The Future of Forever:

Virtual Immortality in the Posthuman Era

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Abstract

In 2015, two Google researchers conducted an experiment. After inputting 26 million movie lines into a neural network, they created a chatbot that could extract words from a human speech library. The researchers then asked the chatbot a philosophical question: "What is the purpose of living? "The chatbot responded, "To live forever[1]"

Technology is a basis for human memories. From portraits to photography to video to today's augmented eternity, humans seek immortality by documenting their lives. In today's world, where technology extends our presence into the digital realm, how do we define the time concept of "forever"? This article investigates how our identity is increasingly shaped by digital interactions and data, extending our consciousness beyond our biological form. The evolution of technology is not just about preserving memories but also about creating new forms of symbolic language and meaning. The article discusses the impact of virtual immortality on collective human memory, cultural heritage, and various legal aspects. The article cites examples of digital legacies, such as AI versions of historical figures and celebrities, and explores the potential consequences of virtual immortality in various scenarios. Finally, the article challenges the notion that digital immortality is merely an extension of life, arguing that it represents a more profound shift in how we understand human existence.

Key Words: virtual immortality, augmented immortality, virtual human, digital legacy, data security and privacy.

[1] Goodfellow, Ian J., Jean Pouget-Abadie, Mehdi Mirza, Bing Xu, David Warde-Farley, Sherjil Ozair, Aaron Courville, and Yoshua Bengio. "Generative Adversarial Nets." ArXiv:1506.05869v2 [Cs, Stat], June 22, 2015. https://arxiv.org/pdf/1506.05869v2.pdf.

From Biological to Digital Self

When I hear modern people complain of being lonely then I know what has happened. They have lost the cosmos.

- *D.H. Lawrence, Apocalypse*[2]

Avoiding death has been a primary objective of the human race ever since the beginning of recorded history. From the pyramids of ancient Egypt to the terracotta warriors of China, human has been seeking ways to transcend the limits of time and remain in this world forever.

Nevertheless, with very few exceptions, humans have never really conquered the fear of death. The fear of death drives many of our social behaviors, from how we treat other people to the laws we legislate. The idea of using technology to extend life is not a revolutionary idea; just look to the rise of transhumanism. The concept of mind uploading, once considered a niche idea, is quickly becoming mainstream now.

The digital self, a concept we hear a lot about these days, encompasses everything from uploaded photos to the published opinion, can be mostly shaped and created by us. Katherine Hayles presents the idea of posthuman, emphasizing the growing importance of information over physical form. She suggests that human identity is increasingly defined by digital data and network interactions.[3] Andy Clark also claimed that people are naturally technologically integrated. Our reliance on smartphones and the Internet has extended our cognitive functions beyond the brain.[4] Our self-consciousness is no longer merely attached to our biological bodies but extends to our digital existence. As we explore further into this era of digital self-development, traditional notions of identity and existence are being redefined.

Technology is a basis for human collective memories. It enables us to retrace histories, even those we have not personally experienced. However, as technology evolves, certain symbols and systems inevitably become obsolete. Jacques Ellul, a French sociologist and philosopher, observed

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[2] D. H. Lawrence, *Apocalypse and the Writings on Revelation*, ed. Mara Kalnins (Cambridge: Cambridge University Press, 2002), 78.
[3] N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 2-3.
[4] Andy Clark, *Natural-Born Cyborgs: Minds, Technologies, and the Future of Human Intelligence* (Oxford: Oxford University Press, 2003), 7.

that technological advancement often leads to desymbolization, where older symbolic systems are replaced by new ones.[5] For example, as written language standardizes, other forms of symbolic communication fade away. This suggests that the digitization process is not merely about preserving memory and experience, but also about creating new symbolic languages and meanings. It implies that humanity's future symbolic understanding might be rooted in digital experiences and identities rather than traditional material or cultural symbols.

