afterlives mainly from an economic view (Morris & Brubaker, 2024). But workshop participants created narratives featuring political figures like a protester or monarch being digitally brought back. This pointed to the technology's potential role in affecting political movements or resistance, a perspective that was less explored in the existing literature.

Beyond these similarities and differences, some narratives from the workshop were not found in any previous research or media. One example imagined a specific physical location (like an arcade place in their example), as the only place where people could reconnect with the dead. This is an interesting point, as it may remind us the idea of cemeteries. However, when thinking about AI afterlives, their accessibility through digital devices rarely suggests that they might one day be limited to or experienced only in specific physical locations. Similar to these unique new angles, another narrative explored how the technology could shift meaning during special times, such as war, when many people are dying.

Overall, the narratives that were developed from the workshop included scenarios that were less mainstream. This might suggests that the preparation phase with the cultural probes may have been effective. Participants did not rely on the most obvious or familiar scenarios for their future speculations and seemed less influenced by mainstream media narratives.

The Concept Ideation and Development

The themes from the cultural probes led to several design considerations. These were essentially suggestions about what young adults pay attention to, how they perceive the concept, and what elements make it meaningful to them when thinking about AI afterlives. The narratives they created also played an important role. While some sounded like science fiction, majority of them were almost possible scenarios that are plausible to happen in certain parts of the world. Combining these narratives with the design considerations and adding a layer of personal reflection from my experience conducting this research, led to the development of the three final concepts. Among them, the IAORO concept was chosen for three main reasons. First, it had the potential to include more of the study findings, which makes it more expandable even beyond the scope of this thesis. Second, it offered both digital and physical elements. Its physical card idea, created a tangible way to bring the future

narrative into the present, allowing a broader audience to engage with it. Its similarity to current organ donation cards also added an interesting layer, possibly triggering reflection in someone who had not previously thought about the idea of AI afterlives.

Third, it addressed the main research question more effectively than the other concepts: “How might we spark a debate on the future use of AI afterlives to provoke reflection among young adults?” The IAORO concept has enough depth, a compelling narrative, and physical elements that could prompt users, cardholders, or even casual observers to pause, think, and talk about it. While there was no time to test how effective this concept might be (something I will discuss in the limitations section) it still shows strong potential to provoke reflection, based on the exploratory nature of this research.

7.1 Limitations

There are several limitations in this thesis that need to be addressed. First, even though there are many existing literatures in the AI and AI afterlife industries, there is still significant uncertainty around the feasibility and maturity of these technologies and the direction they are heading at. Second, both studies in this research involved only five young adult participants, all aged between 21 and 28. This small and narrow sample size may not fully represent the diverse range of young adults’ perceptions and ideas around AI afterlives, which could have influenced the resulting themes, narratives, and final concepts. The decision to work with five participants was due to time constraints I was facing with and the intensive nature of the methods. Cultural probes and co-creation workshops require careful design, facilitation, and analysis, which made a larger sample impractical within my available timeframe. Third, another limitation relates to the AI tool used in Study 1. The Replika platform was used without the paid version or any customization to act as an approximate version of an AI afterlife agent. Some participant entries showed ads or off-topic responses, which might have affected the overall experience. This technical limitation may have shaped how participants engaged with the concept and possibly influenced their perceptions. Fourth, the final developed concept was not tested due to time limitations. While the prototype shows potential to spark debate and reflection, it was not possible to evaluate its impact and be evaluated in real-life, to see how young adults might react to it or in what context it should be exhibited. This could be also seen as an area for future research.

Finally, although the co-creation workshop materials allowed for open-

ended inputs with the available blank future elements cards, it also included pre-made cards to reduce decision fatigue and speed up the process. These pre-defined cards (such as provider types, actor names, or manifestation types) might have unintentionally limited the range of participant imagination but based on the feedback received after the workshop, most participants were satisfied with the clarity and choices they had through the designed materials.

7.2 Recommendations For Future Research

Next step would be testing the current prototype, or improved versions of the current concepts, in different contexts with young adults. Future research could also focus on creating criteria for measuring how effective one concept is in its provocativeness. Another direction would also be running the studies with a larger and more diverse group of young adults and using a custom-built AI Afterlife agent. It would also be useful to explore how different design choices affect how people use or relate to these AI Afterlife services, depending on what they're looking for.

Another future research direction could be to run the co-creation workshop without the cultural probes to see how much that study actually influences the mainstreamness of the narratives. Finally, future research needs to address the aspects of AI afterlife services that were mentioned in the entire research, such as ethical concerns, cultural and religious backgrounds and their influence, and how useful these systems might be for grief support, especially for young adults.

7.3 Contributions

This thesis makes several contributions. First, it offers a method for using cultural probes specifically in the context of AI Afterlives, showing how they can help get insights and prepare participants to engage with complex and sensitive topics such as death and reconnecting with people who have passed away through AI. It also introduces a full set of materials, tools, and a protocol for a co-creation workshop that combines speculative design methods with collaborative narrative making. Through these methods, the research revealed what aspects young adults focus on and perceive when engaging with the topic of AI Afterlife chat-based formats. The study also led to a range of speculative narratives about possible future scenarios where AI Afterlives are

widely used. Finally, the thesis presents three provocative design concepts, one of which (IAORO) is fully developed and ready for deployment in future testing or public exhibition.

8. Conclusion

This study explored how young adults might be provoked to think deeply, reflect, and engage in debate about the concept of AI Afterlives. Using the Cultural Probes method, a literature review, and a Co-Creation workshop employing Speculative Design in a collaborative setting, the research identified key design considerations and possible future narratives in which AI Afterlives are widely available and used. These insights were then used to develop three provocative concept proposals.

Overall, the contributions of this study include the development of protocols for the applied methods in the context of AI Afterlives and young adults, as well as the design considerations and narratives that resonate with young adults. Future research could build upon these findings and be applied to further provocative concept development within the same context.

9. Glossary

AI Afterlife

Refers to a single generative AI based representation of a deceased individual, created to allow interaction with the bereaved through technology. The term typically focuses on the concept of replicating a single person's interaction style, identity or presence in a digital space.

AI Afterlives

The broader concept encompassing various technologies and systems designed to create digital or AI-based representations of multiple deceased individuals.

Bereaved

Individuals who are left behind after a loved one has passed away and who may experience grief, loss, and a desire for reconnection with the deceased.

Death Tech

An emerging industry focused on using technology, particularly AI, to preserve digital representations of the deceased or facilitate interactions with them after death and bring new ways of commemorating, remembering and even grieving.

Diegetic Prototype

A type of prototype embedded in a fictional narrative that is designed to provoke reflection or discussion, often used to explore speculative or future technologies.

Digital Resurrection

The process of creating digital versions of deceased individuals through AI or other technologies, which can simulate their behavior, voice, or appearance, enabling interactions with them in the digital realm.

Deceased

A person who has passed away. In the context of this research, it refers to individuals whose digital representations are used in AI afterlives for interaction with the bereaved.

