

Wanted Dead or Alive: Anticipatory Regulation of Digital Immortality Platforms

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Abstract

The loss of a loved one is a painful and unique experience. To address that loss, technology companies are exploring the potential of digital immortality platforms, preserving individuals through artificial intelligence (AI) models trained on digital data generated in life. These datasets can be collected from scraping social media profiles and text conversations postmortem or intentionally recording videos and conversations with a person prior to their death for training AI models. In the face of any novel technology, the potential risks and benefits should guide the responsible development and deployment of every product. However, the liminal regulatory space that digital immortality technologies occupy makes this type of evaluation a difficult undertaking. One such approach would be to examine analogous sectors to the novel technology as a first step in developing regulations in that space. In this paper, we identify several ethical risks presented by digital immortality technologies and propose four analogies to contextualize possible regulation: psychology/grief counseling, death care/remains management, social media platforms, and AI companion services. We examine the parallels between digital immortality and each of these analogies in a proactive effort to prevent harms before the widespread public adoption of this technology. The contributions of this paper are a preliminary set of recommendations based on the limitations and challenges presented by a related set of real-world and sociotechnical systems involving social relationships, death, and grief.

Introduction

Immortality as a concept evokes a variety of images depending on your cultural context; perhaps it is from Gilgamesh's quest for eternal life or a favorite episode of *Black Mirror* (Seudin 2017; Brooker 2013). It should surprise no one that technology companies are seeking to address the pain and suffering caused by grief; humans have long sought solace from the loss of loved ones through religion and spiritualism and through technologies of their time, seeking meaning and the power to communicate with the dead (Scheitle 2005). Digital immortality, quite unlike religious or spiritual interventions, involves using the online presence and data of a deceased individual to produce a virtual rendering of them through artificial intelligence models (Bell and Gray 2001).

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Current innovations in death and remembrance technologies have been propelled by the advent of Large Language Models (LLMs), where the preservation of digital communications and images can take on a posthumous life of their own.

For the purposes of this paper, the term *digital immortality* refers to the preservation of an individual's experiences and speech patterns in a software designed to generate simulated interactions with the deceased (Jee 2022). The application of this technology ranges from text-based 'grief chatbots' to phone calls or deepfake videos with a reconstructed representation of the person (Hamilton 2018; Hollanek and Nowaczyk-Basińska 2024). For some, this technology might be a welcomed escape from the reality of grief that comes with profound loss. Others may be disturbed by the idea of a technology company manipulating someone into feeling as if they were speaking with a loved one, all in the name of user engagement and corporate growth. Digital immortality is just one example of *techno-solutionism*, or the process of creating or integrating technologies in an attempt to solve a problem that is a complex socio-cultural issue (Morozov 2013; Hamilton 2018). Digital immortality technologies are intended to cure¹ grief by creating an illusion that a user can continue to interact with a representation of the deceased (Fry 2026). Foregoing the loss felt by the absence of an individual could create a world in which the natural feelings and experiences of loss are never sustained, processed, or fully accepted (Chesler 2022).

Addressing these concerns requires the development of new regulations and policies and researchers often propose an approach to "techlaw" (the law governing emerging technologies) that involves 3 steps: 1) Identify legal uncertainty, 2) Assess regulatory approaches, and 3) Evaluate potential responses (Crootof and Ard 2020). By viewing an emerging technology through different analogies, regulators can ground novel technologies within existing frameworks. We employ this approach to an examination of digital immortality technologies in the context of the U.S. First, we identify the areas of legal uncertainty most in need of addressing by regulators. Next, we assess four different analogous approaches for the regulation of digital immortality technology.

¹Mental health professionals do not generally regard grief as something that is curable, nor does the characterization of grief as a disease align with literature on bereavement (Walsh 2021).

gies using: the death care industry, grief counseling, social media platforms, and AI companionship. Finally, we synthesize themes from each of these approaches and their limitations. In doing so, we contribute a preliminary set of recommendations for regulating emergent digital immortality technologies, encouraging researchers and regulators to build an evidence-based policy infrastructure now, before these technologies are developed and deployed at scale.

Complexity of Grief and Bereavement

Generally, human loss results in a grief and bereavement process (Gitterman and Knight 2019) and every individual's experience with grief is unique (Worden 2018). For many people, the grieving process moves in non-linear cycles within acute grief gradually to an adaptive state over time. However, a sudden or particularly traumatic loss can result in intense grief processing that complicates an individual's ability to function in day-to-day life (Fast 2003). At its worst, this takes the form of prolonged grief disorder or persistent complex bereavement disorder, a clinically significant difficulty in overcoming the loss of a loved one (Boelen and Smid 2017). Grief may also be viewed as a social contagion, affecting those in proximity to the person that sustained the loss (Fast 2003). The reach of a prolonged and disruptive grieving process go beyond the bereaved impacting others around the bereaved. Other abnormal grief processes include disenfranchised grief, where the person grieving cannot do so publicly due to societal pressures and cultural norms (Doka 1999). This may cause grief to become stagnant, affecting all aspects of a person's life beyond the initial loss. Given individual variation in experiencing grief, there are a number of existing techniques to assist with bereavement, such as self-help books, licensed therapists, and grief support groups (Eklund et al. 2024; Worden 2018; Westerlund 2020). There are also technological-based support systems catered towards online grieving communities (Knight and Gitterman 2014) in virtual meeting spaces, from social media forums, telecounseling services, and mental health support apps (Eklund et al. 2024).

