

# Ritual and mourning in the digital era: Between virtual technology and ethical controversies

Roberta Fusco<sup>1</sup>, Rosagemma Ciliberti<sup>2</sup>, Marta Licata<sup>1</sup>, Mario Picozzi<sup>3</sup>

<sup>1</sup>Department of Biotechnology and Life Science, University of Insubria, Varese, Italy; <sup>2</sup>Section History of Medicine and Bioethics, Department of Science of Health (DISSAL), University of Genoa, Italy; <sup>3</sup>Clinical Ethics Research Center, Department of Biotechnology and Life Science, University of Insubria, Varese, Italy

**Abstract.** *Background and aim:* Digital technology has radically transformed how contemporary society perceives death and mourning. The concept of “digital death” and its implications have become a focal point of investigation. This article explores the intersection of digital technologies with traditional mourning rituals, analysing their influence on grief processing practices and providing insights into the complexities of managing grief in the digital age. *Methods:* Analysis of existing literature on emerging funeral technologies and the issues associated with new digital mourning practices. *Results and discussion:* Online mourning has opened new forms of commemoration and community building, offering support and interaction to those in need. However, it has also raised concerns and ethical challenges regarding processing loss, privacy, authenticity, and the commercialization of grief. *Conclusions:* It is crucial to promote the development of ethical guidelines for responsibly managing digital mourning. Raising awareness of the importance of a culture based on empathy and support, along with ensuring respect for the dignity and privacy of the deceased using digital technologies, is crucial. ([www.actabiomedica.it](http://www.actabiomedica.it))

**Key words:** digital death, tanatotechnology, thanatology, digital culture, Eternal Me

## Introduction

Contemporary society grapples with a unique paradox in its relationship with death: while death is often pushed to the periphery of daily life, the advent of digital technology has thrust mortality into the limelight through virtual means such as social networks and chat platforms. This shift in our digital era has profound implications for our understanding and management of death.

The phenomenon of the so-called “digital death” and the management of its inheritance are becoming a central topic of interest for scholars in the field of information society (1). Although it may seem like a niche subject, it involves crucial religious, legal, social, technological, historical, and ethical aspects. A new understanding and management of death has been

adapted to the digital age, and the individual’s multiple virtual identities appear. The theme concerns the management of online profiles and issues of identity, privacy, and access to digital data after death. It extends to creating a digital identity that can persist even after physical death, forcing us to rethink the concept of immortality. Understanding and managing these aspects requires an interdisciplinary approach and deep reflection on how technology shapes our traditional ideas of life and death and influences grief processing practices. The literature on digital death, data inheritance, and privacy is extensive and well-established; however, relatively little attention has been paid to technology’s role in the grieving process (2).

Mourning practices, diverse as they are across cultures, universally serve the purpose of helping individuals come to terms with the reality of loss, an

experience that transcends social, cultural, and religious boundaries. Therefore, rituals play a fundamental role in initiating the grieving process. However, a significant shift has occurred in recent decades: the virtual realm has sparked new behaviors in expressing condolences and articulating grief.

The past decade has witnessed the emergence of a new way of processing loss through the phenomenon of online mourning. Before the advent of technology, death and mourning were considered delicate and often avoided in public conversations. Emotional reactions had to be controlled, avoiding overt public expressions. However, the way mourning manifests on the internet and social media seems to show a trend towards creating new rituals to make grief more visible and public rather than intimate. Death becomes public through current developments in the virtual realm and is reintegrated into everyday life (5).

This article examines the role of digital technologies in mourning, focusing on how they influence and shape traditional rituals associated with losing a loved one. The analysis will center on the opportunities these technologies offer in the grieving process, exploring how they can facilitate the sharing of experiences of grief and the creation of an emotionally supportive environment. Additionally, the article will address the challenges associated with using these technologies in the mourning context, examining factors that may negatively impact the grieving process and the emotional well-being of those involved. Furthermore, it will explore potential strategies to enable digital technologies to effectively support grieving individuals, allowing them to maintain proximity and connection with those experiencing distress. Finally, the article will identify effective strategies to optimize the utilization of digital technologies to offer meaningful support to grieving individuals. Possible approaches will be investigated to ensure that these technologies facilitate closeness and connection among those in mourning, providing a comforting and emotionally supportive environment during such a challenging time.