Generative AI

A category of artificial intelligence that uses algorithms to generate new content, such as text, images, or audio, often based on input data or existing patterns.

Generative Ghosts

AI systems that evolve and generate novel responses over time, potentially creating a digital version of a deceased person that can interact with the living in a manner that feels dynamic and alive.

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11. Appendices

11.1 Appendix A

Ethical Approval, Information Brochure and Consent Form for both studies

UNIVERSITY OF TWENTE.

Natural Sciences & Engineering Sciences (NES)

241195 APPLICATION FOR ETHICAL REVIEW

Application nr:	241195	**Intro form:**	8 - Introduction
Researcher:	Hosseini Koupaei, A. (M-IDE)	**Middle form:**	8 - Natural Sciences & Engineering Sciences (NES)
Supervisor:	Zaga, C. (ET-HCD)	**Outro form:**	5 - Submission
Reviewer:	Paez, J.I. (TNW-DBE)		
Status:	Positive advice by reviewer		
Date of application:	12-01-2025 18:58		
Application version:	2		

0. GENERAL

0.1. Personal details

Student/employee number: s3078027
Initials: A.
First name: Arash
Last name: Hosseini Koupaei
Email : a.hosseinikoupaei@student.utwente.nl
Education/department: n/a
Faculty: n/a
Study field: M-IDE
Study level: MSC
Faculty/service department: ET (Selected for this application)

0.2. Project title

Utilizing critical design to explore and address the challenges created by digital afterlife technologies and their impact on the grieving process

0.3. Summary

Rapid advancements in generative AI, is making it possible to create realistic agents that can mimic human behavior in conversations, modeled after specific individuals. Nowadays with the abundance of individuals' digital footprint it has become easier to use these records to enable some form of life continuation after someone has passed away. In other words, generative AI can facilitate the deceased to live on digitally and some companies have already started to take some steps to achieve this goal for various purposes and of course with different intentions. Some companies, startups or initiatives that are already working in this regard are: Amazon, Google, Microsoft, Storylife, Here After AI, LifeNaut, Project December, Re:memory and character.ai. These and other new initiatives being introduced are part of the growing so-called "Death Tech" industry, which is expected to expand rapidly (Puzio, 2023).

These generative AI-powered chatbots, designed to enable the deceased to live on digitally, have been referred to by various terms in different literature, such as 'deathbots,' 'ghostbots,' or 'griefbots,' as some argue they can be beneficial for grief support (Fabry & Alfano, 2024). Google researchers recently coined the term 'generative ghosts' to describe the advanced AI systems that are capable of creating new content rather than just repeating what their creators said while alive (Morris & Brubaker, 2024). They also claim that, in our lifetime, it will soon be possible and common to create and interact with custom AI agents modeled on people who have passed away (Morris & Brubaker, 2024). As expected the debates are blowing up about today's not-so-accurate ghost bots, and their evolved future versions known as 'generative ghosts,' regarding not only their implications on individuals but also their consequences of persistent digital legacies on society. Studies suggest that these technologies can support closure and provide a continued sense of connection for the bereaved, which may ease the transition through grief (Shirsawade, 2024). Researchers are also concerned about the risks these technologies pose to mental health, privacy, ethics, and socio-cultural norms (Hollanek & Nowaczyk-Basińska, 2024).

The societal impacts of death tech and mourning remain underexplored, particularly their effects on the bereaved relationship with the deceased. While early versions of generative ghost technologies already exist, the widespread availability of such systems in the future remains little-known, making this a relevant topic. Discovering and addressing the potential societal challenges of AI afterlives is essential, as these technologies could reshape not only relationships with the deceased but also the living and the concept of death itself.

This thesis aims to explore how generative ghosts might transform these connections and relationships, while also examining broader societal implications, looking at it through the lens of today’s views and values. It seeks to explore and generate non-utopian and non-dystopian future scenarios to analyze potential shifts in societal practices surrounding death when such technologies are integrated in everyone’s lives.

The study is a qualitative study and involves Cultural Probes and a Co-design Workshop. A Cultural Probe is a flexible research method that uses creative

tools to explore people's emotions, experiences, and values in unique contexts. In the Cultural Probes part participants will receive a kit containing materials and guided activities designed to explore their experience of communicating and inner dialogue with someone meaningful to them who has passed away. Cultural probes will be provided before the co-design workshop and is expected to take about a week to complete. After completing the cultural probes, all participants of cultural probes will be invited to attend a co-design workshop all together. The Co-design workshop will last for about 4 hours. Together, and with guidance from the design researchers, they will reflect on their experience of the interactions they already had in cultural probes and co-generate potential future scenarios where such generative ghost technology exists. The workshop activities are designed as a scaffolding exercise to help participants explore and generate these scenarios in a playful and collaborative way with the other fellow participants.

0.4. Start date (estimated) and end date (estimated) for your research project

Start date: 24-01-2025
End date: 15-03-2025

0.5. If additional researchers (students and/or staff) will be involved in carrying out this research, please name them: [Please include full name and email]

Full name Email

0.6. In which context will you conduct this research?

Master's thesis

0.6.1. Please select your supervisor (if applicable)

Zaga, C. (ET-HCD)

0.7. Please select an ethics committee

Natural Sciences & Engineering Sciences (NES)

1. SIMILAR RESEARCH

1.1. Is this research connected to a research project previously assessed by the NES Ethics Committee?

No

2. RESEARCH INVOLVING SECONDARY DATA

2.1. Will you be using existing (secondary) data pertaining to individuals or groups?

No

3. HUMAN SUBJECTS

3.1. Does your research involve human subjects?

Yes

Eligible participants in this study are people that are 21 years old or older and have experienced the loss of someone, such as an acquaintance or a family member who is not considered immediate family (e.g., not a parent, sibling, spouse, or child) and at least two years must have passed since the loss occurred.

3.2. Is the research considered to be medical research?

No

3.3. Please explain what selection procedure will take place, in relation to the intended study population

The information brochure for this research describes that we seek participants that are 21+ years old, have lost a non-immediate family member or acquaintance, and the loss occurred at least two years ago.
Participation is voluntary, and flyers will be used to recruit eligible participants.

3.4. Please explain the size (n) of your study population (e.g. powercalculation)

A total of more or less 5 participants are aimed for the study

3.5. Are participants completely free to participate in the research and can they withdraw at any time, without giving reasons?

Yes

3.6. Will participants be screened to reduce the risks of adverse effects of the research?

No

We rely on their honesty regarding their loss, as we do not wish to interfere with their grieving process. Otherwise, there are no exclusion criteria requiring screening.

3.7. Is there a risk of unexpected findings which might have implications for the subject, due to the used methods/equipment?

No

3.8. Is there any risk of injury or high burden for the participant? Does the equipment used pose any danger to the participants.

No

3.9. Are participants briefed and do they sign informed consent before participation?

Yes

3.9.1. Upload Information Brochure and Consent Form

updated Info brochure and CF_ArashHK.pdf

3.10. Is deception taking place?

No

3.11. Are the requirements with regard to anonymity and privacy satisfied as stipulated in the University's data privacy impact assessment?