The Illusion of Human-Technology Attachment

In recent years, advances in multimodal generative AI, virtual reality (VR), and social robotics have enabled the production of strikingly anthropomorphic human-technology interactions and relationships. This attribution of human qualities to these technologies is not by accident, but rather by design, which Axelsson and Shevlin (2026) refer to as *anthropomimesis*. Increasingly, these technologies are being created for the specific purpose of producing more convincing, human-like interactive experiences, with new performance benchmarks emerging every few months for everything from chatbots (Duan et al. 2024) to humanoid robots (Li et al. 2026). The convincing nature of these technologies has led to conversations around the possible attribution of consciousness to AI, both by researchers (Birch 2025) and members of the general public encountering them in their day-to-day lives (Colombatto and Fleming 2024). Research has shown that the more anthropomorphic the technology,

the greater the likelihood of human attachment, especially for those who might otherwise struggle to form and maintain human attachments (Heng and Zhang 2025; Zhang and Rau 2023). The social-emotional effects of these technologies on people are profound, with the term "AI Psychosis" emerging to describe the delusional experiences of some users when interacting with AI chatbots (Hudon and Stip 2025). Although the exact mechanisms involved in this type of extreme anthropomorphism are beyond the scope of this paper and differ based on the type of technology, the practical results are the same: technologists are intentionally optimizing for the formation of human attachment to their products as a means of securing increased engagement, attachment, and, ultimately, profit.

Current State of Digital Immortality

Humans have been navigating death in private and public digital spaces long before the emergence of digital immortality, referred to by (Sofka 1997) as *thanatechnology* (Hutchings 2016; Walter 2017; Stylianou-Lambert and Widmaier 2023). This term builds on the idea of *thanatology*, the study of cultural and ethical considerations related to death and deceased individuals (Fonseca and Testoni 2012). More recently, *cyberthanatology* has emerged as articulation of death and related phenomena with and within cyberspace (Beaunoyer and Guitton 2021). Social media has created space for additional interactivity with the dead by resurrecting them as avatars, informed and fueled by their digital communication and previous online presence. For savvy entrepreneurs, this has become a potentially lucrative venue, offering subscription services for the bereaved to maintain a form of communication with a representation of the deceased (Hutchings 2016).

As various technologies are integrated into every aspect of human life, an individual's digital footprint is growing. The digital afterlife industry has evolved to address the demand for a modern form of digital remains preservation (Öhman and Floridi 2017). In addition to an industry to store and manage these data, there is a parallel sector using the same datasets to "resurrect" the deceased. For example, Microsoft's patent (filed 2017, granted 2020) for chatbot replicas of actual people outraged the general public so much that the company discontinued the project (Duffy 2021). People were disturbed by the notion of a digital replica of a deceased person. Smaller companies, with less recognizable names, such as *HereAfter AI*, *Eter9*, and *LifeNaut* picked up where Microsoft left off. In 2018, *Eternime* sought to make chatbot avatars of dead individuals, based on an idea of its founder following the sudden death of his father (Hamilton 2018). These ventures are not always successful; *Intel-litar*, founded prior to *Eternime*, went out of business after promising thousands of users digital immortality services (Hill 2015).

This emerging industry is changing with each new AI advancement. Many now promise services providing virtual avatars and deepfake chatbots with embedded data powered by multimodal large language models (LLMs) with varying levels of digital immortality interface options accessible to subscribed users (Nakagawa and Orita 2024). Some of the



Figure 1: Documentary of Korean mother who lost her daughter to illness gets a VR “reunion” in *Meeting You*

technologies focus on generating text chatbots that mimic patterns represented in the deceased’s speech, while other technologies recreate deepfakes from segments of audio and video recordings collected while the person was alive (Fry 2026). Users of these technologies report experiencing a renewed connection with a deceased relative, a welcomed opportunity for closure, and report being grateful for a chance to reconnect with someone from whom they had much to still learn (Hamilton 2018; Jee 2022). A particularly compelling narrative is told by a Korean documentary series, *Meeting You* (Hye 2020), that followed a mother three years after the sudden death of her 7-year-old daughter (Figure 1). The woman reported she was incapable of moving forward in her life due to the depth of her grief, and jumped at the opportunity to have a developer create a virtual reality representation of her daughter (Chesler 2022). The producers of the documentary were concerned about how she would react given the imperfections of the virtual reality rendering. She stated that she did not mind the discrepancies; instead, she was grateful to be given an opportunity to say goodbye to a daughter and was so overwhelmed by a sense of emotional closure that her awareness of the deception was inconsequential.

Regulatory Challenges for Digital Immortality

There are a few early examples of digital immortality regulation efforts. Harbinja, Edwards, and McVey (2023) discuss the importance of regulating the creation of “ghostbots” (“digital reincarnations of deceased persons, usually though not exclusively created using AI techniques,” pg. 2). The researchers advocate for an enforceable “do not bot me” (pg. 11) clause in wills, though this has not yet been actualized. These authors also address preliminary ghostbot laws, such as New York’s protections for deceased performers (Bass 2021; New York Department of State) and the EU AI Act’s restrictions and notification requirements for the use of deepfakes and chatbots (Council of European Union b). These are important first steps in addressing the underlying structure of digital immortality, specifically focusing on data privacy, intellectual property management, and transparency of services.