## Methods

Critical analysis of emerging funeral technologies and their impact on individual and collective grieving experiences.

## Results and discussion

### *The new forms of commemoration: Sharing, healing, and online communities*

Recently, mourning rituals have undergone a significant transformation thanks to the advent of social networks. Historically, death has been confined to cemeteries, kept away from the living, and often situated outside urban centers, treated as a private and intimate matter to be commemorated in places separate from everyday life (6). However, the era of social networks has radically transformed this dynamic, making mourning an exposed, social, shared, global, and perpetual experience.

This change has led to the spread of online funerals, a practice that tends to replace physical bodies with “digital bodies” projected through screens (2). The phenomenon of live television broadcasts of public figure commemorations is not new in modern history. Today, such broadcasts involve not only celebrities but also ordinary individuals. The demand for these services increases due to migratory phenomena and the dispersion of families, especially in difficult economic situations or emergencies such as pandemics, to avoid gatherings that could jeopardize public health, regardless of Internet access (7).

The public sharing of grief through social media has become a widespread habit. Death has become an integral part of our daily lives, present on all tablets and cell phones. Today, we are seeing the emergence of commemorative pages and the establishment of designated contacts, selected among friends, who transform the account into a digital memorial capable of making decisions in case of death. These inherited contacts can post and store information, images, and statuses, allowing our content and virtual identities to persist beyond physical death (1). A virtual memorial or a social media profile becomes the space and place where family and friends can gather to mourn and remember publicly. The network offers private spaces to express grief without the pressure of public exposure, allowing for a more intimate and empathetic dialogue among individuals (2).

From this perspective, the internet can have positive effects, helping individuals overcome feelings of loneliness and moments of solitude following a loss. A combined online-offline approach can facilitate

the grieving process and offer individuals a broader, more effective set of options to cope with it. Sharing one's loss online can strengthen and integrate existing social rituals, help mourners manage their grief, and give meaning to death while feeling continuously connected to the deceased. Virtual memorials thus become a tool for healing and accepting loss. They offer users the opportunity to connect with others who may share similar experiences or offer supportive messages, creating a sense of virtual community and providing comfort in difficult times. The reach of online communication is broader and faster, creating a sense of community through the rapid spread of news, like obituaries in a newspaper. Having the opportunity to communicate thoughts and feelings related to grief can be therapeutic for those experiencing a loss, compared to internalizing them.

However, despite the positive aspects, concerns arise about the impersonality of digital means in accompanying mourning. Physical presence, empathetic looks, participatory listening, and proximity are indispensable elements in human communication and the grieving process, hardly replicable or even replaceable by digital means. Regarding streaming funerals, the absence of in-person participation could deprive family members of physical support and nullify the condolence ritual, an essential aspect of commemorations. Transferring the physical evidence of death to an online commemoration system could deprive people of such tangible proof, making death less real. The progressive fading of the importance of collective rites and celebrations due to the lack of space and time for socialization and ritualization may express a weakening of community ties. This can leave people more isolated and vulnerable to life's challenges, including grief and death management.

In an opposite perspective, streaming funerals could make death more visible, bringing it directly into homes through computers and personal devices. This could help make death less hidden and more public in our society, making it an integral part of daily life and, at the same time, reducing its emotional impact on people (1). Regarding online commemorations, some scholars find it difficult to accept the commemoration of death through cold and impersonal platforms, which may appear as a display of vanity or a manifestation of forced compassion (4). Furthermore, some believe that the public exposure of mourning on social media may

dilute the seriousness of the loss, turning a moment of profound grief into a public display. Digital participation in mourning can sometimes lead to the loss of intimacy and the trivialization of grief, turning it into a media spectacle rather than a moment of genuine sharing and understanding. Additionally, easy access to digital memories can sometimes hinder the grieving process, keeping painful emotions alive permanently and preventing the necessary acceptance and resolution of grief. These elements raise questions about the effectiveness and adequacy of digital tools for managing the grieving process comprehensively and healthily.