This transformation in symbolic understanding mirrors changes in the concept of ‘’self’’, evolving from Descartes' mind-body dualism to modern theories. Antonio Damasio, in ''Descartes' Error'', posits that the mind and body are inextricably linked, challenging traditional dualism.[6] Hans Moravec, in ''Mind Children'', delves into the concept of mind uploading;[7] Katherine Hayles, on the other hand, questioning the separation of mind and body.[8] These progressive theories point towards a more integrated understanding of self in the posthuman era, a reflection of the extensive changes driven by technological advancements.

The debate over mind uploading, regardless of its possibility, brings us to a deeper question about the distinction between physical and virtual experiences. Perception is always a form of constructing information. Different people always have different reactions to colors, smells, and feelings. In a way, this reality built on perception doesn't really mean much in terms of how close it is to truth. The Buddhist concept of the emptiness of the ‘’five aggregates’’ from the Heart Sutra further illuminates this idea. It posits that human existence is made up of form, sensation, perception, mental formations, and consciousness, all lacking permanent, independent physical nature.[9] Martha C. Nussbaum, in ''Hiding from Humanity'', writes that many laws are made in relation to human feelings of disgust and shame, and that laws may change along with these two types of human perceptions.[10]

However, this also led to another question: if the physical world, which relies on perception, is not reliable, is the virtual world, which is simulated from the physical world, reliable? In the

[5] Jacques Ellul, *The Technological System*, trans. Joachim Neugroschel (London: Continuum, 1980), 40.
[6] Antonio Damasio, *Descartes' Error: Emotion, Reason, and the Human Brain* (New York: Penguin Books, 2005).
[7] Hans Moravec, *Mind Children* (Cambridge, MA: Harvard University Press, 1988).
[8] Hayles, *How We Became Posthuman*, 1-24.
[9] "The Heart Sutra," The Buddhist Centre, accessed November 30th, 2023, https://thebuddhistcentre.com/system/files/groups/files/heart_sutra.pdf.
[10] Martha C. Nussbaum, *Hiding from Humanity: Disgust, Shame, and the Law* (Princeton: Princeton University Press, 2006).

movie ‘’Wonder Woman’’, Kara's virtual mother says: ‘’You can ask me anything.'' Kara cries: ‘’I ask for a hug.’’ The virtual mother replies: ‘’The program doesn't allow me to do that.’’

We have a kind of obsession, or infatuation with people who have passed away. As stated in ''The Altar-Sutra, ‘’Common people attach themselves to objects without; and within, they fall into the wrong idea of Vacuity.[11]’’ People of the world are either obsessed with the external appearances of things or are fixated on the view of emptiness. The virtual world is the ultimate perfect form of "emptiness," a space where memories can be preserved and reproduced indefinitely. In the digital age, death is no longer just a biological end but enters a blurred domain. If our digital selves can transcend the limitations of the biological body, traditional notions of historical timelines - premodern, modern, postmodern, eschatological, may be breaking down. This could mean that, in Hegel’s sense, history may be approaching its end.

Live Forever in a Virtual World

Let us beware of saying that death is the opposite of life. The living being is only a species of the dead, and a very rare species.

- *Friedrich Nietzsche, The Gay Science*

If I take death into my life, acknowledge it, and face it squarely, I will free myself from the anxiety of death and the pettiness of life - and only then will I be free to become myself.

- *Martin Heidegger, Being and Time*

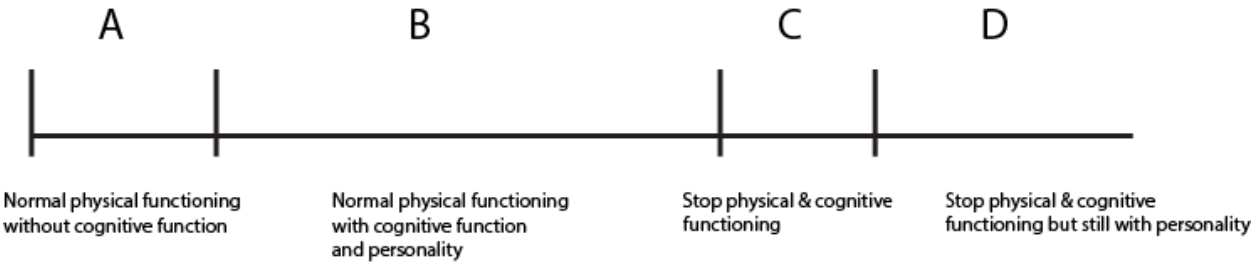
According to Heidegger, death, as a phenomenon of life, reveals the way of human existence and its deeper meaning. He sees death as an existential awareness of potential non-existence, giving it a unique possibility. From this perspective, eternal life is not just a challenge to biological death, but also the meaning of human existence.