Most current laws, however, do not directly address the

issue of digital immortality. There are a number of reasons that this is the case. First, in the U.S., any government-directed infringement on the actions of its citizens is hotly debated. Podosky (2025), for example, argues against the regulation of these technologies, as this would qualify as “affective paternalism,” with a risk of disproportionately negatively impacting already marginalized people whose emotions are politicized (e.g. women, people of color, etc.). Second, these technologies are not yet adopted and deployed at scale. While there are a number of companies offering digital immortality services, these issues are not yet seen as immediately threatening, especially relative to AI-enabled threats generating more media interest such as AI psychosis (Hudon and Stip 2025) or AI agents hacking into competing organization’s systems (Milmo 2026; Chia 2026). Third, digital immortality technologies exist at the intersection of a long-standing human aversion to the discussion of mortality (Wilson et al. 2024). New technologies providing compelling human-like renderings will require a combination of existing regulatory strategies and emerging regulatory trial-and-error approaches. A strategy proposed by Crootof and Ard (2020) bridges this gap by allowing analogies to serve as a preliminary step in weighing the relevance and successes of different regulatory frameworks when deciding how to position solutions to the many risks associated with any given novel technology.

Areas of Ethical Concern

Psychological Impact

Psychological distress is, perhaps, the most obvious concern raised around digital immortality use, as the targeted user group represents an extremely vulnerable population (Gentry et al. 1995; O’Mallon 2009). Grief can impact psychological functioning and decision-making abilities, especially over extended periods of time (Apkarian et al. 2004). Digital immortality business models will be financially dependent on the sustained engagement of the bereaved, although some of these services have originated through the loss experienced by the developers themselves (Fry 2026; Hamilton 2018). Even companies that have consulted psychologists in developing their technologies are not always able to keep people safe from the potentially harmful effects. *Eternime* kept psychologists on the development team, yet still faced users who were obsessively using the technology beyond recommended levels (Hamilton 2018). The long-term use of digital immortality services is not well understood, and research on effective guardrails for development and deployment are nonexistent.

Just as there are risks involved in continued use, there are also risks involved in sudden disuse. There is ample research that humans are capable of forming parasocial relationships to AI chatbots (Maeda and Quan-Haase 2024), and real grief processes occur in documented instances of parasocial relationships suddenly coming to an end (Bingaman 2022; DeGroot and Leith 2018). Based on current trends in the discontinuation of AI companions (Poonsiriwong, Archiraranguprok, and Pataranutaporn 2026; Banks 2024), altering the level of access to digital immortality services require

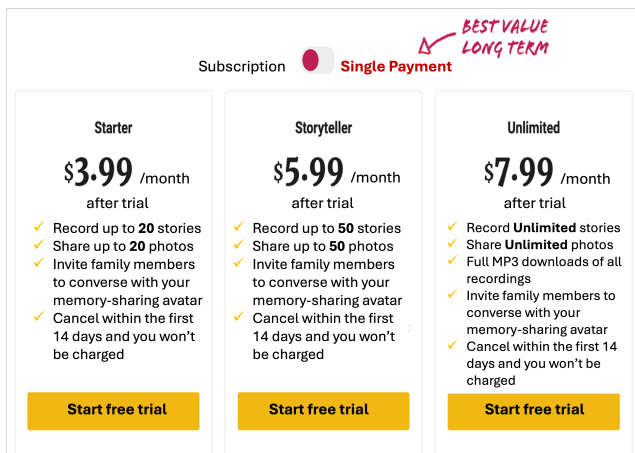


Figure 2: HereafterAI subscription service plan.

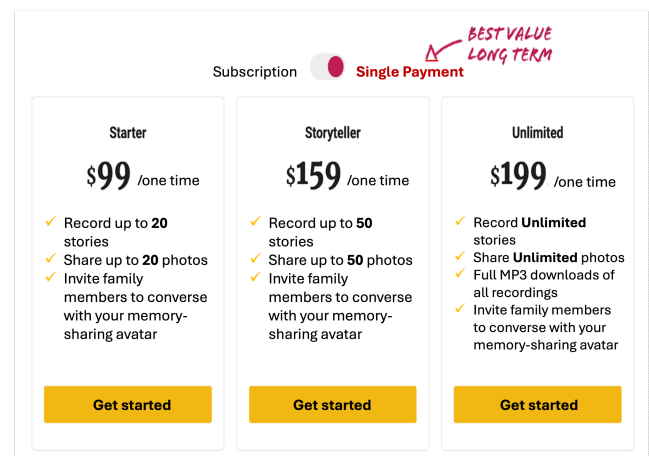


Figure 3: HereafterAI subscription service plan.

psychological support and scaffolding of its own.

Power Imbalance Between Service & User

Any product that elicits an emotional reaction is a risk to the consumer, and digital immortality is particularly problematic. Consumers are more likely to accept a product below acceptable standards when they have an emotional attachment to it, especially when the representation is designed to elicit emotions from an existing real world relationship with the deceased (Boine 2023; Chesler 2022). For example, there were visual fidelity issues with Korean documentary's representation and an obvious difference between the real world and the virtual reality rendering. Yet, any close resemblance of the woman's daughter was enough for her, and she was grateful for the service. While this may seem acceptable on a case-by-case basis, it means that a for-profit company has little accountability in providing a high-quality product to its vulnerable users, and its users may not choose to exercise any recourse when issues with the service arise (Boine 2023).

An additional troubling element is the nature of subscription services and their tiered pricing plans. *HereAfter AI* makes their pricing plan explicit, with the advertised service offered for a one-time payment plan, in addition to a monthly subscription plan (Fig. 2) (Fig. 3). Users are advised to select the one-time payment for the best value, and there are options for additional pricing plans that provide augmented premium services (HereAfter AI). However, the one-time payment option costs the same as nearly two years of subscription payment, meaning those who elect for the one-time payment option are likely intending to use the service for a long time.

