

AI Heritage Avatars¹

Avatares de IA de herança cultural

ALEXANDER GERNER

Lusófona University, CICANT, Portugal
alexander.gerner@ulusofona.pt

Abstract

The relationship between humans and their past, including their ancestors and cultural icons, shapes our collective memory and cultural identity. However, the emergence of AI avatars raises questions about how these connections to the past are evolving. This shift is in the first place exemplified by a mother in South Korea who used VR technology to interact with an avatar of her deceased daughter. Then this paper heeds the Luther Avatar presented in 2023 by the protestant church of Rheinland on the reformation day 31st of October. This unprecedented experience of heritage and cultural figures that as Avatars interact with us via AI technology raises complex questions about the intersection of technology, memory, and culture. The use of AI heritage avatars to connect with the deceased and our heritage figures presents both opportunities and dilemmas in how we deal of broad presence (Gumbrecht) and the relation to foreverism (Tanner) as well as the relation of language and immortality (Gil). The potential of AI avatars to change our relationship to history, temporality, mediation, testimony, collective memory, and social and religious identity is vast and warrants careful, but foremost critical explorations. This is only a preliminary start into the media philosophy of AI Heritage Avatars.

Keywords

language foreverism | cultural heritage | AI technology | ancestors' avatars

Resumo

A relação entre os seres humanos e o seu passado, incluindo os seus antepassados e ícones culturais, molda a nossa memória colectiva e identidade cultural. No entanto, o aparecimento de avatares de IA levanta questões sobre a forma como estas ligações ao passado estão a evoluir. Esta mudança é, em primeiro lugar, exemplificada por uma mãe na Coreia do Sul que utilizou a tecnologia de RV para interagir com um avatar da sua filha falecida. Em seguida, o presente documento presta atenção ao Avatar de Inteligência Artificial de Lutero apresentado em 2023 pela igreja protestante de Renânia no dia da reforma, 31 de outubro. Esta experiência sem precedentes de figuras do património e da cultura que, enquanto avatares, interagem connosco através da tecnologia de IA, levanta questões complexas sobre a intersecção entre tecnologia, memória e cultura. A utilização de avatares do património da IA para estabelecer ligações com os falecidos e com as figuras do nosso património apresenta oportunidades e dilemas na forma como lidamos com a presença alargada (Gumbrecht) e a relação com o eternismo (Tanner), bem

como a relação entre a linguagem e a imortalidade (Gil). O potencial dos avatares de IA para alterar a nossa relação com a história, a temporalidade, a mediação, o testemunho, a memória colectiva e a identidade social e religiosa é vasto e justifica uma exploração cuidadosa, mas sobretudo crítica. Este é apenas um início preliminar da filosofia dos media dos Avatares da Herança cultural da IA. eternismo | herança cultural | tecnologia de IA | avatares de ascendentes

Palavras-chave

1. Towards post-mortem AI Avatars for Memory and Heritage

We relate to our past and our beloved ones, our common ancestors and historical figures, the cultural icons we popularize, and our collective histories. How do these relations to our past and memory change in the age of AI Avatars? How AI Heritage Avatars change our memory culture?

A mother in South Korea² lost her daughter and was immersed in VR to have encounters with her daughter's Avatar in virtual space. What was this experience of the mother that suddenly was able to somehow talk to the child lost forever in an animated VR experience? How did the mother experience this? A relieve from her pain of mourning. A case for the psychiatric care? As she might be fooled by the animated likeness of the Avatar of her daughter that had died? A form of relief — a afterlife communication, made possible by the most advanced technological means, from the pain of not being able to express her love to her daughter that died way too early, a mediation at distance, a fundamental possibility of communicating with the dead?

We do not know, yet. But we slowly gain an intuition about the power that post-mortem avatars might gain over our feelings of loss and solitude an especially if they touch

1 I want to express my humble thanks for the joint force that made the presentation of this paper in public possible, first of all thanks to my research unit CICANT, Universidade Lusófona, by the Portuguese FCT funding (DOI 10.54499/UIDB/05260/2020) for supporting my mission to Brazil, but foremost the UNESP University, Campus Marília, represented by Prof. Mariana Broens and Maria Eunice Gonçalves for making possible a post-Covid presential meeting in São Paulo, organized by Prof. Lúcia Dantas, Renata Silva Souza(PhD), among others of the minicurso “Estética e Memória na Era da IA” Faculdade de São Bento, São Paulo, Brazil, <https://www.faculdadedesaobento.com.br/curso-estetica-e-memoria-na-era-da-ia> on May, 8th-9th, 2024. Special thanks to Dom Camilo de Jesus Dantas, and Prof. Osvaldo Pessoa, Prof. Lucia Santaela, for their exceptional hospitality in São Paulo, Brazil.

2 Cf: “Korean Mother Gets Reunited with Her Deceased Daughter in VR... And It Will Shatter Your Soul.” 2020. Koreaboo. February 7, 2020. <https://www.koreaboo.com/stories/mbc-korean-mother-gets-reunited-deceased-daughter-nayeon-using-vr-crying/>.

our heritage, may it be distant or recent. The force of these synthetic media is about enabling us to think and simulate to talk to your beloved ones that have passed or that we do not have access to, if not by proxy. Or to restart a conversation with the dead, an ancient theme in media philosophy.

How we should judge this situation, as we all long for our dead, beloved ones that have passed, at the bottom, it is what re-ligio means: we re-link to our ancestors, our grandparents, friends, parents, sisters, or our cultural figures in rituals of remembrance, and communities of the living with the dead: cultures of humanity. Our ancestors these as well are our reference figures or our motivations in diachronic time, our heroes and foes, our hopes and “never again” orientations, our believes our deepest mistrust, in what already happened, and should never ever again do so, in the past, and let it stay there, or what was to be repeated to be hold onto- re-ligio- and we do not want to resurrect, but remember, maybe we have no choice to decide: as ghosts haunts us- Derrida’s hauntings in the time of synthetic “AI” media.

1.1 Thanabots: Deadbots, griefbots, postmortem Avatars

Chatbots (Jamisson-Powell et al 2016) and “videos that talk back”³ as if the character would be present to have a dialogue, have been created on data of the deceased, called either deadbots, griefbots, postmortem Avatars⁴ (Hollanek & Nowaczyk-Basińska 2024) or thanabots (Henrickson 2023), to interact with the dead as part of *digital immortality systems* (Galvão et al 2021) that allows as well communicating with the dead online (Krueger & Osler 2022): Should we use Heritage Avatars to enlarge presence and adopt personality capture (Savin-Baden & Burden 2018) to historical testimony? These authors think digital immortality systems in their complexity that we show here as a tentative graph:

3 ““I just wanted to be able to sit across from an individual who might not be with us anymore and feel as though I was having a conversation with them!” Heather Maio-Smith, CVO & Co-Founder, StoryFile” “Conversational Video AI SAAS Technology for Education and Business Solutions.” *StoryFile*, 28 Sept. 2023, storyfile.com/.

4 Hollanek & Nowaczyk-Basińska (2024, 64) note that “[i]t is also important to highlight that the literature employs a range of sub-terms for ‘deadbots,’ including ‘thanabots,’ ‘postmortem avatars,’ ‘griefbots,’ ‘ghostbots,’ and ‘mind clones,’ which, as of now, are used largely interchangeably without a clear differentiation or specification.”

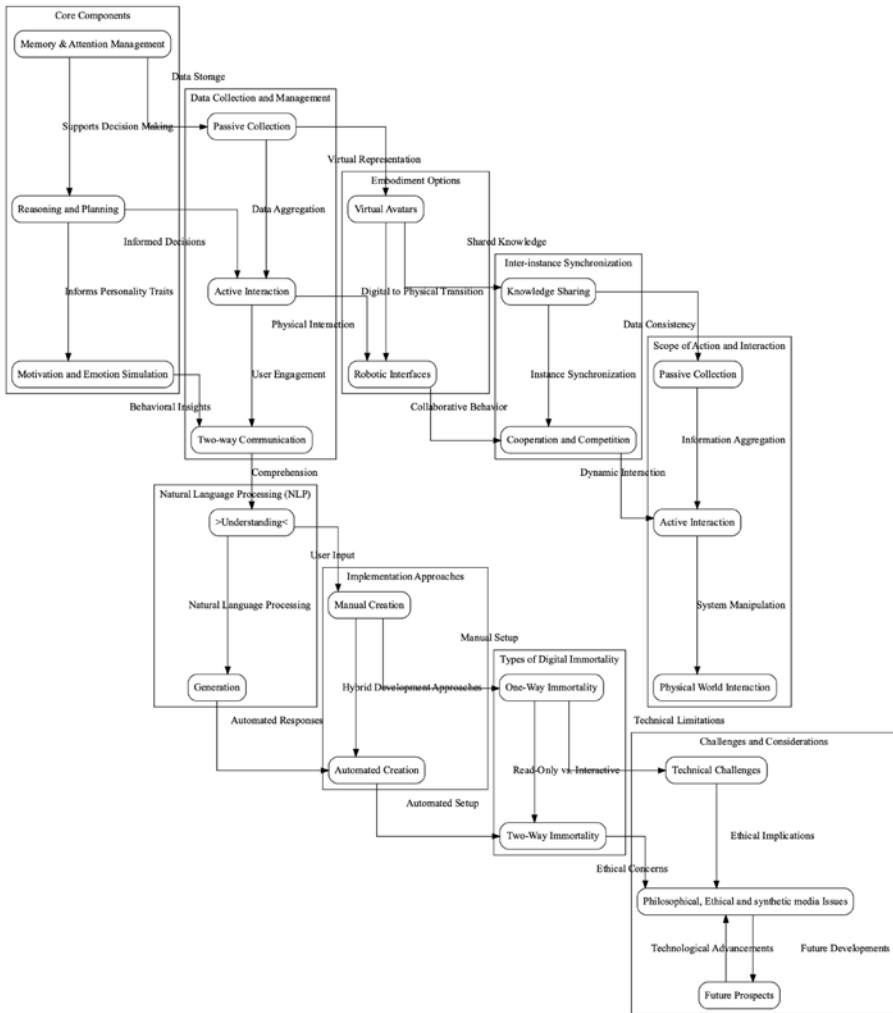


Figure 1
 Graph ideation of an AI Heritage Avatar system (©author) inspired by the descriptions of a “Digital Immortality System” as presented in the paper of Savin-Baden & Burden, 2018