#### *Rethinking the concept of end: Controversies in the digital era*

The digital afterlife industry represents a growing sector, with various companies and solutions on the market to manage loss and grief online. According to some scholars, online mourning coincides with a return to a more social way of processing loss together: social networks and online communities are built to offer support to those affected by grief. This point about networks is highly debated. At the same time, many see computers and social networks as tools that help connect and communicate among individuals. Still, a growing number of scholars and social observers are raising doubts about the effect of these technologies on human relationships and social cohesion (8). Some scholars argue that excessive use of computers and social networks can foster social isolation and fuel an individualistic culture. Despite the long-distance communication these tools enable, online interactions can be superficial and less meaningful than face-to-face interactions. This may lead people to spend much time on social networks without developing authentic relationships, preferring an online presence that requires less emotional and social commitment. Additionally, the widespread use of computers and social networks can contribute to digital isolation, where people increasingly retreat into their virtual world at the expense of actual interactions with family, friends, and local communities. This behavior could decrease the sense of belonging and social cohesion, encouraging an individualization of society where personal needs prevail over collective well-being (1).

Traditional mourning practices have adapted and integrated with new technologies, which is especially noticeable in younger generations, reflecting a transfer of individual sensitivities even in rituals and discussions about death. They freely use tools like blogs, YouTube channels, Instagram, and social networks to openly and publicly address the topic. The current landscape reveals an interesting collective rethinking of mourning and commemoration, with new habits emerging mainly in younger generations and a challenge to certainties in older generations. An exemplary case that attracted worldwide attention is Eugenia Kuyda, who, after losing her dear friend Roman Mazurenko, devised a chatbot based on the digital traces of the deceased. This chatbot replicates a digital version of Roman, with whom one can interact and converse. In a sense, Eugenia found a way to “bring him back to life,” although such an action raised doubts about ethics, opportunism, and correctness for a long time. Eugenia’s startup, called Luka, focuses on artificial intelligence. Eugenia collected text messages exchanged over the years with Roman and thought this informational heritage could serve as a basis for creating a bot that mimicked his communication style. The project became concrete when Eugenia began contacting mutual friends to obtain part of their computer conversations, which would form the semantic basis for the bot. Real conversation models, around which the engineering team could build a bot that processed natural language and started to converse.

The technology on which this project is based has been traced back to Joseph Weizenbaum’s 1966 Eliza project, a program that reacts to a user’s stimuli and writings using a combination of words. The program aimed to mimic a psychotherapist, asking to describe the problem underlying the conversation and trying to respond in tone with another question. Eliza was the first program to pass the so-called Testing test. This test is based on the rule that by reading a conversation based on text phrases between a computer and a person, observers should be unable to determine who the computer is and who the human being is (1).

Critics argue that current bots will always be imperfect imitators of real people: they need a genuine understanding of language and respond mechanically and randomly, and the idea of a computer speaking

precisely like a human being is still considered a utopia. Despite moral reservations and fears of emotional impact, Eugenia announced the project, eliciting mixed reactions among Roman’s relatives and friends. Some appreciated the initiative, while others criticized it. However, Eugenia was convinced that interacting with the bot could be therapeutic for some people, and the project was primarily conceived to receive messages of condolences or affection to keep Roman’s memory alive. It is important to emphasize that the project’s intent is not to keep a deceased person alive but to preserve the memory of who they were. The persistence of online identities after death still raises ethical and legal questions that require careful consideration. Who is entitled to access the information about the deceased, and how? What are the limits of posthumous consent, and who may decide to use the deceased person’s digital data? These are complex questions involving a range of conflicting interests, including respect for the individual’s privacy and the right of family members to keep the memory of the deceased alive. Without an explicit will, deciding who is entitled to decide on using the deceased’s digital information and the limits of posthumous consent becomes difficult.