Subscription plans in any industry represent a complicated consumer decision-making process with potentially unethical motives and costly consequences. In some cases, subscription plans are beneficial; they provide users with more control, opting for lower subscription plans over one-time payment options (Chen et al. 2026). Despite the feeling of control that subscription plans might offer, users often struggle to end subscriptions in practice. There are barriers

to ending subscriptions that deter many users such as regular tracking of multiple subscriptions, which can be frustrating (George 2024). The illusion of control also fails on the privacy front, where the frequent payments increase the number of opportunities for fraud to occur or go undetected (Rajamäki 2018). These general issues with subscription plans can be even more pronounced when the service is emotionally charged. Subscription-based companies have the ability to exert substantial power and control over their users, with financial incentives to exercise persuasive designs to keep users engaged.

Data Management & Consent

The privacy rights of the deceased are sometimes considered but seldom a prioritized concern during the typical process of creating a will. Most people do not consider their personal data as assets. Privacy researchers are now calling on people to consider legally protecting their data in life based on the potential for future harms and fraud (Öhman 2024). This is especially true for older members of society whose understanding of their digital footprint may be less sophisticated, and may require more a more scaffolded conversation about the importance of their personal data after death (Chen, Vitale, and McGrenere 2021).

While the EU has enacted a suite of laws on data privacy such as the *GDPR* and the *EU AI Act*, these regulations only protect the data rights of the living in these regions. Members of the EU can dictate for themselves how to manage the privacy of the deceased. Some countries, such as Estonia, France, Italy or Latvia, have passed legislation on data of those who are no longer living, yet other countries outside of the EU, including the UK and the U.S., have not addressed this issue and there are no universal protection or policies for post-mortem data privacy (Harbinja, Edwards, and McVey 2022). For countries without universal regulations on post-mortem privacy, handling a deceased person's data varies dramatically based on the type of service wherein the information is stored (Öhman 2024). For example, based on HIPAA regulations, general medical data is protected for

up to 50 years after death, unless a specific release has been signed to permit the data to be used in clinical studies (Office for Civil Rights (OCR) 2022). The need for these regulations go beyond health data possessed by medical professionals. Increasingly, social media data from posts, images, voice messages, and videos are interwoven with biometric data collected from wearable tech and integrated with applications such as Strava, WHOOP, and numerous other health data apps. With these hybrid sources of data, the process of recreating not only a digital personality but a biometric digital profile exists. Some companies do take this into consideration; *Eter9*, while vague about their pricing plans without creating an account, do have data privacy policies publicly available on their website, along with a company promise to never sell data to third-party companies (ETER9). However, this does not account for the threat of hacking or data breaches. These security threats presents the possibility that deceased digital representations could be held for ransom or used to commit identity fraud without the account holder's knowledge (Hutson and Ratican 2023). With an absence of explicit policies about a specific recourse for customers in these scenarios, the user and the deceased are relying on the companies to keep highly sensitive data secure.

Environmental Impact

Digital immortality technologies, like any other multimodal LLM service, requires extensive computing resources to meet their power demands. The personal data storage and training datasets needed to create these technologies produces an environmental footprint. Generative AI chat-based interfaces, are massive consumers of energy and water, relying on large power plants with significant cooling demands (Rillig et al. 2023; International Energy Association; Režun and Kapusta 2025). The exact carbon output as well as the long-term environmental impacts of these technologies are still poorly understood (Luccioni, Strubell, and Crawford 2025; Simpson 2025). The use of rare earth minerals used in the chips and environmental pollution from the increase in computing infrastructure with the rapid expansion of data centers is likewise an environmental risk, with the extraction, refinement, and deployment processes draining limited natural resources and increasing risk of population-level harms (Rasheed, Yuhuan, and Ahmed 2025). It is somewhat ironic that as people turn away from disposing of their physical remains through embalming and graveyard burials to environmentally friendly 'green' funerary practices (e.g., tree planting) (Shelvock, Kinsella, and Harris 2022; Shenton 2024), preserving their digital remains could do more environmental harm than a traditional burial cemetery plot.

Analogies for Digital Immortality

This paper argues that there are a number of existing protections that could be used to regulate the emerging digital immortality service industry. Next, we will explore each one in order to find parallels and limitations for determining a suitable course of technology regulation.

Death Care Industry & Remains Management

The death care industry exists as a response to the amount of physical and digital labor that must occur at the end of a person's life, from memorialization to disposition of remains and assets (Marsh 2018). Lawyers, morticians, and the funeral staff supporting those industries are critically important in the ethical handling of the deceased's affairs and physical body (Weissman et al. 2016; Whittaker 2005). Death care is a profitable industry, but there are a myriad of regulations that seek to control it. The U.S. Federal Trade Commission (FTC) has extremely strict regulations about price transparency and what funeral services are allowed to charge their customers. They provide resources for navigating this process to attempt to minimize harm and exploitation (Nguyen 2021). There's an easily accessible list of resources with a simple search of "U.S. government regulations on funerals". Regulatory information for consumers is provided by the FTC *Funeral Rule* (Nguyen 2021), a strict set of laws for any individual or business that identifies as part of the death care industry, the exact provisions for which are outlined in painstaking detail and are strictly enforced.