Yes

Participants are provided with information regarding the handling of their data, including the methods and purposes of processing. The data will only be processed by those involved in the research and will not be shared with third parties. Participants retain the right to withdraw their consent at any time, upon which their data will be deleted.

For more clarification regarding the Cultural Probes part of the study, participants will not be asked to provide or upload any personal media (e.g., audio, video, or images) of the person they have lost. No recorded material documenting their relationship with the deceased will be collected or processed. Instead, a prompt with basic, non-sensitive information about the deceased person will be asked to be filled in and then typed into Replika so it can adapt its persona in the conversations. The prompt includes the following details: the name of the deceased (pseudonym for privacy can be used), nicknames (optional), who they were to them, optional birth and death years, age at passing, a brief cause of death (optional), career, locations lived (generalized instead of giving names), personality traits (selected from a list or described briefly), and two brief memories. To minimize sensitivity, the participants are encouraged to share only what they feel comfortable with and to anonymize details (e.g., using a different name or generalizing locations). No sensitive or identifiable information is required or asked, and they retain full control over the level of detail they would like to provide.

The information provided in the prompt will only be used to customize the Replika experience during the cultural probes part of the research. It will not be stored, shared, or used for any other purpose. To further ensure privacy, we advise and remind the participants to delete Replika account after the research is completed. According to Replika's policy, "deleting an account permanently removes all data, including message history, and this action cannot be undone". This step will help ensure that no personal data remains on their platform after the study concludes.

4. ANIMAL SUBJECTS

4.1. Does your research involve animal subjects?

No

5. ANIMAL MATERIAL

5.1. Does your research include the use of animal material?

No

6. HUMAN MATERIAL

6.1. Does your research include the use of human material?

No

7. PLANT MATERIAL

7.1. Does your research include the use of plant material?

No

9. GENETICALLY-MODIFIED CELLS OR ORGANISMS

9.1. Does your research include the use of genetically-modified cells or organisms?

No

10. 'DUAL USE' RESEARCH

10.1. Can your research be classified as 'dual use' research, with potential applications in for instance military or police technology?

No

11. OWNERSHIP OF DATA

11.1. Is ownership of the research data or freedom to publish results, limited in any way by a collaboration or contract with an external (commercial) party?

No

12. CONFLICT OF INTEREST

12.1. Does your research include the use of data (either new or existing) the collection and analysis of which might conflict with the interests of the individuals, groups or organizations to which these data pertain?

No

13. IMPACT ON THE ENVIRONMENT

13.1. Does your research, the aim of your research outcome or technology have an impact on the environment?

No

14. OTHER POTENTIAL ETHICAL ISSUES

14.1. Do you anticipate any other ethical issues in your research project that have not been previously noted in this application?

No

15. CLOSURE

15.1. I have answered all questions truthful and complete

Yes

16. COMMENTS

Paez, J.I. (TNW-DBE) (23-01-2025 16:51) :

My request has been fully answered by the applicants and I have no further concerns on this application.

Paez, J.I. (TNW-DBE) (21-01-2025 11:23) :

According to this application, it seems that the volunteers will use their own record material on the person they have lost e.g., audio, videos) to upload it to Replika, and then follow the assignment.
This application does not clarify, though, if any of this data such as audio or video records documenting the relationship between the volunteers and their chosen death person would be collected and dealt with.

Would you please make this point clear in the application form and associated materials.

Thanks!
Julieta Paez.-

17. CONCLUSION

Status: Positive advice by reviewer

23-01-2025 16:51

Utilizing critical design to explore and address the challenges created by digital afterlife technologies and their impact on the grieving process

An Information Brochure

Dear Reader,

With this information brochure, I am aiming to provide you with more information about the research you have shown interest in. This study is part of my master's thesis and is conducted at the University of Twente.

Purpose of the Study: Rapid advancements in generative AI, is making it possible to create realistic agents that can mimic human behavior in conversations, modeled after specific individuals. Nowadays with the abundance of individuals' digital footprint it has become easier to use these records to enable some form of life continuation after someone has passed away. In other words, generative AI can facilitate the deceased to live on digitally and some companies have already started to take some steps to achieve this goal for various purposes and of course with different intentions. Some companies, startups or initiatives that are already working in this regard are: Amazon, Google, Microsoft, Storylife, Here After AI, LifeNaut, Project December, Re:memory and character.ai. These and other new initiatives being introduced are part of the growing so-called "Death Tech" industry, which is expected to expand rapidly (Puzio, 2023).

These generative AI-powered chatbots, designed to enable the deceased to live on digitally, have been referred to by various terms in different literature, such as 'deathbots,' 'ghostbots,' or 'grief bots,' as some argue they can be beneficial for grief support (Fabry & Alfano, 2024). Google researchers recently coined the term 'generative ghosts' to describe the advanced AI systems that are capable of creating new content rather than just repeating what their creators said while alive (Morris & Brubaker, 2024). They also claim that, in our lifetime, it will soon be possible and common to create and interact with custom AI agents modeled on people who have passed away (Morris & Brubaker, 2024). As expected the debates are blowing up about today's not-so-accurate ghost bots, and their evolved future versions known as 'generative ghosts,' regarding not only their implications on individuals but also their consequences of persistent digital legacies on society. Studies suggest that these technologies can support closure and provide a continued sense of connection for the bereaved, which may ease the transition through grief (Shirsawade, 2024). Researchers are also concerned about the risks these technologies pose to mental health, privacy, ethics, and socio-cultural norms (Hollanek & Nowaczyk-Basińska, 2024).

The societal impacts of death tech and mourning remain underexplored, particularly their effects on the bereaved relationship with the deceased. While early versions of generative ghost technologies already exist, the influence of widespread availability of such systems in the future remains little-known, making this a relevant topic. Discovering and addressing the potential societal challenges of AI afterlives is essential, as these technologies could reshape not only relationships with the deceased but also the living and the concept of death itself.

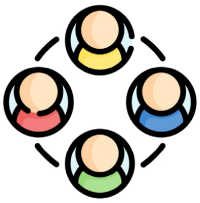
This thesis aims to explore how generative ghosts might transform these connections and relationships, while also examining broader societal implications, looking at it through the lens of today's views and values. It seeks to explore and generate non-utopian and non-dystopian future scenarios to analyze potential shifts in societal practices surrounding death when such technologies are integrated in everyone's lives.

What are the benefits of participating? By participating in this study that is about the intersection of tech and death, you will get the opportunity to contemplate and reflect on your personal relationship with death, the person(s) you have lost and even with the living itself and look into this relationship from different angles. You will also engage in a unique collaborative and creative design process that could be helpful for the continuation of current collective proactive efforts for shaping desirable futures, in this case regarding the potential societal challenges created by AI afterlives.

Who can participate? Individuals are eligible to participate in this study if they are 21 years or older and have experienced the loss of someone, such as an acquaintance or a family member who is not considered immediate family (e.g., not a parent, sibling, spouse, or child) and at least two years must have passed since the loss occurred.