Another highly debated web service is Eterni.me, designed to ensure the digital immortality of data and the person. The project constantly stores data from Facebook, Twitter, emails, photos, videos, location information, and devices like Google Glass and Fitbit fitness trackers. Essentially, as people go about their daily activities, they can curate the upload of this material into a system that will use it after death. They should pay attention to privacy parameters, which determine which information they want to store and make public. The service allows for the creation of a list of people who will be contacted and have access to the account in case of death, providing quick and easy access to all data. The most valuable feature is the generation of a 3D avatar designed to look and speak like the original subject, whose task will emulate the personality and share all the information from the database with friends and family. A user in life will be encouraged to “train” their avatar with daily interactions to increase its vocabulary and conversational skills (9).

Platforms like Eterni.me that aim to digitally preserve a person’s identity and presence after their death

raises important questions about the impact of such services on our perception of death, loss, and identity. The hidden goal behind these startups is to create an automatism that exploits the characteristic simulation of the digital medium, namely the ease with which people can interact with the communicative traces of the deceased. Simultaneously, the difficulty of distinguishing remote communication from communication with the dead makes the paradox concrete, whereby death seems never to have occurred despite having occurred. Essentially, these platforms aim to offer a sort of continuity in communication with the deceased, using technology to make it seem like the person has not really disappeared (10;2). The use of such services could influence our ability to process grief and cope with loss in a healthy and meaningful way. The persistence of the deceased's virtual identity could make it more difficult for family and friends to process their grief and accept the reality of the loss (11).

*The role of technology in the transformation of mourning: Reflections and considerations*

Technology has revolutionized our approach to death. Thanks to our online presence, we are immersed in an eternal life where the memory of our departed loved ones continues to live through digital reminiscences. This new way of commemorating and remembering the deceased is radically changing our relationship with grief and mourning, both positively and negatively. The virtual world seems to become the intermediary for traditional symbolic communication between here and hereafter, a dialogue that feels bidirectional in front of the computer screen.

However, this technological progress also raises crucial ethical and psychological questions. While ethical considerations regarding the possibility of digitally keeping a person alive after their death have been widely discussed (2), less attention has been devoted to the digital afterlife industry's commercial, emotional, and psychological aspects.

The term "digital afterlife industry" highlights the commercial aspect of a sector that monetizes digital information. However, many of these companies do not always act in the best interest of grieving individuals and often overlook their psychological fragility.

Companies involved in this sector tend to keep digital interactions active through notifications and updates to encourage the use of their platforms (12; 13). This profit-centric approach can be harmful to the grieving process, especially for those who are already vulnerable, as the loss of a loved one is inherently delicate. The psychological and emotional dynamics that can push a person to use thanatotechnologies to create an infinite image of a deceased loved one through a virtual avatar are complex and deeply rooted in mourning and loss mechanisms. This desire emerges from the human need to face and make sense of death—an event that inevitably challenges our understanding of life and mortality. When we lose a loved one, we are faced with an impossible void—a lack that shakes the foundations of our existence. A sense of helplessness and weakness often accompanies the pain of loss as we realize the inevitability of death and our inability to change it. In this context, creating a virtual avatar of the deceased can be seen as an attempt to fill that void, keep a tangible connection with those who are no longer there, and become a sort of emotional anchor. Additionally, it can function as a defense mechanism to protect oneself from the unbearable pain of irreparable loss. Thus, denial serves as a psychological coping mechanism, allowing individuals to support a sense of emotional stability in the face of overwhelming adversity. Interacting with an avatar can create the illusion of control and continuity, mitigating the feeling of helplessness and weakness. Another psychological dynamic that is involved is the fear of oblivion. Death brings with it the possibility that your loved one will be forgotten. Creating a virtual avatar allows one to keep the memory and essence of the deceased alive. This can create confusion about the interpretation of the idea of death. It is essential to consider that technology targets individuals who may find themselves in an emotionally vulnerable state after experiencing loss and offers them the opportunity to keep a part of their loved one alive online, allowing the deceased person to continue to be present, albeit in digital form, in primary social interaction contexts. This includes social networks and digital platforms. The risk arises when the grieving person fails to overcome the detachment and continues to dedicate not only their memories and thoughts but also their daily lives to the deceased person (10).