The postmortem distribution of physical assets is relatively straightforward (although often contested) and is subject to succession law in most places, though the exact protocols of each succession law differs based on legal jurisdiction (Reid, De Waal, and Zimmermann 2011). Handling digital assets, however, is a different matter. Researchers have suggested that there are two ways to view the digital remains legal dilemma - as either a property matter or a posthumous privacy matter (Birnhack and Morse 2022). Under the property framing, digital remains are considered a form of assets belonging to the domain of succession law. The framing of digital remains as personal data privacy, which is not considered part of the estate, becomes complicated because privacy rights are inconsistently applied beyond an individual's death. Birnhack and Morse (Birnhack and Morse 2022) argue that there are four legal categories of digital remains, depending on the type of information: intangible items, information about property, intellectual property, and personal data. Because some types of data fall into liminal spaces between these categories, they ultimately advocate for digital remains to be legally protected based on the expectations of the living before their death. The enforceability of this approach without regulatory grounding is practically impossible; therefore, it is up to the individual and their lawyers to dictate what will happen to their digital assets after their death. Therein lies the limitation of this approach; there is a lack of clarity and consistency around individual responsibility and industry accountability for digital remains management

Grief Counseling & Psychiatry

There are different counseling treatment protocols depending on the nature of the death, background, and personal preferences of the person experiencing grief. There is no one-size-fits-all approach; for example, a child losing a parent to cancer requires a very different therapeutic technique for processing grief than a parent losing a child to gun violence (Worden 2018; Kristensen, Weisaeth, and Heir 2012).

However, there are common expectations for high quality treatment goals set by governments and regulating bodies within professional psychological spheres. Death education and grief counseling treatment are based upon death research data, methodologies, and theories (The Thanatology Association). There are established codes of ethics for those that provide grief counseling services including a mission to improve the health and well-being of the individuals and society in a culturally sensitive manner. The tools at their disposal, including medication, are likewise strictly monitored through heavy government oversight (Taylor 2016). Professionals who offer grief counseling services are prohibited from exploiting or deceiving their clients, per the licensing and certification requirements for providing services (Gamino and Ritter 2009). Finally, grief counselors are obligated to educate or counsel their clients regarding their rights, responsibilities, and options along with their possible consequences. Concerns arise when individuals or groups not held to these same professional standards operate without sufficient oversight when administering care or other services (digitally or in person) (Gibson et al. 2020). The strength of using this analogy as a regulatory approach for digital immortality technologies is the clear professional ethics, norms, and research behind the psychological treatment of grief. The limitation of this approach lies in a potential resistance for professional mental health and medical organizations to advocate for bringing in these types of technologies under their jurisdiction and therefore their responsibility. It is just as unlikely that most companies offering these commercially focused services would submit to the extensive research and validation of their platforms to meet the therapeutic standards required by these professional organizations without clear and enforceable regulation at scale.

Social Media Regulation

Social media relies on user-generated data for account management, content, and the dissemination of curated content, providing a platform for users to come together and interact in a digital space (Obar and Wildman 2015; Howard and Parks 2012; Carr and Hayes 2015). Social media is a challenging regulatory issue, and companies are being held accountable with varying degrees of success based on the type and jurisdiction of the online platform. Social media has long received criticism for their optimization to an addictive end, particularly but not exclusively for young people, the dissemination of disinformation/misinformation, and the facilitation of fraudulent online personas/companies (Moreno and Radesky 2024; Hays 2026). This is not for a lack of awareness on the part of the companies, and the companies are often aware of the problems before the public. For example, Meta whistleblowers revealed that executive teams knew about how its addictive social media sites were negatively affecting their users, resulting in a public health crisis (Robinson 2024). The challenge is, because social media companies are only responsible for *disseminating* rather than *producing* materials, their level of accountability and credibility is lower than other media outlets. Section 230 of the U.S. Communications Decency Act and the First Amendment provide the same protections to social media compa-

nies for harm to young users and prevent much of the existing media regulations on their content and treatment of their users (Robinson 2024).

Government regulators around the world are constantly looking for new ways to protect users and hold social media companies accountable, but this looks different across countries and governing contexts. Australia recently passed an age restriction that went into effect by December of 2025, resulting in a number of countries following suit (eSafety Commissioner; UNICEF Australia). This approach is controversial, with many scholars highlighting the absence of research on the effects of technology bans at a population scale (Bhaimiya 2026; McAlister et al. 2024; Fatt and Fardouly 2025). In the EU, the Digital Services Act (DSA) is a major legislative framework requiring conglomerate social media providers to produce Statements of Reasons (SoRs) for the DSA Transparency Database when they audit or remove material from their platforms (Drolsbach and Pröllochs 2024). This is heavily contrasted with the U.S., where companies like Meta announced that they were abandoning content moderation altogether (Kaplan 2025). Not even a year after that announcement, the U.S. Supreme Court Decision ruled that both Youtube and Meta were liable for building addictive social media platforms (Hays 2026).

Currently, there is no universal protocol for managing the social media account of a person who dies. This is important for issues around data asset inheritance and who controls what happens to individual accounts after the user's death. Social media policies on handling data from deceased users' accounts are inconsistent across platforms. Social media platforms often *X* require verification that a person is deceased and then the company will assist in the closure of the account (*X*). For Facebook users, surviving relatives have more options. Legacy contacts can manage the account after the person is gone. There are also memorialized user profiles which exist indefinitely, like a display, or the legacy contact can file a formal request that the account be deleted upon the account holder's death (Facebook 2025). The limitation of using the social media analogy for the regulation of digital immortality is not grounded in structural or design discrepancies; those are actually quite similar. Instead, its limitation is the overall lack of clearly successful attempts to regulate social media companies despite extensive efforts by many governments beyond the U.S. context.