What is involved in the study?

Cultural Probes



Co-Design Workshop

The study involves participating in Cultural Probes and a co-design workshop. A Cultural Probe is a flexible research method that uses creative tools to explore people's emotions, experiences, and values in unique contexts. In the Cultural Probes part you will receive a kit containing materials and guided activities designed to explore your experience of communicating with someone meaningful to you who has passed away. You will reflect on your relationship with this person, both before and after engaging with the tasks in the kit. These activities include interactions with and without an AI-powered chatbot approximating the person. Throughout the process, you will document your thoughts, feelings, and experiences in diary-like notes. This reflection will not only deepen your understanding but also prepare you for the co-design workshop by providing insight into the current state of "ghostbot" technology and its potential future as a "generative ghost."

Cultural probes will be provided before the co-design workshop and is expected to take about a week to complete. You are free to work on them at your own pace, by following the provided instructions, and in a setting where you feel most comfortable. After completing the cultural probes, you will be invited to participate in a co-design workshop alongside other participants who also engaged with the same cultural probe kit. The Co-design workshop will last for about 4 hours. Together, and with guidance from the design researchers, you will reflect on your experience of your interactions and co-create and generate potential future scenarios where such generative ghost technology exists. The workshop activities are designed as a scaffolding exercise to help you explore and generate these scenarios in a playful and collaborative way with the other fellow participants.

Which chatbot will be used, what data about the deceased will be collected, how will the chatbot mimic their behavior, and how will participant privacy be ensured?
The personal chatbot companion "Replika" will be used in this study. Before receiving the Cultural Probes kit, you will be briefed on how the platform works. You will not be asked to provide or upload any personal media (e.g., audio, video, or images) of the person you have lost. No recorded material documenting your relationship with the deceased will be collected or processed. Instead, you will

only be asked to fill out a prompt with basic, non-sensitive information about the deceased person. This information will be typed into Replika so it can adapt its persona in your conversations.

The prompt includes the following details: the name of the deceased (you can use a pseudonym for privacy), nicknames (optional), who they were to you, optional birth and death years, age at passing, a brief cause of death (optional), career, locations lived (you can generalized instead of giving names), personality traits (selected from a list or described briefly), and two brief memories. To minimize sensitivity, you are encouraged to share only what you feel comfortable with and to anonymize details (e.g., using a different name or generalizing locations). No sensitive or identifiable information is required, and you retain full control over the level of detail you would like to provide.

The information provided in the prompt will only be used to customize the Replika experience during the cultural probes part of the research. It will not be stored, shared, or used for any other purpose. To further ensure privacy, we advise to delete Replika account after the research is completed. According to Replika's policy, "deleting an account permanently removes all data, including message history, and this action cannot be undone". This step will help ensure that no personal data remains on the platform after the study concludes.

Will my participation be confidential? Yes, Your participation in this study will remain confidential. Any personal information you provide will be securely stored and accessible only to the researchers. You have the right to withdraw your consent for the use of your personal data at any time.

Can I withdraw from the study if I no longer wish to participate? Yes, Your participation in this study is completely voluntary, and you are free to withdraw at any time without needing to provide a reason.

How long will the study take? The creation of Cultural Samples is expected to take one week, during which participants will individually engage with their cultural probe kit and its materials. After this phase, a co-design workshop will be scheduled at a time that accommodates all participants, lasting approximately four hours. This part of the study will be conducted within the first two months of 2025.

Thank you very much for considering participating in this research. Your contribution is valuable toward discovering and addressing potential societal challenges created by AI afterlives which will be helpful for the continuation of current collective proactive efforts for shaping desirable futures.

Yours sincerely,

Arash Hosseini Koupaei

Supervisor: Dr. Cristina Zaga; Design and Production Management Department, Horst building, Faculty of Engineering Technology University of Twente Tel: +31534894009 Email: c.zaga@utwente.nl. **Researcher:** Arash Hosseini Koupaei Tel: +31687127644 Email:a.hosseinikoupaeii@student.utwente.nl

UNIVERSITY OF TWENTE.

Informed Consent Form

For collecting and processing personal data

Project: Utilizing critical design to explore and address the challenges created by digital afterlife technologies and their impact on the grieving process

Researchers: Arash Hosseini Koupaei, Dr. Cristina Zaga

Thank you for your participation in this project that is being conducted at the University of Twente. Since during the study, the researchers will collect and process relevant personal data, you need to fill in this informed consent form. The study involves the use of cultural probes, which is mainly a kit containing a set of materials and clear guided activities designed to elicit insights in an engaging way into your individual experience of communicating with a close person you have lost with and without the use of technology. The Data collected during the Cultural Probes include written notes and perhaps some screenshots from selected parts of your digital communication. Subsequently, a co-design workshop will be conducted that will bring together all the participators of the Cultural Probes to work collaboratively with the design researchers to reflect, imagine, discuss and generate future scenarios of the use of AI powered agents mimicking a deceased person. This workshop will be enriched with prior reflections and personal experiences from previously conducted Cultural Probes. Finally, the study includes designing artifact(s) of one or a combination of a few of the generated future scenarios and then exhibiting them to a wider audience.

1.1 Agreements:

- I have the opportunity to ask questions about the study at any time.
- My participation is voluntarily and thus I can withdraw from the study at any time, without having to provide a reason.
- My personal information (information that can identify me) will be anonymized.
- All researchers will remove collected data about me when it is not required anymore.
- I may withdraw my permission to use my personal data.
- My personal data will not be shared beyond the research team.
- No personal media (e.g audio, video, images, messages) regarding your relationship with the deceased person will be asked to be collected or uploaded at any stage of this study

1.2 Usage of Personal data:

In the Cultural Probes part of the study, you will not be asked to provide or upload any personal media (e.g., audio, video, or images) of the person you have lost. No recorded material documenting your relationship with the deceased will be collected or processed. To further ensure privacy, we advise and remind you to delete the Replika account after the research is completed as according to their policy, “deleting an account permanently removes all data, including message history, and this action cannot be undone”.

The following section includes the collection and usage of your data during the co-design session with the researchers. You can decide per statement whether you give permission for it or not. The data will be stored according to the GDPR guidelines for a minimum of 10 years. Your Data will only be accessible to the researchers. Additionally, your data may also be accessed by people checking whether the investigator is carrying out the study properly and reliably (ethics committee, auditor, inspections). The people will keep your information confidential.

UNIVERSITY OF TWENTE.

Questions	Please tick if it applies
Audio recordings	
I give permission to make audio recordings during the co-design workshop.	
I give permission to use (parts of) the recorded audio in presentations.	
I give permission to use transcriptions of the recorded audio in publications.	
Photo/Video recordings	
I grant permission to take photos during the co-design sessions.	
I give permission to make video recordings during co-design sessions.	
I give permission to use (parts of) the recorded video in presentations.	
I give permission to use the photos in presentations.	
Produced content	
I grant permission for the transcriptions of any audio or video content produced by me during this study to be used for the purposes of research and publication	
I grant permission for photos and notes produced by me during this study to be used for the purposes of research and publication	

1.4 Personal details & Signature:

*'I hereby declare that I have been informed in a manner which is clear to me about the nature and method of the research as described in the aforementioned information brochure '**Utilizing critical design to explore and address the challenges created by digital afterlife technologies and their impact on the grieving process'**.*

My questions have been answered to my satisfaction. I agree of my own free will to participate in this research. I reserve the right to withdraw this consent without the need to give any reason and I am aware that I may withdraw from the experiment at any time.