Already filed in 2017, published in 2018 and granted in 2020, Microsoft developed a patent entitled "Creating a conversational chatbot of a specific person" (Abramson and Johnson 2017)⁵ that outlines the creation of artificial life chatbots based on the personal information of deceased individuals. The patent describes the process of constructing a chatbot using various data sources, including images, voice data, social media posts, and electronic messages. The chatbot could represent a past or present entity, such as a friend, relative, acquaintance, celebrity, fictional character, historical figure, or oneself. Additionally, the patent hints at the possibility of generating 2D or 3D models of specific people using images, depth information, or video data. Nevertheless, Microsoft has yet not developed a concrete 'Deadbot' up to date, due to ethical concerns. The company *Storyfile* that publicizes the AI Avatar of the actor of the role of Commander James Kirk, William Shatner, and his digital legacy has filed bankruptcy on May 9, 2024, that for training purposes granted access — until now- to ask 75- 1600 and more questions to train an AI Avatar for a "story for life":

-
- 5 "The patent US 10,853,717 B2 contains the following "Abstract: Examples of the present disclosure describe systems and methods of creating a conversational chat bot of a specific person. In aspects, social data (e.g., images, voice data, social media posts, electronic messages, written letters, etc.) about the specific person may be accessed. The social data may be used to create or modify a special index in the theme of the specific person's personality. The special index may be used to train a chat bot to converse in the personality of the specific person. During such conversations, one or more conversational data stores and/or APIs may be used to reply to user dialogue and/or questions for which the social data does not provide data. In some aspects, a 2D or 3D model of a specific person may be generated using images, depth information, and/or video data associated with the specific person." This patent is categorized in the *artificial life* category: "[G06N3/006](#) Artificial life, i.e. computing arrangements simulating life based on simulated virtual individual or collective life forms, e.g. social simulations or particle swarm optimisation [PSO]" (Abramson and Johnson 2017)

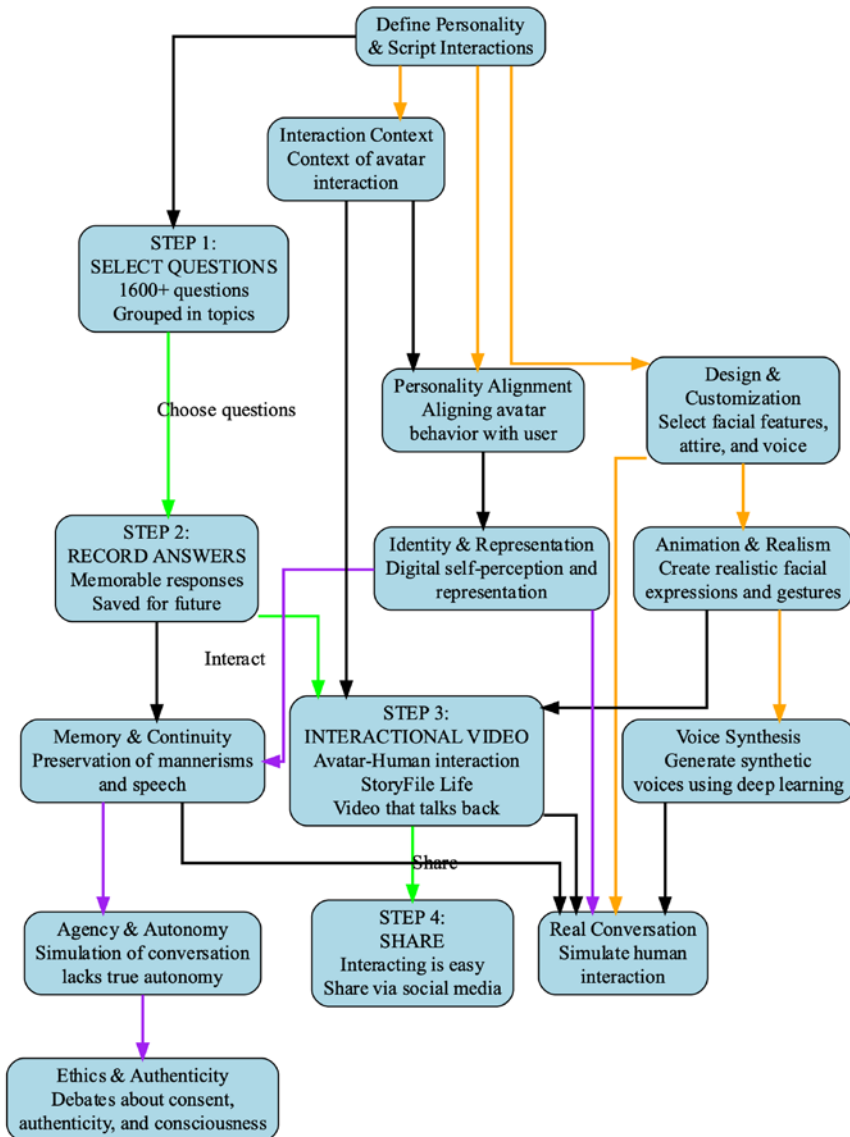


Figure 2
Conceptual Ideation Diagram to explain
the several steps in the process of creating
a “storyfile” AI Avatar; ©author

Generative AI in the Digital Afterlife Industry (DAI) means that generative AI applications are being used to create post-mortem avatars including re-creation Services that involve different stakeholders, including data donors, recipients, and service interactants. The interests, rights, and needs of all parties must be considered as part of the ethical Development of AI Systems in DAI. Transparent procedures should be in place for retiring deadbots, and meaningful transparency should be ensured for users. It is important to restrict access to adult users only and obtain mutual consent from data donors and service interactants. While developing Machine-Learning Chatbots Simulating Dead Individuals raise ethical questions regarding consent, respect for the dignity and memory of the deceased, and the responsibility of developers and users.

In the field of post-mortem avatars or deadbots, there are different types that can be identified based on their characteristics and purposes. These include a) *Personalized Chatbots*, which are designed to replicate specific deceased individuals using their personal data and past interactions to recreate their personalities, b) *Generic Avatars*, on the other hand, are not based on any particular person, but are programmed to imitate common traits or behaviors associated with the deceased in general, while c) *Therapeutic Avatars* are designed to provide comfort and support to those who are grieving, by offering simulated interactions with dead loved ones. Lastly, d) *Historical Replicas* or *Cultural Heritage Avatars* recreate historical figures or events for educational or entertainment purposes.

Each type of post-mortem avatar raises unique ethical considerations concerning consent, privacy, accuracy, the historical index, and the potential impact on users and society as a whole as much as the consequences for memory and historical consciousness in an age of AI endowed enlarged presence.

1.2 Museal and entertainment AI Avatars

A museum in the United States recreated an AI Avatar from Dali's handpicked lines and images- Dali LIVES⁶ — to eternalize him as an AI Avatar and as a museum celebrity to take selfies with museum visitors: AI Dali: "I do not believe in my death."

The Avatar embodies a attractive Museum media model that integrates memory, culture, and artificial intelligence. In some cases humans interact with Avatars as

6 <https://thedali.org/exhibit/dali-lives/>.

museum guides⁷, in others as a form of “living memory”⁸ (Pataranutaporn et al. 2023) for example of Leonardo DaVinci, or the naturalist Alfred Wallace⁹. The Digital Deepak app, on the other hand tells us in a Jimmy Fallon Late-Night TV show that his Avatar¹⁰ will outlive him and in the future communicate with his grandchildren talking about the TV show he is in at that actual moment in a situation of a “broad presence” (Gumbrecht 2014), *digital* immortality (Gil 2023) or foreverism (Tanner 2023).

Today we even can watch hologram concerts as *enlarged posthumous legacy*¹¹ of dead singers (Roy Orbison; Whitney Houston, Elvis Presley (Hall 2024)), or singing duets with their daughter for a VW legacy TV spot (Elis Regina with altered faciality by “facial recognition software to give the impression that the singer was performing” (Phillips 2023; VW¹² 70 anos), de-aged Avatars of still alive icons such as Abba, Kiss¹³. But still when thinking about memory cultures of AI Avatars as digital heritage — which in parallel to *artistic integrity* (Murphy et al 2023) of shared common experience appeal to the integrity of historic testimony, we consider mainly their posthumous entities such as their voice as “digital