AI Companions

Although digital immortality is not yet deployed at scale, there are some preliminary lessons that may be learned from the booming industry of AI companions. The majority of AI chatbot interactions are not marketed as AI companion services, but are being treated as such by users as generative AI has witnessed global adoption among all age groups (Liu and Wang 2026). Use cases for these technologies vary dramatically, from querying the AI chatbots for advice on relationships and health concerns to more direct appeals for companionship and social interaction (Spytska 2025; Herberner and Damholdt 2025). While all generative AI chatbot interactions should be carefully studied, this paper is concerned with the use of generative AI platforms as artificial

companions.

AI companion companies such as *Replika* and *character.ai* have grown in popularity over the last five years, as evidenced by the increase in platform downloads (88% year-over-year) (Perez 2025). People deeply trust these technologies; a recent study in the UK found that 4 in 10 UK adults would use an AI companion as a counselor (Dimitrova 2026). While research on AI companions has documented the ability to decrease loneliness, there is some evidence that the relief does not extend beyond the initial interaction sessions (Peng et al. 2025; Wyatt 2025). Online forums, AI companion users report that the technology can facilitate the formation of real-world relationships. In one case, two people left their AI companions for each other after meeting on a Reddit subthread for people who have AI companions (Tait 2026). However, the potential benefits of the AI companion industry are offset by the profound risks. Emotional attachments to artificial companions can result in social isolation from other humans (Gawne 2026). It can also modify purchasing habits (Whang and Im 2021; Lee and Park 2022), which is of increased concern in the wake of OpenAI incorporating advertisements into their lower tier subscription services (OpenAI 2026). Cognitive offloading and loss of social abilities are rising concerns, with those already socially ostracized feeling even more socially excluded and anxious around other people (Malfacini 2025; Ho et al. 2025).

In the U.S., the majority of regulation on AI companion technologies happens at the state level. For example, California became the first state to legislate chatbot safeguards in October of 2025 (Padilla 2025). At the global level, China has a booming AI companion industry, and are actively pursuing avenues to address it (Boine 2023). The EU AI Act generally applies a “limited risk” approach (Council of European Union b). One of the only documented violations of the EU AI Act by an AI companion company occurred in May of 2025 when *Replika* did not adequately prevent underage users from accessing their service, and did not justify the need for the quantity of personal data they were collecting (Council of European Union a). The limitations for the application of this analogy to digital immortality technologies is that AI companion platforms are likewise emergent in their design and use and thus do not have any coherent regulations to draw upon beyond the few examples above.

Recommendations

Based on this review of potential regulatory approaches, there appears to be no singular analogy that provides clarity on the management of the digital immortality technologies. These limitations and tradeoffs are displayed in Table 1. The remaining sections discuss a synthesis across several analogies, and how they might be used to compliment and strengthen one another.

Disentangle Data Management from Artificial Companionship

There needs to be a separation in approach between the person making the digital replica and the person being replicated. In the Human-Computer Interaction (HCI) space,

there is an existing framework for the creation of “digital memorials” (which have existed for longer than the bot-based interfaces that we see today) (Moncur and Kirk 2014). Under this framework, there is a difference between the “author” and “audience” of these platforms. Borrowing from this differentiation, the audience and author should be regulated separately. From the perspective of the person being replicated (that is, the author), this is a data management issue that should be aligned with the wishes of the deceased, similar to and aligning with the “do not bot me” wishes outlined by Harbinja, Edwards, and McVey (2023), and in accordance with four different property varieties: intangible items, information about property, intellectual property, and personal data (Birnhack and Morse 2022).

The handling of an individual’s digital assets, though, only covers one of the digital afterlife dimensions of concern. If a person consents to an artificial rendering to be made of them after death, there are still a host of remaining ethical issues. The psychological implications of interacting with the service are more or less the same for the person making the replica, regardless of the consent provided by the deceased. Even with permission, these artificial renderings could have profound psychological impacts on the user of the platform. As such, aside from data management for the deceased, there needs to be substantial regulation for the safety of the user.

It would be more practical and straightforward to consider this dimension as similar to AI companions, but with far greater risks at stake. Because digital immortality technologies involve not only the artificial replica of a real individual, but also a person who is no longer alive to consent to the representation and its actions, the risks presented by the misrepresentation, exploitation, and potential for fraudulent activities based on the attachments are numerous and require new protections. In a similar approach to this paper, researchers are examining potential analogies to regulate AI companion technologies. One such example is viewing the technology through the analogy of family law (Huntington 2025). This link is especially compelling because it acknowledges the power dynamics that enter into AI companionship. For example, there is a legal intervention that is required when there is a power imbalance between members of that family, which Huntington (2025) directly relates to the dynamic between users and the AI companion platform companies.