The risk that many foresee is, of course, a failure to overcome detachment to the point of confusing what is life with what is death. Another danger concerns the possible dependency on the online world, where the deceased continue interacting with their relatives. In real life, bonds tend to loosen over time, even for those who regularly visit the cemetery. However, an online cemetery accessible anytime via phone or computer could maintain the illusion of closeness and connection, thus hindering a healthy grieving process and adaptation to loss (14).

We are faced with a series of interconnected complexities that reveal much about how our society is evolving about these deeply human themes. The psychological dynamics that come into play also include the desire for immortality. Creating a virtual avatar responds to the human need to leave a lasting trace, not to be forgotten; there is an increasingly widespread desire to “live” even after death, not only in memories and works but also virtually. This suggests a deep connection between our digital identity and our perception of immortality. It is crucial to consider digital identity’s anthropological and ethical aspects and its interaction with our identity. Our identity is not reducible to digital identity; the latter is a dynamic and interconnected part of our overall self. The digital is not separate from the person but rather an extension and reflection of it. As individuals, we actively shape our digital identity through online interactions, sharing choices, and using digital technologies. This means that the digital is not neutral: our online actions influence and are influenced by our identity and values. In this context, it is essential to recognize that resorting to the possibilities offered by the digital world reflects our desires and aspirations as human beings. We may wish to preserve our memory online or create digital avatars of our loved ones because we are motivated by the desire to connect, share our experiences, and keep emotional bonds alive even after physical death. We must consider the impact all this has on the grieving process for those who remain. The constant presence of digital avatars could complicate the acceptance and adaptation to loss, negatively affecting the emotional healing journey of the survivors.

Technology has introduced a series of challenges and complexities to how we approach death and mourning. It is essential to carefully examine these dynamics

to fully understand their impact on our lives and society. It is then necessary to ask whether this reflection on our death and the “after” is a way to address or hide the problem of our finiteness itself. There is a tendency to shift the focus from the process of preparing for death to dealing with the post-mortem consequences. Instead of addressing the theme of death preventively, emotionally, and practically while preparing for our passage, we increasingly focus on how to manage our digital identity and legacy after our departure.

Furthermore, the contradiction between the public nature of the digital world and the still-present taboo surrounding death in everyday life highlights a profound dissonance in how society approaches this topic. Although we live in unprecedented digital connectivity, death remains a solitary and individual experience. Despite our online presence, we still find ourselves having to face our deaths alone.

However, we cannot ignore the potential positive aspects of funeral technologies in providing a new space for sharing and support for those experiencing grief and mourning. Social networks and digital platforms are becoming places where people can find comfort and understanding from individuals in similar situations, thus reducing isolation and promoting greater sharing of experiences. Approaching these technologies without prejudice could identify their use in another way, in addition to those already known, of connecting and supporting in times of profound suffering. Undoubtedly, the boundaries between authentic commemoration and narcissistic displays of vanity, seeking attention, or even pathological manifestations can be blurred. The digital transformation of death offers many possibilities for commemorating the deceased. Still, at the same time, it raises ethical questions about the authenticity of the intentions behind such commemorations. Social media and other digital platforms can often be influenced by complex personal and social motivations, ranging from self-promotion to the desire to attract the attention of others or to gain social approval. This raises the need to carefully examine the motivations behind digital commemorations and promote a culture of respect, authenticity, and compassion in using digital technologies to commemorate the deceased. At the same time, it is difficult to provide definitive and unequivocal answers on

interpreting this redefinition of death and all its implications in the era of social networks.

Funeral technologies offer new ways of commemorating the deceased but require a balance between responsible use and safeguarding the mental health of participants. Digital death is increasingly integrated into online society, which requires a critical reflection on the ethical use of these technologies. This intersection of digital identity, ethics, and self-care requires thorough analysis and constant commitment to promoting mindful use of digital technologies, always considering individual and social well-being.