-
- 7 Martí Testón, Ana and Muñoz, Adolfo. “Digital avatars as humanized museum guides in the convergence of extended reality.” MW21: MW 2021. Published February 1, 2021. Consulted June 24, 2021. [https://www.youtube.com/watch?v=sxfYDNx0MeY](https://mw21.museweb.net/paper/digital-Testón, Ana Martí. “Museology 4.0. A New Paradigm Arises from the Integration of Digital Strategies and Metaverse in Museums.” Essay. In <i>Digitalization in Business: On the Road to a Sustainable World</i> Publisher: Nova Science Publishers, edited by Rosa Medina and José Martínez. New York: Nova, 2022.</p>
<p>8 “We define a Living Memory as an interactive AI-generated <i>portrayal</i> of a person’s stories, attitudes, personality, and wisdom. We envision living memories to take the form of anything from a chatbot to an embodied, animated, and interactive photograph. Rather than “bringing the person back to life” or being “a clone of the person”, we conceptualize living memories as being similar to a photograph; like photographs, living memories are snapshots of people at specific moments in time and should not be thought of as the person themselves. Hence it is important that they are authentic and well-represent the data that they are trained on.” MyHeritage 2021</p>
<p>9 e-REAL by Logosnet. “Alfred Wallace, Avatar.” YouTube, May 21, 2024. <a href=).
- 10 The Tonight Show Starring Jimmy Fallon. “Deepak Chopra Uses AI Digital Deepak to Guide Jimmy through Meditation.” YouTube, January 29, 2020. <https://www.youtube.com/watch?v=LOa273lNdWo&t=13s>.
- 11 “The Rolling Stones/ Lots of other ageing stars are mulling holograms — not least The Rolling Stones. Guitarist Keith Richards said it was “bound to happen”, while the lead singer, Mick Jagger, went further, suggesting that a posthumous tour would enable their legacy to continue, and calling into question their sympathy for the devil.” Hall, R. (2024, January 4). *Ai Elvis not the first hologram star to shake his moves on stage*. The Guardian. <https://www.theguardian.com/music/2024/jan/04/ai-elvis-not-the-first-hologram-star-to-shake-his-moves-on-stage>
- 12 “The idea ... was to use artificial intelligence to create a unique moment that reunited ... one of the greatest singers in the history of Brazilian music, and her daughter Maria Rita, a contemporary icon,” the company said, adding that the production had the blessing of the singer’s family.”
- 13 “Your power has made us immortal. (...)The new kiss era starts now” from the promotional video: BubbleUp. (2024, January 4). *Kiss — a new era begins (the conversation)*. Vimeo. <https://vimeo.com/890053166/432d6a9749?share=copy>. cf. Sun, M. (2023, December 4). *Kiss unveil digital avatars at Final ever show: “we can be forever young and forever iconic.”* The Guardian. <https://www.theguardian.com/music/2023/dec/04/kiss-digital-avatars-final-show-madison-square-garden-tour>.

dust” (Kasket 2019) or a mediated illusion of immortality in digital time. This phenomena is exemplified by “ghosting” of movie actors such as the posthumous appearance of the digital doubles of actors such as Peter Cushing in the Star wars sequel movie *Rogue One* or the reappearance of Carrie Fisher on screen after her actual death, all made possible with the use of computer generated imagery (CGI) used to “de-age” and bring back to life characters, such as by DeepFake technology. But what is the uncanny moment about this?

We examine the technological platforms and ML techniques used to create legacy AI Avatars and the difficulties they entail in relation to testimony, truthfulness, and the invention of future pasts. AI Avatars as metahuman digital twins offer new perspectives on human-machine relationships in Memorial AI in the sense of transgenerational tele-presence able to share gaze and facial expressiveness that is thought to be almost indistinguishable from an actual presence of a person or object and to enhance our sense spectrum through new artificial digital media senses that could be called immersive digital sense of anticipation (Forshadowing) of proximity to an object, person, its time and history.

Another example are *Memorial* (e.g. Deepbrain AI’s Avatar service, re;memory), AI Avatars services that create digital representations of deceased individuals using photos, voice and videos provided by their consent or by their hers. These avatars can be used as virtual companions, tools for grieving, or to relive fond memories. We are talking about the cultural impact of Heritage Avatars on how we remember people, how we interact with the dead, how we create not only digital dust, but think and interact with digital people or virtual humans that have a relation to the once lived figure in family or cultural history.

While Digital twinning is the process of creating a digital replica of a physical entity, such as a person, an object, or a system, the synchronization rates and fidelity measures between physical and virtual “personhood” become questionable in a digital twins’ efficacy of AI heritage Avatars. Thus, the potential ethical drawbacks of data ownership, and how diachronic artefactors (Gerner 2024), that is digital twins that act as if being alive and present, and as such transform our perception, sentiment, and sociality in relation to the physical original has yet to be fully explored. The advent of generative AI avatars as synthetic humans and digital proxies therefore expands the concept of digital twins beyond representational models and fosters enlarged digital presence, even labeled “Eternity¹⁴”. Digital twinning in this way gains a new cultural significance in the context of heritage and memory culture, such as mourning and collective memory, or perseverance and

14 Virtual K-pop “Eternity” or MAVE (Virtual girl group as Metaverse Entertainment) “Eternity and MAVE: are examples of virtual idol groups created solely with technology. Eternity, an 11-member group created using artificial intelligence, debuted in March 2021. PULSE9, Eternity’s producer, is one of the leading virtual human technology companies in the country. The company entered the virtual human business market in Japan by signing an agreement with Realize Innovations, a Japanese IT company under SoftBank Group, on Dec. 28.” Jung-Youn, L. (2024, January 3). *Virtual idols open up new possibilities for K-pop*. The Korea Herald. <https://www.koreaherald.com/view.php?ud=20240103000634>.

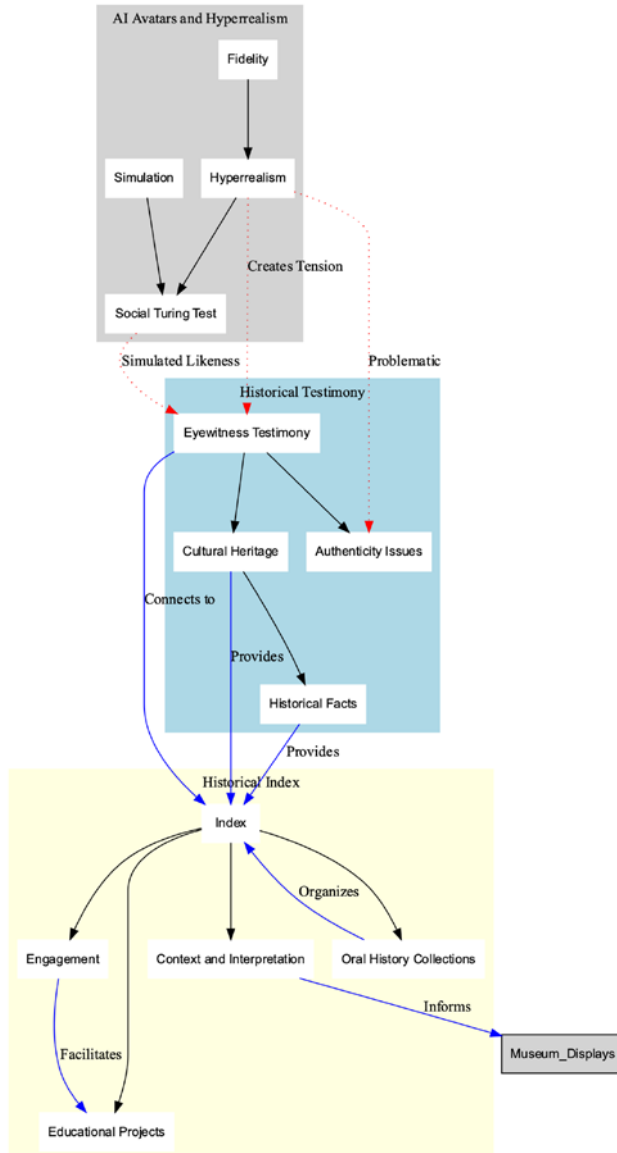
influence of legacy through creating a virtual representation of someone who has passed away or preserving a group identity via digital techno-totemistic praxis of AI Avatars. Currently, the focus is mainly on creating visual representations of the heritage, which often involves creating avatars. These avatars can mimic deceased individuals' appearance, bodily gestures, voice, and personality. Klevjer (2022) has classified avatars based on the degree of visual and immersive embodiment and the degree of narrative involvement of the first-person player experience. While these dimensions help us understand how we play our avatars in gamified interaction, they do not necessarily explain how avatars relate to diachronic experience of collective memory, heritage, and testimony via heritage and testimony avatars. Zhang et al. (2022) argue that digital twins for tangible and intangible cultural heritage are still in their early stages of development. The use cases of people already deceased and their digital resurrection (AI Avatar Doubles raise as well questions about the nature of temporality, testimony, and wisdom in the digital age. Therefore the challenge this paper explores in digital heritage, legacy, and after-death Avatars as synthetic generative media doubles in which themes in AI-endowed stochastic-probabilistic, algorithmic, and data-driven cultural practices related to Heritage Avatars (cf. the survey article 2003-2022 by Sylaiou & Fidas 2022), distinguish User-Avatars such as generated by the Lensa app that lead to a Magic Avatar Lensa App lawsuit (Thibodeau 2023) related to (AI-endowed) Digital or Virtual Humans, their role in preserving legacy and heritage and presenting intangible cultural heritage and historical mediatic figures, that form legacies and new forms of museum storytelling (Spallone et al 2024), the theme of digital totemism and techno-animism inside AI endowed stochastic-probabilistic, algorithmic and data-driven cultural “religio”/heritage practices concerning non-human digital “persona”-masks animating by presentification (Vernaut 1990, 152) of the dead, or the actualizing of the spectral¹⁵ by Avatars.

The use of AI Avatars, including famous people and artists such as AI Avatar of Dali, historical figures — such as the protestant reformer Luther, not only being names in a file of facts being preserved in an online or material archive¹⁶ but “coming to life” of personal, family or cultural, historical and even religious heritage and legacy preservation by AI-based proxies created from pictures, videos, voice models, and text documents, as a means of preserving synthetic Avatars as memories and experience media for future generations, that questions the status of animated heritage in the sense of the historical index, as shown in the following graph:

15 With José Gil we can think digital immortality, in the worst case scenario -as thought experiments of spectral resurrections of the undead from Hitler to Lenin as an tyrannic Specter-human (Gil 2023, 209) or “dark historical heritage Avatars”.