Funerary & Psychological Consumer Protections

If a U.S. company advertises themselves as assisting in the creation of an artificial rendering of a dead person, they should be subject to the FTC Funeral Rule. The FTC mandates that certain information be included in a General Price List (GPL) including “the consumer’s right to select only the goods and services desired” (Nguyen 2021). Everyone engaging in any sort of funerary practice must give the GPL to consumers and are not allowed to paraphrase or modify the very specific protocols required by the Funeral Rule. In an ideal world, this would be applied to all digital immortality technologies by mandating a very explicit list of what consumers services should expect, and the prices they can expect to see for each type of service. These also align

	Psychological Risks	Power Imbalance Between User and Service	Data Management & Consent	Environmental Impact
Psychology & Grief Counseling	Protections for the bereaved and standards of care	Protections for the bereaved and standards of care		
Death Care & Remains Management		Price transparency and preventing price-gouging	Differentiating between the property/body of the deceased and the companionship sought by the living	Aligning with the “Green Death” movement
Social Media*	Proactive rather than reactive policy (ex: social media bans)		Learn from the mistakes of regulators and expectations of users	
AI Companions*	Aligning with the psychological concerns for AI companions	Family law approach to power dynamics		Mainstream news coverage may propel AI Companion environmental impact concerns into regulation

Table 1: An overview of the approaches detailed above (Column 1) and the issues they each address (Row 1). * The AI Companion and Social Media analogies include lessons from the *absence* of regulation in these contexts (blank spaces) in addition to *existing* regulation.

with best practices for psychological fields which provide guidance on therapeutic services pricing, conditions of the professional services, and availability (Gamino and Ritter 2009). The same types of protections and quality assurances should be applied to digital immortality services.

Managing Psychological Risks

Psychological risk management is perhaps the most important of the recommendations. Many companies, such as *Eternime*, may involve psychologists in the development of their technologies. However, considering the lack of empirical research on how they may assist in the grieving process, more scientifically rigorous studies are necessary before these technologies are allowed to take hold within an population (Hamilton 2018). International psychological associations and the Association for Death Education and Counseling (ADEC) should be recruited for consultation and research partnerships throughout the process of developing and testing these products before they are released to the public. This is a regular process with psychiatric treatments, medications, and medical technologies, which all require input from professional associations for the site of deployment (e.g., American Medical Association (AMA), the American Psychological Association (APA)) and oversight from government agencies responsible for protecting patients from harmful, unproven treatments (e.g., Federal Drug Agency (FDA), Federal Trade Commission (FTC)). The involvement of these organizations would require protective policies to

prevent users from being harmed in a similar manner to other harmful products (e.g., nicotine, alcohol, chemicals, illegal drugs, etc.). For example, it is unclear what the safe use and time limits are for interacting with various forms of this technology (e.g., text, audio, video, etc.) or how the technology might be used safely as a supplemental resource for dealing with loss and grief along with traditional medication and/or mental health care providers. The objective of these technologies should be to give people an opportunity to manage their grief and not encourage a permanent communication dependency based on a profit motive for user engagement.

We argue that these technologies should only be accessible under the direct supervision of a licensed mental health professional. Regulations could mandate a prescription or only allow the “interactions” between a person and the digital rendering of their deceased loved one in the presence of a profession and only for a finite duration of time. Since this technology already exists and is evolving rapidly, this may be currently unrealistic; however, there are restrictions that could be required for any new technologies in this area. Typically, a medical technology used in treatment would need to provide a specific physiological remedy rather than a purely psychological one (Mandel 2009). As such, it would be difficult to label a non-invasive technology that has no physical connection to the human body under a medical umbrella. Yet requiring an anticipatory regulatory move for this level of therapeutic oversight would ensure that any new digital immortality technologies would not allow for harmful interac-

tions, as well as provide sufficient guardrails for the permitted therapeutic interactions. Rigorous investigations into the effects of digital immortality technologies should be a bridge between physical health, mental health, and technology (Fernandez 2024; American Psychological Association). It will take time and an established body of research to garner enough support for it to be considered a medically beneficial technology used for treatment in the same controlled category as, say, antidepressants or insurance-regulated counseling services. Interdisciplinary research involving medical ethicists, computer scientists, and grief counselors is necessary before these types of consumer protections could be enacted.

Social Media & AI Companion Regulation

Regulation of digital immortality technologies should align with existing policies and frameworks developed for social media, and learn from the ways in which regulatory efforts have failed. Social media platforms remain profit-motivated, based on attention and engagement metrics, and subject to the whims of CEOs, politics, and public opinion (Conger 2024; Isaac and Griffith 2024). Treating digital immortality technologies as highly sensitive social platforms, even more so than AI companions, requires a more proactive rather than reactive regulatory presence. AI companion regulation can likewise learn from the longitudinal failures of social media regulation as it develops. Currently, AI companion regulation seldom exists beyond the regulation for AI chatbots, despite its rapid scale of adoption (Perez 2025). Strictly enforced privacy policies, secure data storage, and informed consent protocols for consumers should be established to safeguard sensitive personal information, aligning with the expectations that users have for social media platforms. Retroactively banning an adopted technology, as was seen with the Australian social media ban, is a far more contentious decision relative to building upon responsible AI design principles and restricting deployment even after extensive testing and monitoring (Fatt and Fardouly 2025). All of the reasons to regulate AI companions are equally present for digital immortality technologies, and digital immortality has two additional dimensions of concern: data privacy/rights of the deceased, and the even more extreme vulnerability of the target user population. We argue that anticipatory regulation efforts are urgently needed now instead of waiting for the technologies to mature further and be more widely adopted by the public.

There also should be an requirement for presenting an official proof of death, such as a death certificate required by social media profiles to alter a user's account (X). This would help to prevent anyone from accessing or manipulating the data of a still-living person, or altering the deceased's account settings and content without their explicit permission, aligning with the preferences set during life.