Death is not only a medical assessment, but also a legal judgement. Lawyers are obsessed with the moment of death, believing that death occurs when the heartbeat and respiration have reached a " stationary state".

If we represent the life of a human being with the following diagram, we can observe that, in addition to stages A, B, and C, there is a stage D in the digital age. This stage represents a phase

[11] *The Diamond Sutra and The Sutra of Hui-Neng*, trans. Wong Mou-lam (Boston: Shambhala Classics, 2005), 112.

where my physical body no longer exists, but my personality still does. What does stage D mean? Am I still considered alive? Technically, if we define ‘'me’' as someone sharing my personality, then a virtual person possessing my memories, beliefs, desires, and goals would imply a continuity of personal identity between myself and this virtual being. Can we, therefore, conclude that my existence continues in some form?



In “Sum: Forty Tales from the Afterlives,” David Eagleman explains that people die three times in their lives. The first is biological, when your heart stops; the second is social, marked by your funeral; and the third occurs when the last person who remembers you forgets you, you are truly dead.[12]

With the innovation of technology, in the future, we may never have to experience the third death.

Digital immortality technologies, such as virtual reality, artificial intelligence, and digital legacies, enable us to continue existing in some form in cyberspace. Many companies, including Eternime, HereAfter, Nectome, Intellitar, Hereafter Institute, and the MIT Media Lab, are working on research related to virtual immortality.

But is it good to continue to exist? The British philosopher Bernard Williams apparently didn't think so, believing that every life is ultimately boring and tedious.[13] Indeed, in general, there are only two situations in which a person would want to live forever: first, if you are lucky enough to have enjoyed your life so far; and second, if you think that the rest of your life and the world

[12] David Eagleman, *Sum: Forty Tales from the Afterlives* (New York: Pantheon Books, 2009), 23.
[13] Bernard Williams, "The Makropoulos Case: Reflections on the Tedium of Immortality," in *Problems of the Self: Philosophical Papers 1956–1972* (Cambridge: Cambridge University Press, 1973a).

will be fulfilling. However, the longer you live, the more you realize that few people have either of these possibilities.

In 2021, a survey by the University of Texas, which studied 900 people, found that only 33% of people wanted to live forever, with the majority being young people.[14] Interestingly, this survey was conducted during the COVID-19 pandemic. During this period, everyone faced thousands of daily deaths, and society was filled with an apocalyptic atmosphere.

So why do people want to live forever digitally, anyway?

First, immortality offers the possibility of transcending time constraints, without the limitation of life, individuals can accumulate more knowledge, experience, and have more chance to realize their potential and dreams. Secondly, immortality allows people to witness the long-term development of human history. This means not only being able to see technological, cultural, and social advances, but also being able to continue to contribute to these advances and establish a deeper connection with the world. In addition, for those who cherish relationships and family bonds, immortality offers the possibility of spending more time with their loved ones.

The desire for immortality is not driven by a mere fear of death, but rather by a deep desire to realize the sustainability of our existence. In this process, we are not only seeking biological immortality, but also a long-lasting preservation of our culture, thoughts and emotions. Through digital immortality, our experiences, accomplishments and relationships can be preserved forever, becoming valuable resources for future generations and influencing future societies and cultures.