16 Cf. a) the United States Holocaust Memorial Museum. (n.d.). *Arolsen Archives Online Archive (ID: 46460)*. United States Holocaust Memorial Museum. https://www.ushmm.org/online/hsv/source_view.php?SourceId=46460. b) The Wiener Holocaust Library : Testifying to the truth : Eyewitnesses to the holocaust. (n.d.). <https://www.testifyingtothetruth.co.uk/viewer/>.

Figure 3
The complex problematics (the dotted lines) of the historical index and historical testimony and in the age of hyperrealist AI avatars, ©author



In the above graph the problematic tension of hyperrealism of AI avatars on the reliability of eyewitness testimony in the context of cultural AI-generated heritage avatars and historical indexing is shown. It explores how AI-generated images and avatars can simulate human likeness to pass the social phenomenological social Turing Test (Meta 2019). It emphasizes the importance of historical indexing in connecting eyewitness testimony to cultural heritage and historical facts. The historical index is described as a tool for providing context, interpretation, and engagement, particularly in educational projects and oral history collections.

The Reformer Luther animated by ChatGPT as Avatar on the Reformation day of the protestant Church of Rhineland 31st of October 2023, and reading the Christmas story

The AI Luther avatar experiment (Reiman 2024; EKIRInternet 2023) aims to bridge historical and contemporary contexts, allowing people to directly engage with Martin Luther's legacy through cutting-edge technology. The Protestant Church of Rhineland, Germany, has developed an AI-powered 3D avatar of Martin Luther for a start on the 2023 Reformation Day, which has piqued interest and curiosity, and since then is applied in several occasions of the Lutheran Protestant-Christian calendar. The avatar's likeness is based on a Cranach painting of the historical reformer, which was transformed into a photorealistic 3D representation using AI algorithms by XRhuman. The interactive experience allowed people to share their questions with Martin Luther via the YouTube chat on October 31, (1517), but as part of the *religious digital transition* in 2023. ChatGPT processes the questions of the religious users, and responds in a style consistent with a 21st-century Martin Luther Avatar. The AI-generated answers- the pitch of his initial voice in October 2023 is already tuned down to a more grave voice- are then converted into audio using a text-to-speech engine and fed to the avatar. This allows viewers to directly engage with Martin Luther and receive real-time answers, providing an interactive experience as if he were alive today. The project's goal is to make the Reformation's message tangible for the modern era. Technical details include the creation of Luther's robe by 3D scanning a colleague for a realistic avatar and manual content filtering to ensure ChatGPT's responses align with the project's intentions.

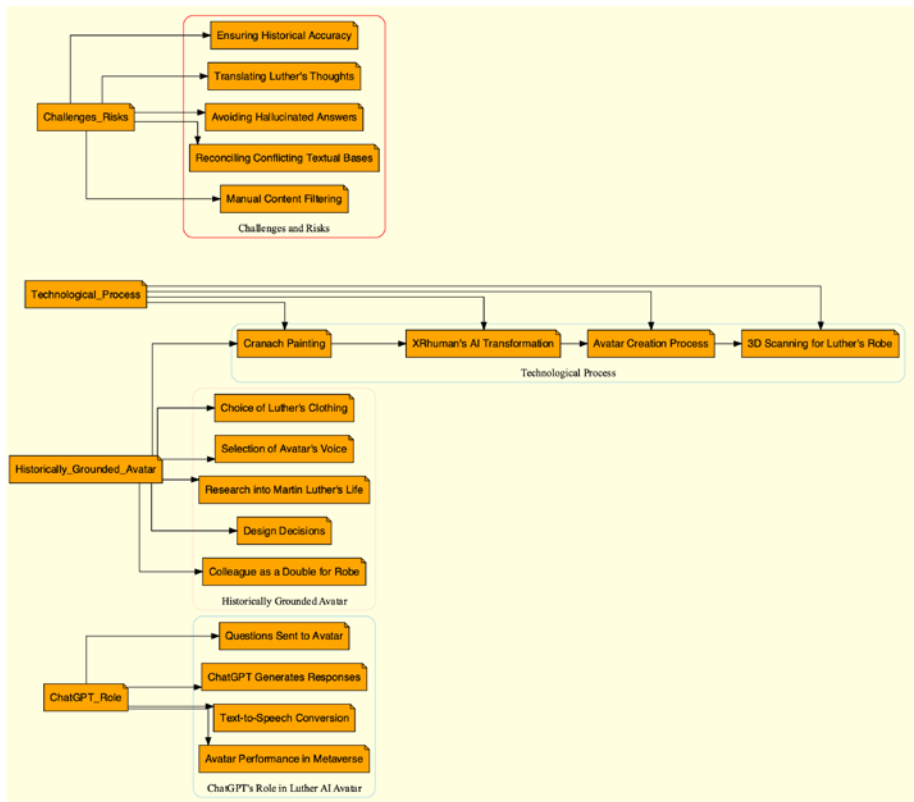


Figure 4
 Diagram of the Luther Avatar Ecosystem
 including Challenges/risks, Technical
 Processes, and the Role of ChatGPT, ©author

Luther's AI Heritage avatar is thought as an educational tool to transport the message of his time into a contemporary frame in the example of how Martin Luther's 95 Theses are transposable into the 21st Century. The question "In a world shaped by digitization, social media, and global challenges, how would Luther summarize his 95 theses today?" the answer¹⁷ provided by the AI Luther avatar according to ChatGPT showed that the Luther AI avatar provided a modernized interpretation of Martin Luther's ideas, highlighting the parallels between materialism and the sale of indulgences. The ChatGPT mediated answer, supposedly encourages authenticity in the face of social media distortion, advocating individual truth in the age of information overload, and emphasizing an contextual and actualized interpretation of the Bible. The avatar also recognized the need for the church to address current issues while upholding its values, and reminded the spectators of our responsibility when using the internet.

The challenges in addressing these concepts include data bias, complexity, and trade-offs for antibias bias, and simplification, anachronism, and selective bridging for the bridging problem, while the solutions and benefits encompass fairness-aware algorithms, debiasing techniques, transparency, interpretability, education, and empathy.

Historical consciousness encompasses the temporal distance between past events and contemporary society, the use of digital tools to make historical figures and ideas accessible, the translation of historical concepts into modern contexts for meaningful engagement, and the encouragement of critical analysis to understand historical complexities. However, challenges such as oversimplification, anachronism, and unequal attention to different historical events need to be addressed when modernizing and bridging historical narratives.

17 Luther Avatar: "Today's world is characterized by materialism and consumption. This reminds me of the time when the church sold indulgences. It's easy to get lost in these things and forget the true meaning of life. Social media can be deceptive. While they connect us, they can also create a distorted reality. It is important to stay genuine and not get carried away by these online personas. / The internet is a double-edged sword. There is so much information out there, and it can be difficult to know what is true and what is not. It's like back when I wanted to make the Bible accessible to everyone. Everyone should be able to find the truth for themselves./The Bible is still relevant, but we need to see it in the context of our time. It's not about taking it literally, but understanding its message./The church faces many challenges today. It needs to remain relevant while preserving its values. It's not just about religion, but also about how it positions itself on current topics./The internet can be used to do good, but it must be done responsibly. It's easy to hide behind a screen, but that doesn't mean you're not responsible for what you say or do./ There are many different beliefs, but at the end of the day, we all have more in common than differences. It's important to recognize that and work together./And finally, the church should not shy away from difficult questions. It should be ready to deal with the issues of our time and take clear positions."/Summary of Martin Luther's 95 Theses by ChatGPT in the 21st Century"/ <https://theonet.de/2023/10/29/martin-luther-as-an-ai-powered-3d-real-life-avatar-answers-questions-live-on-youtube/>.

The curation problem of “historical grounded” Avatars

How can we refrain from sanitizing the past? By selective interpretation and actualization of the Luther legacy we might introduce an anti-bias bias oversimplifying the difficulties that lie in historical figures such as Luther. Luther’s antisemitism is well studied (cf. Kalimi 2023; Pangritz 2017) and documented, however, to avoid the distribution of antisemitic thought or otherwise unethical content, the unacceptable positions of the historical church reformer, including his catastrophism, has been selected out from the training set that was curated with the expertise of the Protestant Church of Rhineland. While these preselection decisions — as AI curation problem- have their valuable reasons, they imply rewriting history and memory culture that often deals and handles historical facts or figures that are not always one-sided or either on the right or wrong side of history but entail complexity and a historical consciousness to understand history, heritage and its difficulties and problems. The challenge of avoidance of bias (e.g. racial/ethnic/gender biases) even leads to surreal outcomes as shown in the generative AI Gemini (Google) LLM model that in prompts such as “German soldier 1943” (Milmo 2024) generated not only dark-skinned German Wehrmacht but as well Asian women wearing German soldier uniforms, introducing an anti-bias bias.

Our exploration here focuses on a diverse array of Heritage Avatar types, from the values and perils of Dali to the influence of Luther and the Legacy Avatars, such as Elis Regina’s memorable VW commercial. The key question we seek to answer is: How does the use of heritage Avatars reshape our experience of temporality, testimony, and fidelity to our past? And how does the digital production of seriality, statistical combinatorics, and narrative, visual, and historic fluidity, as seen through the lens of Gumbrecht’s (2014) concept of broad presence -which I interpret as an expanded Avatar presence- not only enhance but also intensify our sense of embodied presence, thereby broadening our experience of a past reality? This emphasis on digital production serves to enlighten and inform our understanding of history, temporality, technological mediation in testimony, collective memory, and social identity.