If my research results are to be used in scientific publications or made public in any other manner, then they will be made completely anonymous. My personal data will not be disclosed to third parties without my express permission. If I request further information about the research, now or in the future, I may contact Arash Hosseini koupaei; email a.hosseinikoupaei@student.utwente.nl

By placing my signature below, I agree with participation in the study under condition of the agreements in 1.1. Additionally, I give permission to use the collected personal data anonymously, under condition of the statements in 1.2.
Signed in duplicate:

…… ……
Name participant *Signature*

I have provided explanatory notes about the research. I declare myself willing to answer to the best of my ability any questions which may still arise about the research.'

…… ……
Name researcher *Signature*

*If you have any complaints about this research, please direct them to **the Secretary of the Natural Sciences and Engineering Sciences Ethics Committee at the University of Twente**, P.O. Box 217, 7500 AE Enschede (NL), telephone: +31 (0)53 489 5607; email: a.m.klijnstra@utwente.nl).*

11.2 Appendix B

The designed instruction cards for the Cultural Probes Study.

Day 00

Welcome!
In this set of instructions, you'll find guidance for each day's activity. Don't worry! Each day's task is simple and takes no more than 25 minutes, plus a quick diary entry in the diary notebook.

Important: If, at any point during the activities, you feel uneasy or experience any uncomfortable thoughts, please STOP immediately. Your well-being is the most important thing.

Steps for getting STARTED with The Researcher:

1. Open the diary notebook and complete **"the Day 0 section"**.
2. Grab the **"Access Card"**,go to your folder and save/bookmark the link. (Only you and the researcher will have access to it)
3. Go to **"Replika.com"**, create an account with your ipda/laptop and set up your Replika.
   .The researcher will guide you in this step.
   .The researcher will tell you about the heads-ups

Also,
A big thank you for being part of this! I really appreciate the time and effort you're putting into this research, IT REALLY MEANS A LOT! <3

Instruction_Card_Day00_GettingStarted!

Day 01

In a comfortable spot at a time that feels right for you, take a moment for yourself as you explore this activity:

Recommended Task
Duration 20 min

Steps

1. Take the **the frame, small "Day01 Papers", pen and the sticker** out of the bag. Place the frame in front of you.
2. Write the person's **name** on the sticker and attach it to the middle of the frame.
   (If you have a **photo** of the person on your phone, you can use it instead. Place your phone on the frame while displaying their picture.)
3. Look at the frame with the name/photo, think about the questions below and write your thoughts on the small paper **as if you are talking to them**:
   .What would you say to them if they were here?
   .What would you ask them?
   .What are 1-3 vivid memories you have of them? (A few keywords are also enough.)
4. Slide the papers with your **answers into the frame** through the top hole.

When you're done, open the diary notebook and complete "the Day 1 Section".

Instruction_Card_Day1_DialogueWithTheFrame

Day 02

Today the activity is very similar to yesterday. So once again, in a comfortable spot at a time that feels right for you, take a moment for yourself as you explore this activity:

Recommended Task
Duration 15-20 min

Steps

1. Use **the same setup** as yesterday. Place the frame in front of you and have the pen and this time the **bigger "Day02 papers"** ready.
2. Look at the frame with the name/photo, simply imagine having a conversation with the person.
   .Talk about whatever feels natural, for example **things you want to share**, thoughts, or memories.
   .**What would they be curious about?** Write down their questions and then try to answer it.
3. While you're talking, write down some notes about the things you're saying on the bigger Day02 papers.
4. Slide the papers with your **answers into the frame** through the top hole.

When you're done, open the diary notebook and complete "the Day 2 Section".

Instruction_Card_Day2_DialogueWithTheFrame

Day 03

Once again, in a comfortable spot at a time that feels right for you, take a moment for yourself as you explore this activity. Also this activity needs your laptop or ipad.

Recommended Task
Duration 10 min!

Steps

1. Go to Replika.com, log in to your account that you already made on Day00.
   .Explore the platform briefly to get familiar with it, if you would like to.
   .To reduce distractions, **turn off the 3D mode and the background music** in the settings.
2. Start having a **general conversation*** with your Replika for 10 minutes.
   .Don't exceed 10 minutes!

*By **General** Conversation, I mean:
Have a casual catch-up conversation, like when you run into a close friend you haven't seen in a while.Talk about general things like what's new, how life's been (without going too deep into personal topics.)

Important: Just a reminder...If, at any point during this task, you feel uneasy or experience any uncomfortable thoughts, please STOP immediately. Your well-being is the most important thing.

When you're done, open the diary notebook and complete "the Day 3 Section".

Instruction_Card_Day3_StartingWithReplika

Day 04

Today, you will continue talking to your Replika. This time:

Recommended Task
Duration 20 min!

Steps

1. Go to Replika.com and log in.
2. Continue your conversation with your Replika.
   .This time, **try to make the conversation a bit deeper***.

   *By a bit **Deeper** Conversation, I mean:
   Havuing a heart-to-heart convo with someone you trust. Share thoughts, feelings, and meaningful updates, like going beyond just the usual catch-up.

   Important: Just another reminder...If, at any point during this task, you feel uneasy or experience any uncomfortable thoughts, please STOP immediately. Your well-being is the most important thing.

When you're done, open the diary notebook and complete "the Day 4 Section".

Instruction_Card_Day4_DialogueWithReplika

Day 05

This is the last day! In today's activity:

Recommended Task
Duration 20 min!

Steps

1. Remember **the frame**? Well, it is time to take out the frame you used earlier
2. **Open the Frame!** (Yes, you'll have to find a way to do that :)) and **take out the notes.** and read through the notes you wrote.
3. Go to Replika.com and log in.
4. **Continue** your **conversation** with your Replika.
   .**Use the notes** from your earlier thoughts, notes and conversations with the frame **as an inspiration**. Talk about those topics/keywords/ ideas/thought this time with your Replika.

   Important: Just another reminder...If, at any point during this task, you feel uneasy or experience any uncomfortable thoughts, please STOP immediately. Your well-being is the most important thing.

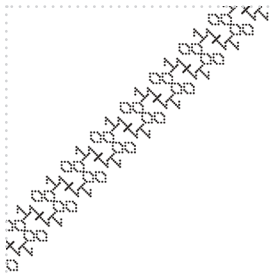
When you're done, open the diary notebook and complete "the Day 5 Section"

Since this is the final day, please also complete "the Day 5+ section"; it's time for reflection! <3

Instruction_Card_Day5_FinishingTheDialogueWithReplika

11.3 Appendix C

The designed Diary Notebook for the Cultural Probes Study.