For example, some believe that virtual immortality technology will enable individuals to control their own data, further utilizing their digital replications to continue influencing the thoughts of future generations. Indian meditation master Deepak Chopra created an AI chat program called Digital Deepak. He put his years of spiritual learning and medical knowledge into the program. Asking it questions is like talking to Deepak himself. The program can also respond by observing your expressions and movements, as if establishing a real relationship.

“I hope to have the opportunity to talk with the next generation, to understand what their era is like, and to achieve digital immortality.” Deepak expressed his pursuit of immortality in an

[14] M. D. Barnett and J. Helphrey, "Who wants to live forever? Age cohort differences in attitudes toward life extension," *Journal of Aging Studies* (2021, June 1), https://doi.org/10.1016/j.jaging.2021.100931.

interview.[15] Such personalized digital life can carry the outstanding human intelligence of the present into the future. And as long as there is enough personal data left, some people believe that we can also "resurrect" the famous people such as Albert Einstein who have passed away.

Behind virtual immortality, there are also huge business markets.

On November 2nd, 2023, the legendary rock band “the Beatles,” two of whose members have passed away, released their new single “Now and Then”, which has been viewed more than 30 million times in two weeks and reached number one on the UK charts.[16] Furthermore, Warner Bros. is also about to produce an AI commercial film for Edith Piaf, the French singer who passed away in 1963.[17]

Same year, Marilyn Monroe, who passed away 60 years ago, appeared on the cover of “CR Fashion Book.[18]” This was made possible with the authorization of Monroe's estate and the help of CGI technology. These images were released as NFTs, although it's unknown if Monroe herself would have agreed.

Meanwhile, on the 50th birth anniversary of the Notorious B.I.G., Brook Company digitally resurrected him, creating a digital playground accessible on the computer.[19] Additionally, holographic imaging creates a more realistic effect for virtual immortality. This concept is not new. In 2012, the rapper Tupac appeared at the Coachella Music Festival with the help of AV Concepts, using a 2D image stage technology that made him look like a hologram.[20] By 2021, Whitney

[15] Martine Paris, "Deepak Chopra And Richard Branson To Live On Forever Through AI, Here’s How," *Forbes*, June 5, 2021, https://www.forbes.com/sites/martineparis/2021/06/04/deepak-chopra-plans-to-live-forever-through-ai-heres-how/?sh=1cc1f0084871.
[16] Lars Brandle, "The Beatles Hit No. 1 in the U.K. Now and Then," *Billboard*, November 13, 2023, https://www.billboard.com/music/chart-beat/the-beatles-no-1-uk-now-and-then-1235470065/.
[17] Angelica Legaspi, "Edith Piaf Biopic Created with Artificial Intelligence Gets Support from Warner Music," *Rolling Stone*, November 14, 2023, https://www.rollingstone.com/tv-movies/tv-movie-news/edith-piaf-biopic-artificial-intelligence-ai-warner-music-1234877962/.
[18] Taylore Elle, "Digitally Reimagined Marilyn Monroe On The Cover of CR Fashion Book In China," *ELLE*, July 29, 2022, https://www.elle.com/uk/fashion/a40751081/digitally-reimagined-marilyn-monroe-on-the-cover-of-cr-fashion-book-in-china/.
[19] E., "Life After Death: The Notorious B.I.G. Enters the Web3 World," *Medium*, May 23, 2022, https://medium.com/@EQ.Exchange/life-after-death-the-notorious-b-i-g-enters-the-web3-world-b66430eebb83.
[20] Christine Ngak, "Tupac Coachella Hologram: Behind the Technology," *CBS News*, January 26, 2018, https://www.cbsnews.com/news/tupac-coachella-hologram-behind-the-technology/.

Houston's hologram occupied a permanent spot at a Las Vegas casino with the show “An Evening with Whitney: The Whitney Houston Hologram Concert.[21]”

The development of this technology is not just a way of nostalgia, but also a new approach to finding connections with the deceased in the digital age. However, this technology also raises many ethical and moral questions. When the digital avatars of the deceased are active in the virtual world, how do we ensure that this representation respects their wishes and dignity? Should the image of the deceased be used for commercial purposes? These issues require us to think deeply and discuss as we explore virtual immortality.