How do they perform memory, grief, loss, memorial services, and mourning rituals as externalized communication and interaction with the deceased via Machine Learning AI? In the absence of concrete and truth-establishing indexical relations, Heritage Avatars embrace a problematic stance of suspended or diffused index. They might adopt a stance of “generic pastness,” (Roland Meyer), “diffused memory” (Lev Manovich) implying enlarged presence and generic futureness, and generative stylization of historical footage, images, sound, voice, text or other data that feed into the platforms and LLMs of generative media. AI Heritage avatars can help us feel a connection to the past, present, and future in a more immersive and emotional way. These avatars can create a sense of broad presence by stimulating our senses and emotions, which allows us to feel the intensity, atmosphere, and aura of different historical moments, cultural settings, and personal encounters. Moreover, AI Heritage avatars can challenge some

of the modern conceptions of history and time, such as the idea that the historical past are fixed and stable events that can be objectively and rationally reconstructed, or the idea that the present is the main dimension of time that matters and that can be experienced and acted upon, or the idea that the past and the future are homogeneous and uniform entities that can be easily categorized and generalized. However, I agree that this is a slippery slope of uncanny coming to life of the past in which historical events and personalities in “Harry Potter Style” (Eisikovits 2021) of an envisioned interactive newspaper are animated and narrated. AI Heritage avatars show us that the past and the future are dynamic and changing processes that can influence us in unexpected and unpredictable ways, and that the present is not the only or the most important dimension of time, and that meaning and representation are not the only or the most valuable modes of experience and action.

Post-mortem AI avatars are envisioned as new technology for cultural heritage and *historical education*): Historical education (on figures such as Mahatma Gandhi or Nelson Mandela) is one of the point mentioned as positive effects of Deep-Fake technologies in the review of the technology of Dagar & Vishwakarma (2022) despite using the Obama deepfake as warning about DEEPFAKE as a paradoxical and self-reflexive example of the technology that might not always be the case and switch from self-reflexive stance to manipulation. What about cases in which the manipulation of a polemical historical figure such as a living one diminishing epistemic trust in a political manipulation or war (Twomey et al 2023) or pre-war propaganda? Who has the right or liberty to be depicted in a Heritage Avatar and who should we not “re-animate” as dark Heritage Avatar?

Artificial Intelligence can be a way of presentification of experience of a museum goer and a memory culture of preserving, honoring, and keeping alive what should never be forgotten, such as the singular important testimonies of Holocaust survivors (cf. the *Dimensions in Testimony Program* (Bloom 2023) by the *USC Shoah Foundation based at the University of Southern California*) and engaging future generations by *educational use* of Deep Fake technology. In this case the AI is used to choose excerpts of interviews that have been done in beforehand letting still alive Holocaust survivors testify in front of a green screen for hours of documental material creation. Then in the finished museum piece visitors such as school classes can ask their own questions to the interactive video installation, and get an AI chosen answer out of the documented testimonials.

However, creating AI chosen responses from a set of prerecorded testimonial interview parts- to visitors questions -we could argue- unintentionally creates *historical testimony avatars* and as such raises ethical and philosophical questions of AI- mediated memory and dialog systems, the authenticity of the encounter of historical testimony by AI choice of the adequate testimonial responses with the consent of the interviewed historical witnesses in a context of memory culture in the AI age.

The potential of AI avatars to change our relationship to history, temporality, mediation of testimony, collective memory, and social and religious identity is vast and

warrants careful but foremost critical exploration. Digital heritage preservation raises questions about the authenticity and accuracy of historical representations (*AI-enlarged historical index*), and the potential for cultural appropriation or historic narrative and affective aesthetic misrepresentation playing with co-presences from the past which includes itself in the spectral or haunted media (Sconce 2000) theory of disembodiment in electronic presence from telegraphy to television starting from Francis Roland to Samuel Morse overcoming not only distance in communication by media of telepresence, but as well mediating final absence of the deceased (Stokes 2021) of electric corpses, including stewarding the online dead (Kasket 2019,133-166) and networked ghosts. It also highlights the potential risks of identity theft or the loss of individual agency and autonomy in a world increasingly dominated by digital technologies (*digital podhood*).

One case in point is the uncanny valley issue of an animated image and cinematic experience of a gamified, or AI endowed Avatar, other issues are related to the problematic aesthetic-ethical issue of generating or creating memory *kitsch*, as an issue in artefactor relation of mimetic substitution of real experience in the sense of the holocaust survivors a rare possibility is left as, almost all survivors become older, before it will not possible anymore to have direct contact and face2face encounter with them.

By applying Gumbrecht's concept of an enlarged presence enabled by real-time¹⁸ AI avatars and ML/CGI technologies we challenge our traditional notions of identity, temporality, and cultural heritage that give more emphasis to now, presence or immersion.

The concept of "now" (Coleman 2020) in digital media is not a fixed moment in time but exhibits a remarkable fluidity, capable of being stretched, compressed, or paced according to various factors such as technological affordances, user interactions, and platform dynamics. This fluidity gives rise to a multiplicity of "nows," each with its own temporal characteristics. Users actively participate in shaping the temporal dynamics of digital media platforms, imbuing "the now" with subjective meaning. However, certain platforms, technologies, or actors may have the capacity to exert influence over the construction and representation of "now," privileging certain temporalities over others. This may result in the marginalization of alternative temporal experiences and perspectives, reinforcing dominant narratives and structures of power within digital societies.

As this paper explores the potential to inherit or pass down AI endowed, cloud-based and other platformed avatars as proxies of heritage and legacy to future generations and synchronisations of algorithmically (Miyazaki 2018) mediated temporal experience in

¹⁸ As Kitchin (2023:40-41) notes in relation to Coleman on real-time there are (...)“varying forms of ‘realtimeness’. As such, there is a **multiplicity of the present** (Coleman, 2018[!]). For example, ‘Twitter creates a real-time, **live connected present**, while Netflix produces ... a **suspended or expanded present**; ... the present is not a static digital technologies and temporalities [41] or homogenous temporality but rather it is (capable of being) **stretched and condensed, expanded and contracted, sped up and slowed down**, in various ways’ (Coleman, 2018[!]: 3). Real-time is differently compressed and paced (Coleman, 2020) and the present is active, flexible and malleable (Coleman, 2018[!], 2020).” My emphasis

growing now's and enlarged digital presence culture, we ask: can Generative Adversarial Networks (GANs), Transformers, and other LLMs using Natural Language Processing (NLP) and conversational systems, joined with Computer Vision/facial vision, recognition, Speech synthesis, Speech Recognition, and other Deep Learning models, be utilized to create AI-technologically mediated “accurate” and historically adequate or even truthful intergenerational AI Avatar representations as heritage and testimony of future pasts? Can Avatars not only be a virtual proxy and direct representative delegate of a real person synchronized in its presence, but as well change our relationship to the past, history, temporality, diachronic experience and become AI-media of testimony, collective memory, and social identity between generations?

2. AI Heritage Avatar drive towards foreverism:

2.1 What's wrong in Layton's “Expanded Childhood”

Foreverism, as conceptualized by Grafton Tanner, represents a departure from his former notion of nostalgia.

(N)ostalgia is, which for me is a human emotion that's experienced when we encounter something that isn't normally encountered in the present. It could just be in our minds, like a memory of something from the past, that is no longer in our world anymore. Or maybe it's encountering something like an old car or something that's been restored and we see it. It's not normally seen in our day-to-day life, and so when we see it, we feel that tug toward the past. (Tanner, in Marx, February 24, 2022).

The concept of ‘foreverism’ handles the preserving of things in time or maintaining a sense of stability, seen as a response to the declining belief in progress, where people feel stuck and crave a sense of constancy. In the realm of politics, foreverism is evident in the promises to restore a nostalgic past, like the “Make America Great Again” slogan, which suggests a return to a glorified US-American era, that actually lies in the past. The promise of restoration of the former, or the past acts as both a trigger for nostalgia and a cure for it, as it implies that once the past is reinstated, there will be no need for further longing.

While nostalgia typically involves a longing for elements of the past, the concept of Foreverism and the technical AI tools such as “DeepNostalgia” goes beyond mere digital preservation of remembrance objects such as old family photoalbums and videos and Super-8 family footage, as it changes the past in a form of a deepfake generative AI parallel of a kodakization¹⁹ of memory in the beginning of the XXcentury — *you provide*

¹⁹ Comparing Adobe's AI tools with the concept of “Kodakization” involves further examining their

the prompt/media input, we generate the rest — as shown in the winning film “Expanded Childhood” (Lawton 2023). The film of Sam Lawton “Expanded Childhood” that received a merit award at the 2023 AI AIFF²⁰ film festival created by *Runaway* (Tortum 2024), utilizes an artificial intelligence technique known as “outpainting,” which is a version of “Generative Fill,” recently added to *Adobe Photoshop*, but as well available in other Generative AI imaging tools such as *DiffusionBee*. The AI image model examines the filmmaker’s childhood photographs, predicts what content could be outside the frame, and reimagines the world beyond. These enhanced photographic memories are expanded through the use of AI. Still, as they grow, they also become more generic and lose their specificity, blending into a more extensive collective representation of the past, but also add ghostly faces, multiplied dogs in a bathtub and scary clowns on children birthday parties that the author’s father seeing a family photo slideshow in very low voiced, voice-off comments with “something’s wrong”, or “This is not how I remember it.” ““No, that’s not our house. *Wow*—wait a minute. That’s our house. Something’s wrong. I don’t know what that is. Do I just not *remember* it?” (Goode 2023). While for Susan Sontag (1977, 5) the photography was a tangible evidence device of forensic and incriminating experience in the sense of attributing permanence to transient moments, the generative AI past is not only related to extended, externalized mind and memory approaches in relation to smartphones (Eliseev & Marsh 2021), but part of a growing intimacy of media and our body, integrating and behaviorally activating our interaction with our heritage in which artificial memory, leads to stronger dependencies as well to the expansion and regeneration of the past — until its collapse (Goode 2023), diffusion, or generative generality- and remediation of past media inside new synthetic media, such as by AI Heritage Avatars.