#### *Optimization of the use of thanatotechnologies for bereavement support*

In the context of the use of thanatotechnology, it is crucial to set up standards for weighing risks versus benefits. This is essential for the development of well-balanced guidelines and recommendations. The different components of these standards must include the psychological evaluation of the user. The emotional stability of the individual is a crucial factor: it must be determined whether these technologies can offer real support or whether, on the contrary, they risk exacerbating suffering. Identifying the phase of mourning the user in (denial, anger, bargaining, depression, and acceptance) is essential for adapting the use of thanatotechnologies. For example, during the denial phase, using such technologies could reinforce the illusion that a loved one is still present, complicating the process of accepting the loss. Continuous monitoring of users' emotional and psychological states is needed. Periodic evaluations allow observation of any positive or negative changes. It is essential to collect regular feedback from users to understand how they react to the use of these technologies. Monitoring ensures that the use of thanatotechnologies remains beneficial and does not cause long-term emotional harm, allowing for timely intervention in signs of emotional deterioration.

It will be essential to ensure access to professional psychological support in parallel with using thanatotechnologies. thanatotechnologies should complement, not replace, traditional therapeutic support. The evolution of technologies will also be monitored through the involvement of professionals from various sectors, such as psychologists, therapists, and

technology experts, to ensure a holistic approach. This collaboration will help to develop more complete and secure solutions.

Establishing boundaries for using thanatotechnologies is essential to avoid developing emotional reliance. Establishing daily or weekly interaction time helps prevent social isolation and unhealthy dependency. The purpose of interacting with these technologies must be clear, limiting their use for specific purposes such as commemoration or emotional support.

Users and their families should be educated on the potential benefits and risks of thanatotechnology. This includes an understanding of technology's limitations and possible psychological effects. Continuous education ensures that expectations stay realistic, and these technologies are seen as complementary tools rather than complete solutions. Awareness helps mitigate the associated risks and promotes healthy and informed use. It is essential to evaluate whether these technologies can provide real emotional support and whether they allow the user to navigate the grieving process healthily.

To encourage users to use thanatotechnology as one of the many tools for dealing with grief. Promoting other health strategies, such as participation in support groups and memorial activities, is essential for a more balanced and comprehensive approach to grieving. To develop well-balanced guidelines and recommendations, it is necessary to adopt a comprehensive approach that considers the complexity of human emotional responses while ensuring the well-being and safety of users.

## **Conclusion**

Traditional mourning practices have adapted and integrated with new funeral technologies, revolutionizing our approach to death and how we process and share loss. This reconsideration of the concept of death and these new modes of participation and expression of ritual should not be looked upon with prejudice. Grieving is an intimate and unique journey for everyone, influenced by a wide range of variables, and sometimes does not follow a linear or predictable trajectory. The proper and conscious use of such technologies can be a valuable tool to enrich and integrate traditional mourning practices, maintain bonds, and preserve the memory of those no longer with us. It also provides

added emotional and practical support. However, effective strategies for using digital technologies require adopting a cautious attitude and being aware of the ethical issues underlying such tools. It is, therefore, crucial to provide comprehensive education on the conscious use of digital platforms and understanding the emotional and social implications of online interaction during the grieving period. This education should promote ethical and respectful digital practices, carefully considering grieving individuals' needs and preferences while ensuring respect for their privacy and dignity. It is also important to emphasize that these technologies should not replace physical closeness, human contact, and words of comfort. Instead, they should complement such forms of support, helping to strengthen the bond between individuals and offering added emotional and informational resources. It is essential to raise awareness of the importance of digital detachment to foster a gradual acceptance of loss. Integrating these practices into coping with grief can help people manage the process healthily and respectfully, keeping a meaningful connection with their deceased loved ones; it is significant to promote a culture of empathy and mutual support, both online and offline. Therefore, it is essential to promote healthy grieving strategies. Encourage users to use thanatotechnology as one tool among many to deal with grief. It also encourages other healthy strategy, such as participation in support groups and memorial activities, for a more balanced and comprehensive approach to grieving. In summary, a holistic and well-balanced approach ensures that thanatotechnology offers real and meaningful emotional support without compromising the natural grieving process. Continuous evaluation of risks and benefits, combined with proper education and support, helps maximize the benefits and minimize the risks associated with these innovative technologies.