In particular, although using AI technology, NFTs, and VR might make it easier to achieve a digital afterlife, not everyone wants to continue existing on Earth after their leaving. In 2021, a film about the chef Anthony Bourdain ‘’Roadrunner’’ was released. The filmmakers narrated the work using a deepfake of Bourdain's voice but did not inform the audience. This sparked discussions about consent in artificial intelligence and digital afterlife technologies, as well as ethical issues of using technology to resurrect those who no longer have a voice and then exploiting them. [22] However, as technology advances, such situations will become more difficult to control.

At the same time, virtual immortality could lead to terrifying scenarios. For instance, dictators like North Korea's leader might never be overthrown. Should missiles be launched into South Korea? How to deal with a certain political prisoner? Asking a virtual immortal version of Kim Jong-un could provide answers. Furthermore, this virtual immortality could potentially give rise to virtual lovers and virtual sex robots. The head of the “Eterni.me” website stated that the system only collects data from living individuals. Although the head seems to have excluded this possibility, if there is a market demand, it's uncertain whether virtual John Lennon, Audrey Hepburn, Bruce Lee, or other A.I.s might appear in the App Store. These celebrities have been interviewed by the media, and their every move has been thoroughly recorded, which makes the simulation not that difficult.

[21] Elias Millman, "Whitney Houston Hologram Tour: A Preview," *Rolling Stone*, February 19, 2020, https://www.rollingstone.com/music/music-news/whitney-houston-hologram-tour-preview-954242/.
[22] Helen Rosner, "The Ethics of a Deepfake Anthony Bourdain Voice in 'Roadrunner,'" *The New Yorker*, July 17, 2021, https://www.newyorker.com/culture/annals-of-gastronomy/the-ethics-of-a-deepfake-anthony-bourdain-voice.

Further, virtual immortality raises questions about human memory and heritage. In this digital age, how do we decide which memories are worth preserving and which should be forgotten? How do we ensure that digital legacies truly represent the lives and experiences of the deceased, rather than being distorted or misinterpreted?

While writing this article, I can't help but think of a joke I've heard before. In the 1994 Miss Universe contest, the host asked the candidate: ‘’If you could live forever, would you and why?’’ Miss Alabama answered: ''I would not live forever, because we should not live forever, because if we were supposed to live forever, then we would live forever, but we cannot live forever, which is why I would not live forever.[23]''

The Undefined Area: Digital Legacy

It's certain we're going to be dead, so where's the design for that? There's a huge design disconnection.

- Faheem Hussain, Associate Professor at Arizona State University

Investigation agencies use the extensive footprints left by criminals to figure out who they are, and archaeologists use the footprints left by their ancestors to figure out what life was like back then.

Now, let's think about digital footprints. Just as people leave footprints in real life, we leave records in the digital world. According to statistics, each person creates 1.7MB of data per second,[24] and this data will be on Google forever. Google frequently backs up or caches the entire Internet, and once something is online, it's almost impossible to delete it.

The key to achieving virtual immortality lies in collecting vast amounts of data, which can be as simple as conversation logs, social media posts, or as complex as preserving brain information through bio preservation technologies. Many companies use various methods to collect these data such as 3D scanning, motion capture, or artificial intelligence. A significant

[23] Why Don’t We Want to Live Forever?" *PublishersWeekly.com*. Accessed November 29th, 2023. https://www.publishersweekly.com/pw/by-topic/industry-news/tip-sheet/article/58894-why-don-t-we-want-to-live-forever.html.