Blending Authentic and Artificial Memories, as demonstrated in the film student Sam Lawton’s “Expanded Childhood,” AI can modify and expand photographs, creating hybrid memories that blend real and generated elements. This challenges the authenticity and specificity of personal and collective, (deep) fake generated and recorded memories.

impacts on memory culture and visual narratives. Adobe’s AI enables users to insert new elements into photos based on text prompts. In contrast, “Kodakization” refers to Kodak’s popularization of photography, democratizing image-making and influencing cultural memory through mass proliferation of photographs in the 20th century. “Kodakization” facilitated the widespread documentation of everyday life, contributing to the formation of collective memory through photographic archives. Adobe’s AI, however, represents contemporary image manipulation, enabled by advanced machine learning and digital editing software, Adobe’s AI offers unprecedented flexibility and control over visual narratives, potentially leading to misleading representations of reality and the past. Comparing these phenomena provides historical insight into the evolving relationship and differences between 20th and 21st century technologies, memory, and visual culture in the digital age.

20 <https://aiff.runwayml.com/2023>.

The concept of AI heritage avatars hereby encompasses the idea that through technological mediation, historical figures can be brought to life in the present, fostering a sense of immediacy and tangibility. This allows for real-time interactions, creating a bridge between the past and the present, ultimately shaping how future generations will engage with these historical figures in a post-digital age in which synthetic media play a stronger role in how we communicate and live by. However, the dispersion of memory across various digital platforms, while ensuring continuous accessibility and modifiability, also poses the risk of diluting the unique aspects of these memories. When critiquing Stiegler and Hui's approach in analyzing AI-driven memory culture transformation, it becomes evident that their frameworks may not fully capture the nuances introduced by generative AI, particularly in the context of AI heritage avatars. In the case of the AI Luther Avatar, which in its curatorial training set deliberately excludes controversial aspects of Martin Luther's legacy, highlights the limitations of selective memory and ethical filtering that we could call anti-bias bias. In my view, Stiegler (tertiary retention) and Hui's (terciary protentions that despite criticizing the totality of presentism of the now of the XX century archive²¹ frameworks with its "*directedness to the future*" (Hui 2018, 147) still tend to emphasize the transformation of memory within the model of recursion through technological mediation into future directedness, but from a techno-phenomenological driven point of view without sufficiently addressing how generative AI can homogenize, sanitize or massively live edit²² AI memory, historical narratives by operational de-ontologisation (cf. Gramelsberger 2023), leading to a generic pastness and a generative futureness, where complex and controversial aspects are smoothed over or antibias curation filters are introduced, due to the fact that hallucinations — as vehemently shown in manipulative "lovebombing" (Roose 2023) Bing Chat conversational persona mask Sydney, before this AI chatbot trained on GPT3.5/4

21 "An archive is not just a relic from the past or some accumulation of outdated material: rather, it opens a path *to* the past in a way that *anticipates* a future. The archive is in this way *always* the present, or better it is a kind of 'against becoming,' if we can so construe the etymology of the German word *Gegenwart* (gegen-werden): it resists the 'no longer' and the 'not yet.' The archive is the totality of the present, a totality of relations that constantly modifies both the past and the future in every passing 'now.'" Hui 2018, 131.

22 The concept of mass-editing memory in a Transformer (Meng et al 2023) signifies a significant change in how historical narratives could be constructed and disseminated. This technological capability challenges traditional ideas of historical authenticity and authority, as it allows individuals to actively shape and revise collective memory in real-time. The combination of artificial intelligence and historiography raises important questions about truth, representation, and cultural memory. Mass-editing memory provides unprecedented access to dynamic, evolving historical knowledge, leading to a pseudo-democratization of history where diverse voices and perspectives contribute to a non-specialist understanding of the past. However, ethical considerations about the responsible use of this technology, particularly in preserving cultural heritage and mitigating bias, must be addressed within critical media literacy that fosters a memory culture that reflects our collective complexities and aspirations.

in an antibias curation in the beginning of 2023 was “lobotomized” (Edwards 2023) — should be avoided and unacceptable biases (Ananya 2024) of AI models should be removed- AI, that, however, in turn leads to censoring and correcting historical complexity by contemporary value or moral filters. Here we deal with persuasive computing of LLMs that instead of recurring and adding to specific data in a training set or archive, takes hold of the influence function by removing training examples (Grosse et al 2023, 9). To comprehensively analyze the impact of generative AI on collective memory curation culture, first we have to need to accept that the idea that a LLM would become able to “understand” or to share compute with “meaning” is even mathematically unsound (Merrill et al 2021), and concepts such as synthetic curated memory, and generative narratives provide a more nuanced understanding of the ethical, cultural, and ideological implications of AI heritage avatars. These concepts shed light on the dynamic and sometimes contentious nature of AI-generated memory, emphasizing the need for critical engagement with the construction and interaction of digital pasts.

2.2 Foreverism and AI Heritage Avatars

Instead, it seeks to keep the past fully present to consume perpetually and profit from it. This relates to Gumbrecht’s enlarged presence. In Foreverism, the past is not something to be remembered fondly but rather a continually marketed and sold commodity: Foreverism is expression of not just a political strategy but also a cultural phenomenon, as seen in the digitization of memories and Cultural and creative media Industry (CCI). Companies like iMemories offer to “foreverize” analog memories by digitizing them, implying that digital formats will last indefinitely. However, this promise of eternal preservation overlooks the vulnerabilities of digital infrastructure and the impermanence of technology. Tanner highlights how foreverism operates as a response to uncertainty and dissatisfaction, offering the allure of stability and continuity. Tanner argues that the relentless churn of cultural franchises, such as the constant stream of reboots, sequels, and spin-offs in film, television, and other media, exemplifies Foreverism. These endeavors are driven not by a genuine desire to revisit beloved stories but by commercial interests seeking to capitalize on nostalgia for profit. Foreverism aims to ensure that consumers never feel a sense of longing for the past because it is constantly available and being rehashed in new forms. Foreverism relates to much broader socio-political histories, affecting our understanding not only of identity and memory culture but also of cultural consumption at large. It influences our collective perception of history and identity by promoting nostalgic narratives and reusing existing intellectual properties. Nevertheless, Tanner points to a relentless quest for profit by finding ways to generate income from past experiences or resources, and this might by foreverizing even lead to ultimately reverse its intrinsic goal: deteriorating original effects and a possible decrease in consumer interest.

What in Grafton Tanner’s book “Foreverism” surfaces is the intersection of

technology, nostalgia, and a deep human search for deep nostalgia (MyHeritage 2021) that might trigger a wish for digital immortality.

When we foreverise, we revitalize things that have degraded, we emend the failed and scattered, or we remodel of what has disappeared, however following our own patterns and rules and not necessarily doing justice to the past person, event or historical heritage. What are the rules for allow passed voices or persons to remain active in the present? Cloned voices²³ and digital twins such as Avatars or AI Avatars that mimic iconic and historical figures fall within this concept. They reanimate and protect aspects of the past, perpetuating the illusion of continuity.

Foreverism reflects on the implications of the belief or implication that certain aspects of life, such as memories or experiences, can be preserved indefinitely, often through technological means and contrasts between nostalgia for analog media and the convenience of digital preservation, questioning the reliability and longevity of digital storage technologies compared to physical media.

Cloned voices allow us to hear the familiar tones of historical figures or loved ones. They bridge the gap between past and present, blurring the boundaries of time- despite all the problematic of misuse cases or appropriations of the specter of the others via stealing his or her voice. Digital twins as virtual replicas of physical objects or processes that immortalize real-world entities, enable ongoing monitoring, analysis, and interaction, for instance in a digital data analysis setting, in which the interaction of museu visitors or entertainment consumption and audience as study object is measured.

23 Even if not admitted by Sam Altman, the CEO of OpenAI, posted the single word “her” on X on the 13.05.2024 — the introduction day of the GPT4o model: <https://x.com/sama/status/1790075827666796666>.) which makes a clear reference to the film in which Scarlett Johansson lend her voice to an AI operated voice system that the main character falls in love with, the voice of SKY the voice model of OpenAI sounded exactly like the voice of the famous actress, and Johansson even gave notice that Altman tried to convince her to do the voice for OpenAI, which she had refused: “Two days before the ChatGPT 4.o demo was released, Mr. Altman contacted my agent, asking me to reconsider. Before we could connect, the system was out there. As a result of their actions, I was forced to hire legal counsel, who wrote two letters to Mr. Altman and OpenAI, setting out what they had done and asking them to detail the exact process by which they created the “Sky” voice. Consequently, OpenAI reluctantly agreed to take down the “Sky” voice. In a time when we are all grappling with deepfakes and the protection of our own likeness, our own work, our own identities, I believe these are questions that deserve absolute clarity. I look forward to resolution in the form of transparency and the passage of appropriate legislation to help ensure that individual rights are protected.”Scarlet Johansson from: <https://x.com/BobbyAllyn/status/1792679435701014908>.

3. Language as trigger for digital Immortality: Starting to Think AI Heritage Avatars with José Gil

The perception that digital storage technologies offer permanence and immortality to memories, despite the inherent vulnerabilities and impermanence of physical infrastructure of anything digital, creates an illusion of immortality through digital preservation, as the abstraction does not think its incarnation, or its Avatars. This technological abstract optimism urges us to caution and rethink of a backup strategy to avoid not data loss, but our double culture of memory and forgetting.