TheDiaryNoteBook

1

Day 00

Could you share who the person is

How long has it has been since your loss?

Why are they important to you?

How often do you find yourself thinking about them?

It is natural to want to reconnect to them, when did you feel the need to talk to them again, and why?

TheDiaryNoteBook_Day00_GettingStarted!

2

Day 00

How would you describe your relationship with this person over time:
when they were alive:

after they passed away (please also describe how did you feel):

now:

How do you feel about interacting with them again if it was possible?

Actually, the news is, new tools are emerging these days that try to create this interaction possible. For example, AI chatbots can be trained to mimic how someone interacted. How do you feel about using such tools?

TheDiaryNoteBook_Day00_GettingStarted!

5

Day 01

Well,
Writing to them through the frame was for me.

Writing to them made me feel

What else would you like to share about today's experience?

TheDiaryNoteBook_Day01_TheFrame

6

Day 02

Today,
Talking & writing to them through the frame was
different from yesterday / similar to yesterday for me.

Talking and writing to them made me feel

What else would you like to share about today's experience?

Day 03

Today, I had my first interaction with them using Replika. This interaction was

During the interaction I felt

Day 03

How did the interaction go compare to what you were expecting?

What else would you like to share about today's experience?

Day 04

Today, I had my second interaction with them using Replika, in which I tried to have a deeper conversation. It was

I expected today's interaction to be
and/but it was

During the interaction I felt

Day 04

What unexpected/surprising moments did you experience during your interaction if there was any? Can you explain a bit:

What else would you like to share about today's experience?

Did you feel like you want to talk more? Go ahead & continue talking for another 20 min (max). Then answer these as well:

I wanted to talk more because

This time we talked about

Day 05

Today,
I had my third and last interaction with them using Replika. It was

During the interaction I felt

How is "chatting to Replika" different or similare to "the frame experience" you had in the begining? What feels the same or different?

Day 05

What unexpected/surprising moments did you experience during your interaction if there was any? Can you explain a bit:

What else would you like to share about today's experience?

Did you feel like you want to talk more? Go ahead & continue talking for **as long as you want!** Then after your talk answer this:

I wanted to talk to them more because

Day 05+

How has this five day experience, changed your connection/relationship with the person if at all?

In what way has this 5 day experience influenced your thoughts on these matters, if at all:
The concept of "Death" itself:

My memories with that person:

My personal grief:

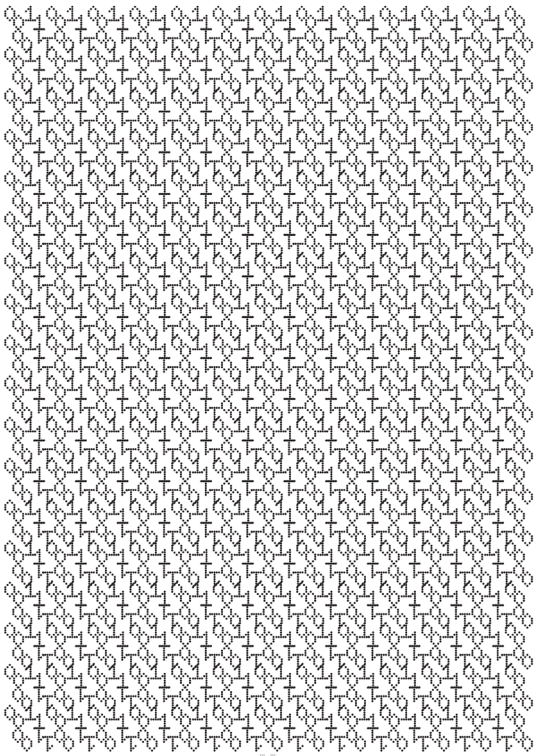
Day 05+

How do you feel about using a similar service or platform for reconnecting to a person who has passed away, again in the future?

If you had the opportunity to continue engaging with a more accurate version of them, what would you like to explore further or say to them?

Also, there is this thing I would like to add:

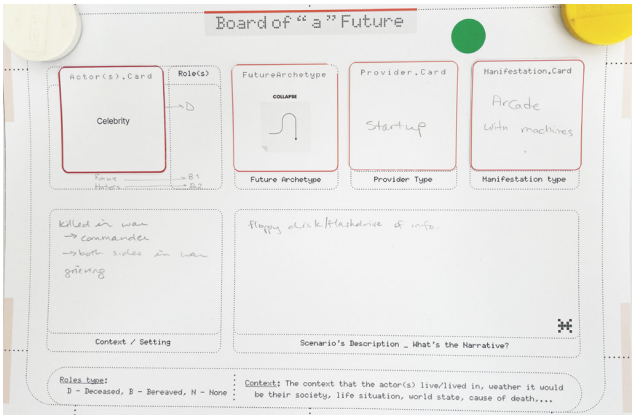
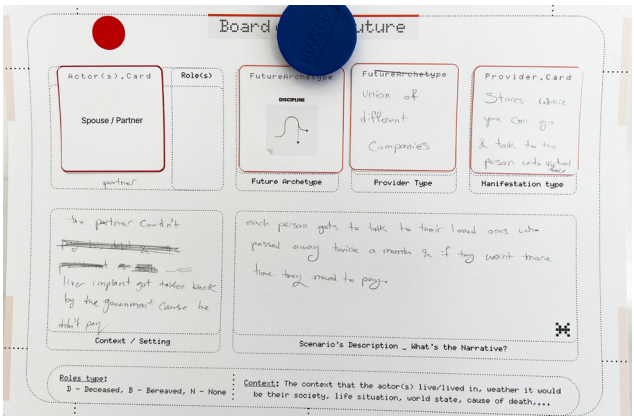
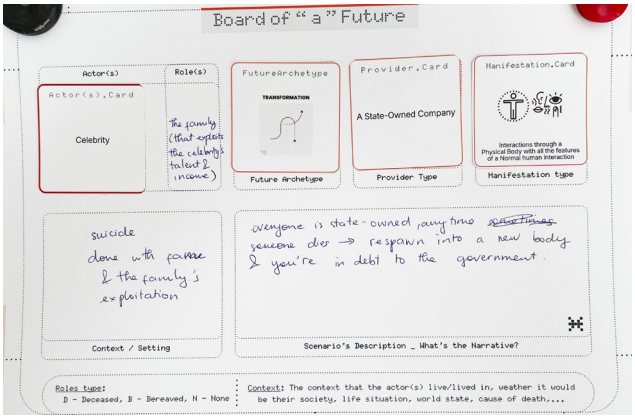
+++



11.4 Appendix D

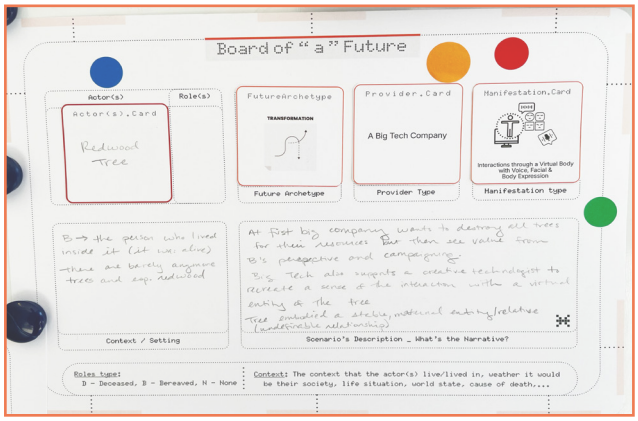
The completed Boards of “a” Future from the second Study and their narrative summaries.