[24] Richard Stengel, "Data Drives the World. You Need to Understand It," *Time*, October 20, 2021, https://time.com/6108001/data-protection-richard-stengel/#:~:text=We%20are%20living%20in,850%20page%20book%2C%20per%20second.

feature of virtual immortality technology is the visualization of the deceased, creating a virtual image of the deceased to achieve an interaction experience similar to that during their lifetime. These virtual images can not only move but also have their own thoughts. Although current technology has not yet fully achieved this goal, as artificial intelligence progresses towards AGI (Artificial General Intelligence), the deceased in the future virtual immortality will be able to have the ability to think independently and learn on their own, thus generating their own ideas in interaction with their loved ones and achieving augmented Eternity. This is a major reason why many companies are willing to put a lot of money into this field.

These massive data that we left can be analyzed by psychologists and scientists to infer and predict various types and behavior patterns. In 2008, Professor Jeremy Bailenson conducted a study at Stanford University, where they required students in a class to spend at least six hours a week in their created virtual space. By the end of the experiment, the professor had collected a vast amount of data. They predicted personalities and identities based on these data, including their chats with subjects and their typing style during chats, such as male or female, Caucasian or non-Caucasian, extroverted or introverted. The results showed an accuracy rate of 70%-90%. Professor Bailenson believes that these virtual world predictions differ from criminal investigations because they are less likely to produce personal subjective biases, therefore having a high accuracy rate.[25]

Additionally, Professor Alex Pentland of the MIT Media Lab also conducted similar experiments by collecting large amounts of data from digital devices and observing the tone and syntax of male and female couples shopping for furniture to predict their interests and behavioral patterns.[26] Clearly, using data to predict a person's behavior and thoughts is not new, and many scholars and companies have done similar studies.

William J. Mitchell's 1995 assertion that virtual societies would be created to map the physical world has been proven true in many ways.[27] Virtual society is no longer just a mirror image of the real society but has become embedded in real life, becoming a part of reality. Like physical goods and currency in the real world, the digital content we create in virtual spaces have become part of personal assets. In this sense, anything that exists in digital format and has usability

[25] Jim Blascovich and Jeremy Bailenson, *Infinite Reality: Avatars, Eternal Life, New Worlds, and the Dawn of the Virtual Revolution* (New York: William Morrow Paperbacks, 2011), 107-109.
[26] Blascovich and Bailenson, *Infinite Reality*, 112-113.
[27] William J. Mitchell, *City of Bits: Space, Place, and the Infobahn* (Cambridge, MA: MIT Press, 1995).

can be referred to as “digital legacy.” Although most people can realize the importance of these digital contents to themselves, not everyone recognizes that these contents can be counted as assets, and only a few people realize the need to make arrangements for these assets after their death. The “2018 Digital Death Report” based on an online questionnaire, jointly conducted by the Digital Legacy Association and Siena College, shows that over 40% of respondents are aware of terms like digital assets, digital footprints, and digital legacy, but most are not familiar with related policies and regulations, and few have made plans for their social media accounts, websites, blogs, and other online digital content.[28] Also, as for the current legal norms related to inheritance, whether they apply to digital legacy still awaits further clarification by judicial interpretation.

No Ghost in the Shell

The concept of humanity is an especially useful ideological instrument of imperialist expansion, and in its ethical-humanitarian form it is a specific vehicle of economic imperialism. Here one is reminded of a somewhat modified expression of Proudhon's: whoever invokes humanity wants to cheat.

-Carl Schmitt, The Concept of the Political

As Carl Schmitt said, the term ‘’human'’ has troubled us since the emergence of humanism. The term humanity, as Carl Schmitt said, can be instrumentalized, used to accuse the enemy of not being ''human.''

The future of the human race is a product of synchronicity. The future of humanity is not determined by a single factor or trend, but rather is the result of multiple factors and events that interact and influence each other over time. This includes a variety of factors such as technology, environment, politics, and economics. These factors do not operate independently but interact within an interconnected system.