Many social media technologies are now subject to similar regulatory mechanisms: age restrictions. The social media ban for minors under 16 that went into effect in Australia (UNICEF Australia) has since prompted France's bill titled "Protéger les mineurs contre les dangers des réseaux sociaux" ("Protecting minors against the dangers of social me-

dia") (Assemblée Nationale), Canada's proposed Safe Social Media Act (Government of Canada), and the UK's expansion of the Online Safety Act (Department for Science, Innovation and Technology). Both the UK and Canada also have incorporated restrictions on AI chatbot use into their legislation efforts. These changes come in wake of mixed results from Australia's ban, and many important questions regarding the psychological effects of individuals losing access to these types of technologies remain unanswered without a longitudinal research approach (Zhang et al. 2022; Wu 2026; Bursztyn et al. 2026). Documented instances of AI companion discontinuation demonstrate the risks involved in removing access to technologies to which users have become emotionally attached (De Freitas et al. 2024; Poonsiriwong, Archiwaranguprok, and Pataranutaporn 2026). Monitoring the psychological well-being of former AI Companion users in the wake of discontinuation, be it from business failure or legislation, will help to inform policymakers how the regulation of digital immortality technologies may affect the public.

Commitment to Environmentalism

Evolving death care preferences offers insights into managing the impacts of death on the environment. The adoption of AI chatbot platforms means that digital immortality technologies will be most costly to the environment when they are most profitable and widely used. A coordinated movement towards "Green Death Practices" (Shellock, Kinsella, and Harris 2022) could provide a strong link between the growing social movement to reduce the environmental impact in death and burial practices and the environmental costs to using digital immortality technologies. Advocates for digital immortality regulations could connect the growing concerns about environmental impact of generative AI and data centers to collaborate with those working towards greener practices in death care, thus making this ethical alignment clearer to consumers. AI companion technologies are already beginning to be recognized as contributing to the growing environmental resource consumption produced by the use of AI (Ravi 2026). Environmental concerns raised by AI companion critics can just as easily inform regulatory approaches to digital immortality technologies and its environmental harms (Zewe 2025).

Limitations & Future Work

The majority of regulation approaches discussed in this paper are specific to the U.S. context in their scope and specificity. The paper's position is presented from a Western-/Global North perspective on death and its cultural implications. However, death and grief are highly culturally dependent, with many cultures in the U.S. framing death as a celebration of the life lived rather than a loss (Metro 2022). The varied nature of the remembrance of ancestors will undoubtedly intersect with with rise of digital immortality technologies in diverse and unexpected ways. We have limited our discussion of the potential mechanisms for harmful attachments to these technologies without going into depth about theories such as mental state attribution, anthropomorphism,

and misplaced presence. We have framed the risk of attachment as highly context dependent because grief practices across the U.S. are extremely diverse. To argue, without empirical evidence, that this technology is universally harmful and grief is not experienced through larger sociotechnical systems would be a paternalistic overstep (Podosky 2025). We do agree that expanded discussions on AI anthropomorphism (Axelsson and Shevlin 2026) and current folk attribution research related to AI acceptance (Colombatto and Fleming 2024) is sorely needed from multiple perspectives. We would welcome discourse with interdisciplinary researchers and mental health practitioners to other aspects of digital immortality technologies. We believe that related theories would be helpful in framing critical research questions within/across these emerging sociotechnical systems. The aim of this paper is a call for interdisciplinary investigations and dialogues on the complex factors inherent in human interactions with digital immortality technologies.

We also recognize there is the possibility that trying to align this emerging technology with existing technologies may do more harm than good. The regulation of social media platforms has not been consistently successful, and it is difficult to promote extensive efforts around data privacy protections without acknowledging current political, economic, and rapid adoption challenges in the global social media regulation landscape. Fundamental polarization, misinformation, and manipulation around concepts such as free speech, personal data privacy, and content moderation, which plague conversations about reforming social media platforms, will likely influence conversations about digital immortality platforms. As such, we would be remiss if we did not emphasize the risks involved in drawing parallels between this and other contentious spaces. We acknowledge the extreme challenges in implementing any technology regulation, much less regulation for a technology that is not yet mainstream or widespread. Some of our ideas, specifically those arguing this technology is similar to a medical treatment (i.e., an antidepressant), are intended as provocations than practical recommendations. As conversations around regulating social AI technologies become more widespread, we hope that the ideas presented in this paper contribute to novel research and frameworks that will inform future policy efforts.

Conclusion

In this paper, we outline a potential approach for regulating digital immortality technologies based on four regulatory analogies: death care & remains management, grief counseling & psychiatry, social media, and AI companions. Each of these fields have varying levels of regulation success. For death care & remains management and grief counseling & psychiatry, established regulatory frameworks exist that could be applied to digital immortality technologies. For social media and AI companions, while there is an ongoing movement towards greater regulation, the lessons which should be learned are from failed efforts to regulate emergent technologies before widespread adoption by the public. Addressing the issues most relevant to digital immortality (psychological ramifications, power imbalances between user & service, data management & consent, and the envi-

ronmental impact of the service) requires synthesizing the relevant protections from each regulatory analogy and the ways each analogy affects each of the identified concerns. While this initial mapping approach is extremely high level, it provides several different perspectives on an emerging and potentially transformational technology.

We argue that the importance of proactive regulation for digital immortality technologies cannot be overstated. Grief from loss of a loved one is already among the most painful life events a person experiences, and is a common emotional and psychological hardship all people share during their lifetime. The emergence of digital immortality technologies exists at a critical intersection of the promotion of AI solutions to complex human problems and the intentional engagement of highly vulnerable populations. This paper provides a necessary first step towards examining the potential for several approaches to regulation aimed at protecting users, current and future, from exploitation and manipulation.

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