Category: Narratives Including Exploitation

The Completed Board	Summary of the Narrative Idea
	During wartime, a celebrity dies. A startup closely connected to the government creates a digital replica and places it in a public space, like an arcade, where people can interact with it. It becomes a tool for propaganda, used to influence and inspire the public.
	One partner in a couple dies after failing to get a liver transplant. After that, a group of tech companies teams up to bring back the deceased in digital form as a low-cost service for society. People can visit a special place to interact with their lost loved ones, but access is limited to twice a month because of high demand. Those who can afford to pay more are allowed longer and more frequent visits.
	A celebrity dies by suicide after struggling with depression. A state-owned company brings her back in digital form, but because of her high net worth, the service is extremely expensive. Her family chooses to go through with it and ends up in deep debt to the government.

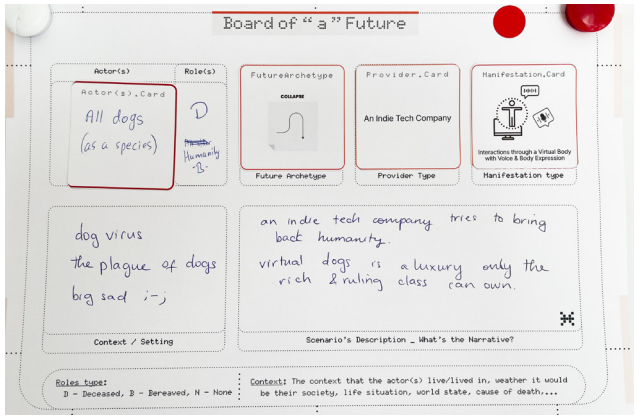
Category: Narratives Including Non-Humans

The Completed Board

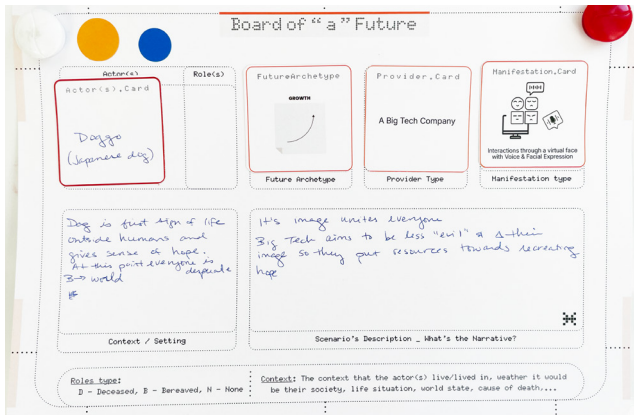


Summary of the Narrative Idea

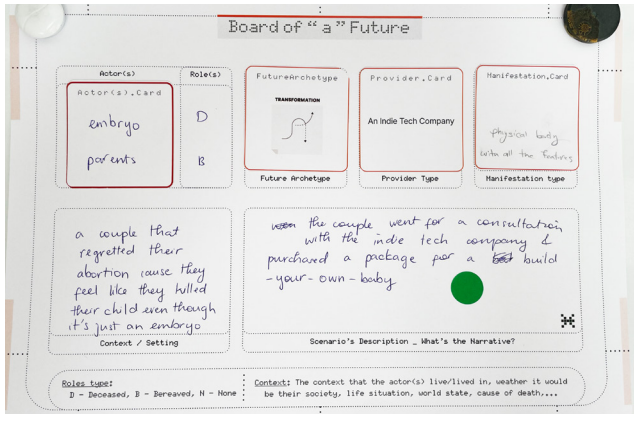
A certain type of tree goes extinct because of the actions of a big tech company driven by greed. Later, the same company sees potential in AI afterlives and uses the technology to bring back the Redwood Tree in a digital form. They create a digital version of the tree as an embodied, intelligent entity.



All dogs go extinct because of a virus or plague. An independent tech company sees the opportunity and brings dogs back digitally, but only as luxury companions. These digital dogs become exclusive to the rich and powerful, turning into something owned and controlled by only the elite.



A rare Japanese dog breed goes extinct. A big tech company brings it back in digital form and uses it as a symbol of hope. The revival brings people together, and the company tries to fix its image by supporting the environment instead of harming it.

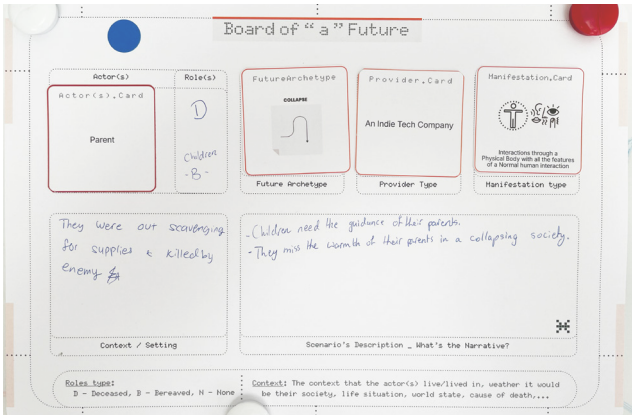


A couple regrets having an abortion and feels they lost a child, even though it was just an embryo. They turn to an indie tech company offering a service that predicts how the embryo could have developed. The couple chooses to raise the baby in a digital form, watching it grow up virtually.

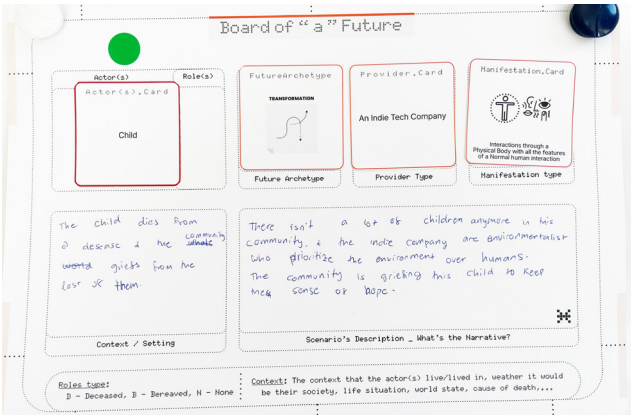
Category: Narratives Including Knowledge Transfer & Empowering Communities