**Conflict of Interest:** Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article.

**Authors Contribution:** R.F.: conceptualization, writing and original draft; R.C.: writing, review and editing, M.L.: writing, review and editing; M.P.: writing, review and editing.

## References

- Ziccardi G. La "morte digitale", le nuove forme di commemorazione del lutto online e il ripensamento delle idee di morte e d'immortalità. *Stato, Chiese e pluralismo confessionale* 2017; 19-34. doi:10.13130/1971-8543/8510.
- Sisto D. Digital Death. *Le trasformazioni digitali della morte e del lutto. Lessico di etica pubblica* 2018;1: 48-60
- Fusco R. Putridaria (strainer rooms) and draining practices of the bodies. *Anthropology of death in the modern age. In: Papers in Italian Archaeology VII: The Archaeology of Death. Archeopress; 2018; 532-539* doi: 10.2307/j.ctv1nzfvx7.63
- Fiorese G. La condivisione del lutto online: Lo scarto tra realtà e ostentazione. *Dada Rivista di Antropologia post-globale* 2019; 2: 139-152.
- Sofka CJ. Social support "internetworks," caskets for sale, and more: thanatology and the information superhighway. *Death Stud.* 1997; 21(6): 553-574. doi: 10.1080/074811897201778
- Fusco R, Garberi C, Licata M, Ciliberti R, Larentis O, Tesi C. Exhumation, from tomb violation to immortality strategy. *Med Hist.* 2022;6(S1): e2022029.
- MacNeil A, Findlay B, Bimman R, Hocking T, Barclay T, Ho J. Exploring the Use of Virtual Funerals during the COVID-19 Pandemic: A Scoping Review. *Omega* 2023; 88(2):425-448. doi: 10.1177/00302228211045288
- Aluffi G. Algoritmi e ricordi: "Così il mio amico resuscita nella chat." *La Repubblica [Internet].* 2016, October 9 [cited 2024 30 Apr]; [about 1 p]. Available from: [https://www.repubblica.it/tecnologia/2016/10/10/news/\\_parla\\_con\\_lui\\_roman\\_muore\\_in\\_un\\_incidente\\_eugenia\\_maga\\_del\\_software\\_usa\\_i\\_loro\\_dialoghi\\_per\\_creare\\_un\\_suo\\_alter\\_eg-149440494/](https://www.repubblica.it/tecnologia/2016/10/10/news/_parla_con_lui_roman_muore_in_un_incidente_eugenia_maga_del_software_usa_i_loro_dialoghi_per_creare_un_suo_alter_eg-149440494/)
- Savin-Baden M, Burden D. Digital Immortality and Virtual Humans. *Postdigit Sci Educ.* 2019;1: 87-103. doi:10.1007/s42438-018-0007-6
- Savin-Baden, M, Burden D, Taylor H. The ethics and impact of digital immortality. *Knowl. Cult.* 2017; 5(2): 178-196. doi:10.22381/KC52201711
- Elder A. Conversation from Beyond the Grave? A Neo-Confucian Ethics of Chatbots of the Dead. *J. Appl. Philos.* 2020; 37(1): 73-88. doi: 10.1111/japp.12369
- Jiménez Alonso, B Brescó de Luna, I Griefbots. A new way of communicating with the dead? *IPBS.* 2023; 57(2): 466-481. doi:10.1007/s12124-022-09679-3
- Ohman C, Floridi L. An Ethical Framework for The Digital Afterlife Industry. *Nat. Hum. Behav.* 2018; 2. doi:10.1038/s41562-018-0335-2
- Santi F, Bianchi Davide. Bereavement in the Digital Age: The Challenges of Online Sharing and Digital Memory Preservation. *Med Hist.* 2022; 7(S2): e2023023.

## Correspondence:

Received: 30 April 2024

Accepted: 12 June 2024

Marta Licata, PhD,

Department of Biotechnology and Life Science,

University of Insubria, Via Dunant 5, Varese, 21100 Italy

E-mail: [marta.licata@uninsubria.it](mailto:marta.licata@uninsubria.it)