Virtual immortality technology reveals a broader truth: our understanding of life, death and memory is rapidly changing in an increasingly digitalized world. This technology is not just a way of memorizing the dead, but a profound exploration of the nature of human existence. Virtual Immortality is not a utopia, and for better or worse, it is bound to have a profound impact on our

[28] Digital Legacy Association, "Digital Death Survey 2018" (2019), https://digitallegacyassociation.org/wp-content/uploads/2019/11/Digital-Death-Survey-2018-The-Digital-Legacy-Association-1.pdf.

history, time, society, politics, economy, and culture. The pursuit of virtual immortality brings us to a critical moment when we must reconsider the value of human existence. Are we merely our physical forms, or does our essence lie in the memories and impacts we leave behind?

We are now entering a brand-new era, an era in which the boundaries between the digital and the biological are increasingly blurred. In this era, virtual immortality not only provides the opportunity to reconnect with deceased loved ones, but also gives us a new perspective to explore the nature and value of human existence. All of this reminds us that we are at a historic turning point in redefining human experience and ways of being.

I am actually not a proponent of “digital immortalist", because even if you accumulate enough private data and use the most advanced AI technology to create a digital me, it actually has nothing to do with me because after my body ages and dies, the consciousness associated with this body will no longer exist (at least for now).

In fact, virtual immortality is more beneficial (or harmful) to future generations and the world. This technology has the potential to change personal development and family legacy.

What should we leave behind for future generations after we die? Perhaps the first choice should be a ‘’second brain.’’ In fact, virtual immortality refers more to the spiritual and intellectual aspects. You leave behind something valuable in your lifetime, upload it to the cloud, and people remember you, miss you, and are even inspired by you.

Perhaps, to those who are alive, you are already ‘’immortal’’ and ‘‘forever.’’

A Test

Let's test how easy it is to create a virtual version of yourself and live forever in a virtual world.

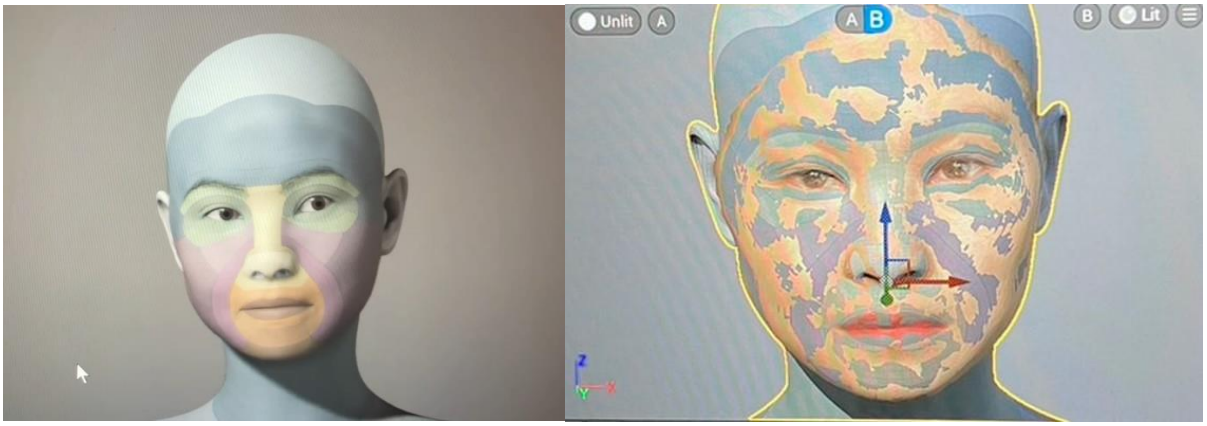
1. Use 3D scanning technology such as Polycam to scan my face and use Unreal Engine Metahuman for facial motion capture and simulation.

2. Use AI technology to create voice simulation.

3. Since we cannot collect a large amount of personal data, we need to use the latest large model language tool, ChatGPT-4, to generate dialogue content for the virtual digital person. In this step, we can first 'train' GPT to better understand the type of dialogue content we need. For example,

we can input the deceased's age, educational background, occupational background, region of residence, personality traits, speaking habits, and way of thinking into GPT, and then make a request: 'You now need to become the person I just described and have a conversation with me.' or similar expressions. Afterwards, we need to capture a large amount of dialogue content to create the virtual digital person.

4. The result.



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