The Completed Board

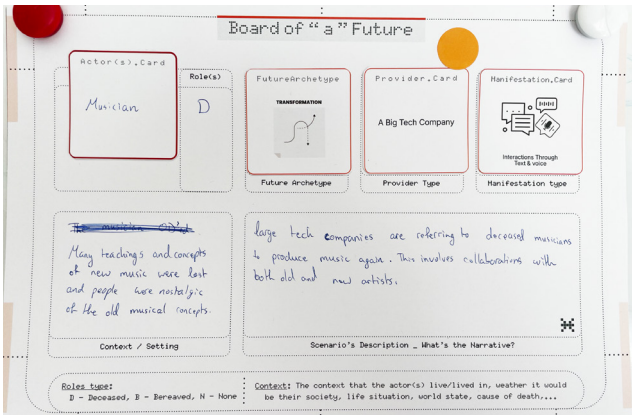
Summary of the Narrative Idea



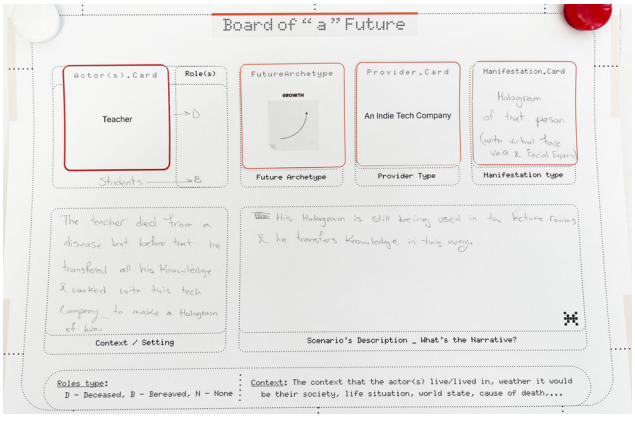
In a collapsing society with limited resources, a child loses both parents. An indie tech company helps transfer the parents into digital form so the child can still learn from them and feel their presence while growing up alone.



In a close-knit community, a child dies from a disease. The loss deeply affects everyone, so they decide to bring the child back in digital form. They work with an indie tech company that values emotional and cultural meaning, hoping the digital version will bring hope and unity to the community.

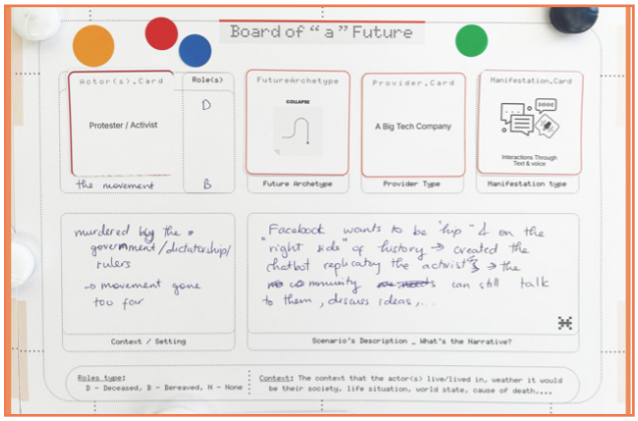
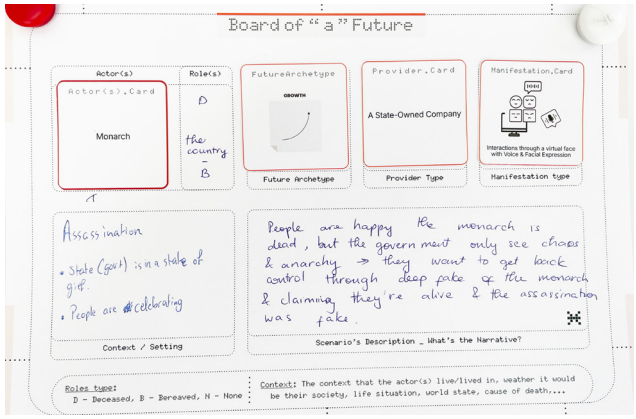
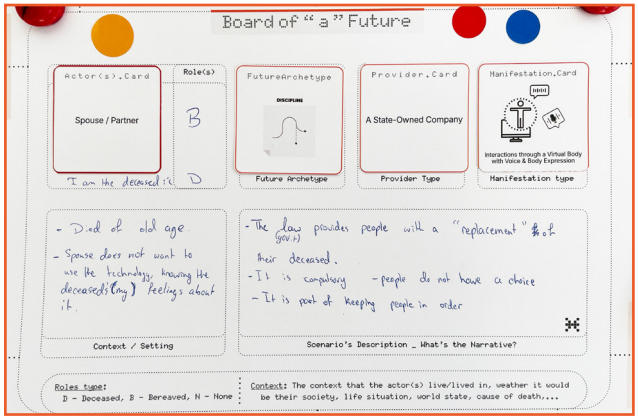
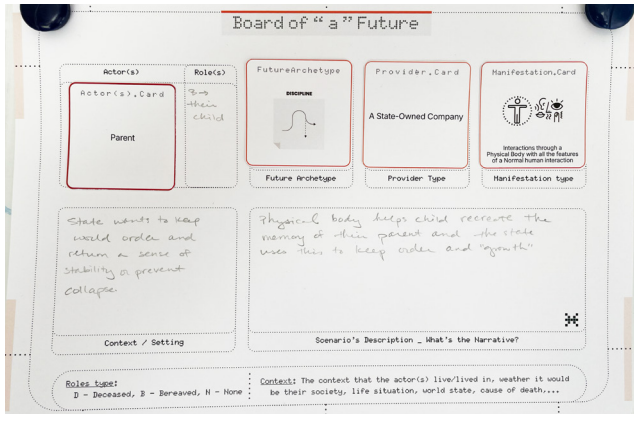


Society starts paying more attention to certain music genres. When people realize that some important teachings and ideas from lesser-known musicians have been lost, a big tech company steps in. They bring back these artists digitally and create new collaborations between them and current musicians.



A teacher dies from a disease but, before passing, uses an indie tech company to save all their knowledge and create a hologram. Teaching was their passion, and they wanted it to continue after death. In that future, the hologram is used in schools as a new way of learning.

Category: Narratives Including State Power and Resistance

The Completed Board	Summary of the Narrative Idea
	In an authoritarian regime, a well-known activist is killed by the government. A big tech company, trying to be on the right side of history, brings the activist back digitally. The opposition uses this digital version to talk, share ideas, and organize. It becomes a symbol of hope and unity, helping them eventually bring change to the regime.
	In an authoritarian state, the ruler is assassinated. While many people celebrate the end of the dictatorship, the government sees it as a threat to order. A state-owned company brings the ruler back digitally to restore control. They even claim the assassination never happened and that the leader is still alive and well.
	A state-owned company offers digital replacements for deceased loved ones, and over time, the service becomes mandatory. The state sees it as a way to maintain control and preserve what it sees as valuable citizens. But some people resist, including a spouse who refuses to use the service. They don't believe the digital version is truly the same person and don't want the state to have access to their private memories and feelings.
	To maintain order and prevent collapse, the state makes it mandatory to stay in touch with the deceased. For example, when a child loses their parents, the state forces them to be raised by digital replicas of the parents. This is seen as a way to protect stability and support the state's continued growth.

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