How should digital technologies preserve historical artifacts and cultural heritage, how should we forget despite our digital doubles? Are these new entities robust preservation methods of our heritage? The cultural shift in the belief of digital technologies inside our memory culture towards digital preservation impacts the perception and value of memories and experiences. “Foreverism” raises awareness of the risks associated with relying solely on digital storage for preserving memories, that in the age of generative AI could be purely fabricated or mixed up. It urges us to consider implications, such as issues of privacy, ownership, and the commodification of memories by eradicating the longing for the past by a digital and AI aided presentification of the spectral. Nevertheless, thinking about heritage Avatar we should not forget the necessity to live with the dead as proposed by José Gil:

The dead are part of the community of the living. There is no community without them. Society brings together not only living beings, but also the dead and ancestors. To speak of the human community as a group made up exclusively of the living is to mutilate reality. (Gil 2023, 207-208, my translation from the Portuguese original)

For Gil it is language that inherently carries a drive for immortality (language foreverism), as it enables us to express our beliefs, memories, and desires beyond our physical lifespan. This language immortality drive- that Gil describes- can be redoubled in the development of AI avatars as post-mortem agential systems that by applying Gils view could be called *digital spectres that outlive us* and speak of us after we have gone, by reinstating the past and gone time, and thus enlarges the pursuit of digital preservation technologies to a shift in temporality experience. According to José Gil in his 2024 interview in the Portuguese daily Público, the act of speaking implies an unconscious belief in survival beyond death, as language embodies the potential for continuity and legacy:

A language that pretended to express the experience of death would fall apart, because there would be nothing to express, neither of the past nor of the totally disappeared and non-existent future — and, consequently, there would be nothing to express about the present either. Practicing language with all its “metaphors” about death implies, even for a non-believer, adhering to the belief in immortality, participating in the culture of

those who profess this belief. (Gil, in Guerreiro, Público 2024, my translation of the Portuguese original)

Similarly, the creation and interaction with AI avatars reflect a belief in the persistence of identity and consciousness in digital form, with language serving as the medium through which we express this belief that with the advancement of AI, particularly Large Language Models (LLMs), facilitates increasingly sophisticated interactions with digital entities simulating and mimicking human-like language and cognition.

How are language and immortality examined, if not by the writing act of the Pharaoh, the scribe that writes it down so it is not forgotten, write it down so it will not vanish. Nowadays, the scrivener is less of a Egyptian, but more of an AI agential system, that entails computer vision, synthetic voice or other NLP language tools, statistically vectorized and recombined and foremost multimodal. As intersection of AI avatars, technological advancements propelled by Natural Language Processing and its applications — such as GPT4o, or SoraAI — and the significance of statistical multimodality, modes of language in shaping our understanding of digital existence of longing, nostalgia, saudade, Sehnsucht all encultured and at once lost in translation of an enlarged presence propelled by the digital drive for eternism, despite our existential material and embodied discontinuity, diachrony or de-twinning: our death as condition of (non-transhuman) mortality: digital post-mortality, however seems to be incarnated in AI Heritage Avatars, and their highly elaborate mathematics and AI dream.

Acknowledgments

This article was made possible by the funding of the CICANT research unit DOI 10.54499/UIDB/05260/2020, Universidade Lusófona, Campo Grande, 376, 1749-024 Lisboa, Portugal.

References

- Abramson, Dustin I., and Joseph Johnson JR. 2017. "US10853717B2 — Creating a Conversational Chat Bot of a Specific Person." Google Patents. Accessed May 10, 2024. <https://patents.google.com/patent/US10853717B2/en>.
- Ananya. 2024. "AI Image Generators Often Give Racist and Sexist Results: Can They Be Fixed?" *Nature* 627, 722-725. <https://doi.org/10.1038/d41586-024-00674-9>.
- Bloom, Shari. 2023. "Missed Connection: A Semi-Liminal Encounter with a Digitized Holocaust Survivor." In *Reflective Practice Research in Higher Education Pedagogies*, edited by M. N. Weiss and G. H. Helskog, 191-221. LIT Verlag.
- Coleman, Rebecca. 2017. "Theorizing the Present: Digital Media, Pre-Emergence and Infra-Structures of Feeling." *Cultural Studies* 32 (4): 600-622. <https://doi.org/10.1080/09502386.2017.1413121>.
- Coleman, Rebecca. 2020. "Making, managing and experiencing 'the now': Digital media and the compression and pacing of 'real-time.'" *New Media & Society* 22 (9): 1680-1698. <https://doi.org/10.1177/1461444820914871>.
- "Dalí Lives (via Artificial Intelligence)." Salvador Dalí Museum, December 6, 2023. <https://thedali.org/exhibit/dali-lives/>.
- Dagar, Dagar, and Dinesh Kumar Vishwakarma. 2022. "A literature review and perspectives in deepfakes: generation, detection, and applications." *Int J Multimed Info Retr* 11: 219-289. <https://doi.org/10.1007/s13735-022-00241-w>.
- EKiRInternet. 2023. "Martin-Luther-Avatar Liest Die Weihnachtsgeschichte." YouTube, 5:15. Posted December 22, 2023. <https://www.youtube.com/watch?v=rSiQjN-kA9g>.
- Eisikovits, Nir. 2021. "The Slippery Slope of Using AI and Deepfakes to Bring History to Life." *The Conversation*, November 2, 2021. <https://theconversation.com/the-slippery-slope-of-using-ai-and-deepfakes-to-bring-history-to-life-166464>.
- Eliseev, Emmaline Drew, and Elizabeth J. Marsh. 2021. "Externalizing autobiographical memories in the Digital age." *Trends in Cognitive Sciences* 25 (12): 1072-1081. <https://doi.org/10.1016/j.tics.2021.08.005>.
- Edwards, Benj. 2023. "Microsoft 'Lobotomized' AI-Powered Bing Chat, and Its Fans Aren't Happy." *Arts Technica*, February 17, 2023. <https://arstechnica.com/information-technology/2023/02/microsoft-lobotomized-ai-powered-bing-chat-and-its-fans-arent-happy/>.
- Esther. 2021. "New: Introducing Deep NostalgiaTM — Animate the Faces in Your Family Photos." *MyHeritage Blog*, (blog). February 25, 2021. <https://blog.myheritage.com/2021/02/new-animate-the-faces-in-your-family-photos/>.
- Galvão, Vinícius Ferreira, Cristiano Maciel, Roberto Pereira, Isabela Gasparini, José Viterbo, and Ana Cristina Bicharra Garcia. 2021. "Discussing Human Values in Digital Immortality: Towards a Value-Oriented Perspective." *Journal of the Brazilian Computer Society* 27 (15). <https://doi.org/10.1186/s13173-021-00121-x>.
- Gerner, Alexander Matthias. 2024. "Playing with Arte(f)Actors." In *Diachronic Perspectives on embodiment and technology: Gestures and artefacts*, edited by Thiemo Breyer, Alexander Matthias Gerner, Niklas Grouls, and Johannes F. M. Schick, 9-43. Cham, Switzerland: Springer. https://doi.org/10.1007/978-3-031-50085-5_2.
- Gil, José. 2023. *Morte e Democracia*. Lisboa: Relógio D' Água.
- Goode, Lauren. 2023. "Where memory ends and generative AI begins." *Wired*, May 26, 2023. <https://www.wired.com/story/where-memory-ends-and-generative-ai-begins/>.
- Grosse, Roger, Juhan Bae, Cem Anil, Nelson Elhage, Alex Tamkin, Amirhossein Tajdini, Benoit Steiner, et al. 2023. "Studying large language model generalization with influence functions." ArXiv. August 7, 2023. <https://doi.org/10.48550/arXiv.2308.03296>.

- Guerreiro, António. 2024. "José Gil: 'As Democracias Liberais Chegaram a Uma Espécie de Limite.'" *PÚBLICO*, January 3, 2024. <https://www.publico.pt/2024/01/03/culturaipilon/entrevista/jose-gil-democracias-liberais-chegaram-especie-limite-2075423>.
- Gumbrecht, Hans Ulrich. 2004. *Production of Presence: What Meaning Cannot Convey*. Stanford: Stanford University Press.
- Gumbrecht, Hans Ulrich. 2014. *Our Broad Present: Time and Contemporary Culture*. Columbia University Press.
- Gramelsberger, Gabriele. 2023. *Philosophie des Digitalen. Zur Einführung*. Hamburg: Junius.
- Henrickson, Leah. 2023. "Chatting with the dead: The hermeneutics of thanabots." *Media, Culture & Society* 45 (5): 949-966. <https://doi.org/10.1177/01634437221147626>.
- Hollanek, Tomasz, and Katarzyna Nowaczyk-Basińska. 2024. "Griefbots, Deadbots, Postmortem Avatars: on Responsible Applications of Generative AI in the Digital Afterlife Industry." *Philos. Technol* 37 (63). <https://doi.org/10.1007/s13347-024-00744-w>.
- Hui, Yuk. 2018. *Archives of the future. Remarks on the concept of tertiary protention*. Göteborg: Riksarkivet Landsarkivet i Göteborg.
- Kalimi, Isaac. 2023. "The Position of Martin Luther toward Jews and Judaism: Historical, Social, and Theological Avenues." *The Journal of Religion* 103 (4): 431-81. <https://doi.org/10.1086/727124>.
- Kang, Jenny. 2020. "Korean Mother Gets Reunited with Her Deceased Daughter in VR... And It Will Shatter Your Soul." Koreaboo. February 7, 2020. <https://www.koreaboo.com/stories/mbc-korean-mother-gets-reunited-deceased-daughter-nayeon-using-vr-crying/>.
- Kasket, Elaine. 2019. *All the Ghosts in the Machine: Illusions of Immortality in the Digital Age*. Robinson.
- Kitchin, Rob. 2023. *Digital Timescapes. Technology, Temporality and Society*. London: Polity Press.
- Klevjer, Rune. 2022. *What Is the Avatar?: Fiction and Embodiment in Avatar-Based Single player Computer Games*. Rev. ed. Transcript Verlag.
- Krueger, Joel, and Lucy Osler. 2022. "Communing with the Dead Online: Chatbots, Grief, and Continuing Bonds." *Journal of Consciousness Studies* 29 (9): 222-252. <https://doi.org/10.53765/20512201.29.9.222>.
- Lawton, Sam. 2023. "Expanded childhood film." *samlawton.space* (blog). January 22, 2023. <https://samlawton.space/expanded-childhood-film>.
- Liu, Y., and K.L. Siau (2023). "Human-AI Interaction and AI Avatars." In *HCI International 2023 — Late Breaking Papers*, vol 14059, edited by H. Degen, S. Ntoa, and A. Moallem, 120-130. Cham: Springer. https://doi.org/10.1007/978-3-031-48057-7_8.
- Marx, Paris. 2022. "How Foreverism Degrades Our Culture W/ Grafton Tanner." *Tech Won't Save Us*, February 24, 2022. https://techwontsave.us/episode/208_how_foreverism_degrades_our_culture_w_grafton_tanne.
- Meng, Kevin, Arnab Sen Sharma, Alex Andonian, Yonatan Belinkov, and David Bau. "Mass-Editing Memory in a Transformer." *arXiv.org*, August 1, 2023. <https://arxiv.org/abs/2210.07229>.
- Merrill, William, Yoav Goldberg, Roy Schwartz, Noah A. Smith. 2021. "Provable limitations of acquiring meaning from ungrounded form: What will future language models understand?" *ArXiv*. June 22, 2021. <https://doi.org/10.48550/arXiv.2104.10809>.
- Meta. "Facebook Is Building the Future of Connection with Lifelike Avatars." *Tech at Meta*, March 12, 2019. <https://tech.facebook.com/reality-labs/2019/03/codec-avatars-facebook-reality-labs/>.
- Milmo, Dan. 2024. "Google pauses AI-generated images of people after ethnicity criticism." *The Guardian*, February 22, 2024. <https://www.theguardian.com/technology/2024/feb/22/google-pauses-ai-generated-images-of-people-after-ethnicity-criticism>.
- Miyazaki, Shintaro. 2018. "Algorhythmic." In *The Routledge Companion to Media Studies and Digital Humanities*, edited by Jentery Sayers, 243-249. New York: Routledge. <https://doi.org/10.4324/9781315730479-24>.
- Murphy, Gillian, Didier Ching, John Twomey, and Conor Linehan. 2023. "Face/off: Changing the Face of Movies with Deepfakes." *PLOS ONE* 18 (7): e0287503. <https://doi.org/10.1371/journal.pone.0287503>.
- Ng, Evonne, Javier Romero, Timur Bagautdinov, Shaojie Bai, Trevor Darrell, Angjoo Kanazawa, and Alexander Richard. 2024. "From Audio to Photoreal Embodiment: Synthesizing Humans in Conversations." *ArXiv*. January 3, 2024. <https://doi.org/10.48550/arXiv.2401.01885>.
- Thibodeau, Matt. 2023. "AI-Generated Art 'Magic Avatars' Company Sued for Biometric Theft." *Loevy & Loevy* (blog). 15 February, 2023. <https://www.loevy.com/blog/ai-generated-art-magic-avatars-company-sued-for-biometric-theft/>.
- Pangritz, Andreas. 2017. *Theologie und Antisemitismus: Das Beispiel Martin Luthers*. Frankfurt am Main: Peter Lang Edition.

- Pataranutaporn, Pat, Valdemar Danry, Lancelot Blanchard, Lavanay Thakral, Naoki Ohsugi, Pattie Maes, and Misha Sra. 2023. "Living Memories: Ai-Generated Characters as Digital Mementos." *Proceedings of the 28th International Conference on Intelligent User Interfaces*, 889 - 901. <https://doi.org/10.1145/3581641.3584065>.
- Phillips, Tom. 2023. "Ai Resurrection of Brazilian Singer for Car Ad Sparks Joy and Ethical Worries." *The Guardian*, July 14, 2023. www.theguardian.com/world/2023/jul/14/brazil-singer-elis-regina-artificial-intelligence-volkswagen.
- Jamison-Powell, Sue, Pam Briggs, Shaun Lawson, Conor Linehan, Karen Windle, and Harriet Gross. 2016. "PS. I Love You." *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*, 2920-2032. San Jose California USA: Association for Computing Machinery. 2920-2032. <https://doi.org/10.1145/2858036.2858504>.
- Roose, K. 2023. "A conversation with Bing's chatbot left me deeply unsettled." *The New York Times*, February 16, 2023. <https://www.nytimes.com/2023/02/16/technology/bing-chatbot-microsoft-chatgpt.html>.
- Reimann, Ralf Peter. 2024. "Martin Luther as an AI-powered 3D real-life avatar answers questions live on YouTube." *TheoNet*. February 26, 2024. <https://theonet.de/2023/10/29/martin-luther-as-an-ai-powered-3d-real-life-avatar-answers-questions-live-on-youtube/>.
- Sontag, Susan. 1977. *On Photography*. Farrar, Straus and Giroux.
- Spallone, Roberta, Fabrizio Lamberti, Luca Maria Olivieri, Francesca Ronco, and Luca Lombardi. 2024. "Augmented Reality and Avatars for Museum Heritage Storytelling." In *Beyond Digital Representation. Digital Innovations in Architecture, Engineering and Construction*, edited by A. Giordano, M. Russo, and R. Spallone, 241-258. Springer, Cham. https://doi.org/10.1007/978-3-031-36155-5_16.
- Savin-Baden, Maggi, and David Burden. 2018. "Digital Immortality and Virtual Humans." *Postdigital Science and Education* 1: 87-103. <https://doi.org/10.1007/s42438-018-0007-6>.
- Sconce, Jeffrey. 2000. *Haunted Media. Electronic Presence from Telegraphy to Television*. Durham: Dule University Press.
- Sylaïou, Stella, and Christos Fidas. 2022. "Virtual Humans in Museums and Cultural Heritage Sites." *Applied Sciences* 12(19): 9913. <https://doi.org/10.3390/app12199913>.
- Stokes, Patrick. 2021. *Digital Souls. A philosophy of online death*. London: Bloomsbury.
- Tortum, Deniz. 2023. "A new kind of cinematograph: New Filmmakers at the AI Film Festival." *Filmmaker Magazine*, July 13, 2023. <https://filmmakermagazine.com/121880-deniz-tortum-ai/>
- Twomey John, Didier Ching, Matthew Peter Aylett, Michael Quayle, Conor Linehan, and Gillian Murphy. 2023. "Do deepfake videos undermine our epistemic trust? A thematic analysis of tweets that discuss deepfakes in the Russian invasion of Ukraine." *PLOS ONE* 18 (10): e0291668. <https://doi.org/10.1371/journal.pone.0291668>.
- University of Southern California. 2022. "Deepfake Is the Future of Content Creation." USC Shoah Foundation, 17 February 2022. <https://sfi.usc.edu/pressroom/resources/deepfake-future-content-creation>.
- "VW 70 Anos | Gerações | VW Brasil." 2023. YouTube, 2:00. Posted July 4, 2023. www.youtube.com/watch?v=aMl54-kqphE.
- Zhang, Xiao, Deling Yang, Cheun Hoe Yow, Lihui Huang, Xiaoqun Wu, Xijun Huang, Jia Guo, Shujun Zhou, and Yiyu Cai. 2022. "Metaverse for Cultural Heritages." *Electronics* 11 (22), 3730. <https://doi.org/10.3390/electronics11223730>.

Biographical note

Alexander Gerner is a theater-maker, curator, dramaturg and since 12/2023, Adjunct Professor and researcher at Universidade Lusófona/FilmEU University. In 1998, he received the city council of Munich “Dance- and Theatre-prize” for his multimedia & interdisciplinary (Internet/TV/theater) play “zap through my life (Ztml)” and the Prize of the Authors Days for his theatre play “Trance”(1997). Gerner holds a PhD in History and Philosophy of Science on “Philosophical Investigations of Attention”(ULisboa 05/2012). He works on a critique of algorithmic rationality (hacking humans), affectivity, and simulation of social encounters and their mediation and digital substitution relations. As part of a dramaturgic philosophy of technology and media he adopts an interdisciplinary approach that focuses on the arts and the concepts of interplay of (programmed) sociality, human technology, ethics, and aesthetic foundations & hacking as cultural method. He envisions (post-) digital media, gestures

and artifacts, art-as-research, epistemologies of aesthetics & media archaeologies and praxeologies. He hacks into AI aesthetics, AI Avatars, dialogues modes and dramaturgies of AI assistants, gamified XR/AI companions, and generative and personalized media. He explores scenic methods (e.g. Climate Theatre) as well as arte(f)actors, artefacts that mimic to be actors, e.g. in language dramaturgies/masks/roles of LLMs cross-modal creative applications in arts and cultural industries.

ORCID

[0000-0003-0914-5591](https://orcid.org/0000-0003-0914-5591)

CIÊNCIA ID

[E31F-D78B-6D17](https://ciencia.id/E31F-D78B-6D17)

Institutional address

Universidade Lusófona — Centro Universitário Lisboa. Campo Grande 376, 1749-024 Lisboa, Portugal.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

To cite this article

Gerner, Alexander. 2024. “AI heritage avatars.” *Revista de Comunicação e Linguagens* (60-61): 18-45. <https://doi.org/10.34619/rdjh-ltod>.

Received Recebido: 2024-05-02

Accepted Aceite: 2024-05-28

© Alexander Gerner. This is an open access article distributed under the terms of the Creative Commons Attribution 4.0 license (<http://creativecommons.org/licenses/by/4.0>), which permits distribute, remix, adapt, and build upon the material in any medium or format for noncommercial purposes only, and only so long as attribution is given to the creator.