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Larsson, Stefan

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LUND UNIVERSITY

PO Box 117
221 00 Lund
+46 46-222 00 00

Stefan Larsson

Chapter 8

Necrorobotics. The Ethics of Resurrecting the Dead



Figure 8.1: DALL•E 2 prompt: ‘Dead person brought back to life in the shape of a humanoid robot, to comfort her grieving mother’.

Abstract: By drawing from recent progress in AI, this chapter scrutinises implications of a specific imaginary of automated futures: the possible resurrection of the dead. *Necrorobotics* is proposed as a field of critical studies on the use of data and design based on one specific dead individual in order to ‘resurrect’ that individual. That is, to mimic or create some level of robotic agency for the sake of mourning, remembrance, or handling of loss. The technological advancements of relevance are here referred to as *resurrection technologies*—that is, methods for the training of AI-models based on data from a specific individual, such as imagery, text and voice—here addressed for the analysis of connected ethical and normative questions.

By drawing from theoretical discourses on mortuary cultures, post-mortem conditions in digital times as well as robotic uncanniness, this chapter uses three reported

cases of necrorobotic practices in order to analyse imaginaries of *being with the dead*—from the eerie to the mundane. Lastly, this particular aspect of automated futures is argued to bring a number of ethical and legal questions, for example connected to *who* should have the right to make a decision to resurrect another person, how to understand potential *markets for resurrection* and potential misuses in terms of haunting.

Keywords: necrorobotics, resurrection technologies, digital afterlife, the uncanny valley, being with the dead, post-mortem privacy

1 Introducing Necrorobotics

There are many ways to speak of death. There are many ways to remember the dead. This chapter uses the concept of *necrorobotics*¹ for the analysis of a particular version of automated futures, that is, a field of study addressing questions relating to use of data and design based on one specific dead individual in order to ‘resurrect’ that individual. That is, mimic or create some level of robotic agency for ‘human–necrorobotic interaction’ (Larsson, 2023). There is a growing body of literature that deals with various aspects of death in relation to digital and datafied technologies. This includes important legal questions around post-mortem privacy (Harbinja, 2023; cf. 2017). The post-mortem condition is studied as remains on social media platforms (Öhman, 2020, 2024, see also Bassett, 2015; Leaver, 2013; Savin-Baden and Mason-Robbie, 2020) and users’ perception of ‘digital necromancy’ (Morse, 2024), ultimately prompting a need for existential media studies for analysing aspects of mourning, commemorating and even speaking *to* the dead in the online environment (Lagerkvist, 2022; see also Bassett, 2020). This latter aspect, the possible agency granted to the digital representations of the dead, enabled by contemporary and future AI-models, is in focus in this chapter. These methods—here called *resurrection technologies*—are argued to stress a need for ethical and normative reflection in how they potentially alter the conditions for remembrance and mortuary cultures around deceased kin. To what extent can one talk of a *new death* (Lee Dawdy and Kneese, 2022), in light of the vast cultural history of mortal remains and ways of being with the dead (cf. Laqueur, 2015; Ruin, 2019)? Compared over cultures and times, the imaginaries of the dead may indeed change. While the reasons for change may have manifold causes, some point to major events like the American Civil War (O’Neill, 1999).

In order to facilitate an analysis of necrorobotic imaginaries, three cases of what in this chapter is referred to as *necrorobotic resurrection* are described in the following section. This leads to a description of a sample of recently published models for generative

¹ Not to be confused with the shorter ‘necrobotics’, which tends to be used for describing the use of dead organisms as robotic parts. For instance, dead spiders have been repurposed as robotic grippers. This does however overlap with the discussion on uncanniness, that is discussed in the chapter.

AI, which serves to better pinpointing developing AI-capabilities. Furthermore, as means for addressing ethical and legal questions of particular relevance, a patent on how to design chatbots based on data from one specific individual is analysed. Lastly, in *A Very Easy Death*, Simone de Beauvoir describes the ordeal of going through the passing of her mother. While reflecting on the lack of consolation that religion could offer for her mother, and posthumous success for herself, she stated: ‘Whether you think of it as heavenly or as earthly, if you love life immortality is no consolation for death’ (de Beauvoir, [1964] 1999: 92). We will return to de Beauvoir in the concluding remarks of the chapter, as a frame to reflecting on necrorobotic resurrection and mortuary cultures.

1.1 Necrorobotic Cases

The following cases will be utilised for the analysis. Firstly, in 2018, the journalist James Vlahos developed a ‘DadBot’ based on his interviews with his dying father, which he describes in the book *Talk to Me: Amazon, Google, Apple and the Race for Voice-controlled AI* (2019). Secondly, in the autumn of 2020, a Canadian man used a chatbot service powered by GPT-3 to create a replica of his deceased girlfriend (Fagone, 2021). Reportedly, he ‘borrowed beta-testing credentials’ in order to develop the bot, but the conditions were set to a finite number of ‘credits’. That is, there would eventually be an end to the bot, the necrorobotically resurrected girlfriend, as well. Thirdly, in 2020, a South Korean mother arranged for a ‘meeting’ with her deceased 7-year-old daughter in Virtual Reality, produced by a Seoul-based studio, recreated from images and video (Park, 2020).

2 Technologies of Resurrection

Current technology, it seems, is at the stage where data from dead people—images, voice recordings, texts—can be used to train software to become conversational agents resembling the person that was the origin of that data (Larsson, 2023). The resemblance can be put in the form of a chatbot, digitally, and with potential for various types of embodiment, set to interact with (living) persons that are missing their loved ones. And, somewhat speculatively, this necrorobotic relationship may then be perpetuated in the sense that the resurrected (the bot) can continue to adapt or ‘learn’, based on this continued interaction.

In order to enable a more detailed analysis of normative and ethical issues related to necrorobotics, this section initially points to a Microsoft patent for developing chatbots based on single individuals, and briefly accounts for some of the most relevant contemporary AI-dependent methodologies in terms of mimicking voice, facial movements in imagery and written text from individual humans.

2.1 A Patent for Resurrection

In late 2020, two engineers at Microsoft were approved a patent (Abramson and Johnson, 2020) on how to design chatbots based on an individual person's data. In brief, the patent describes how rich sets of 'social data' (see Figure 8.2) can be used to create 'a

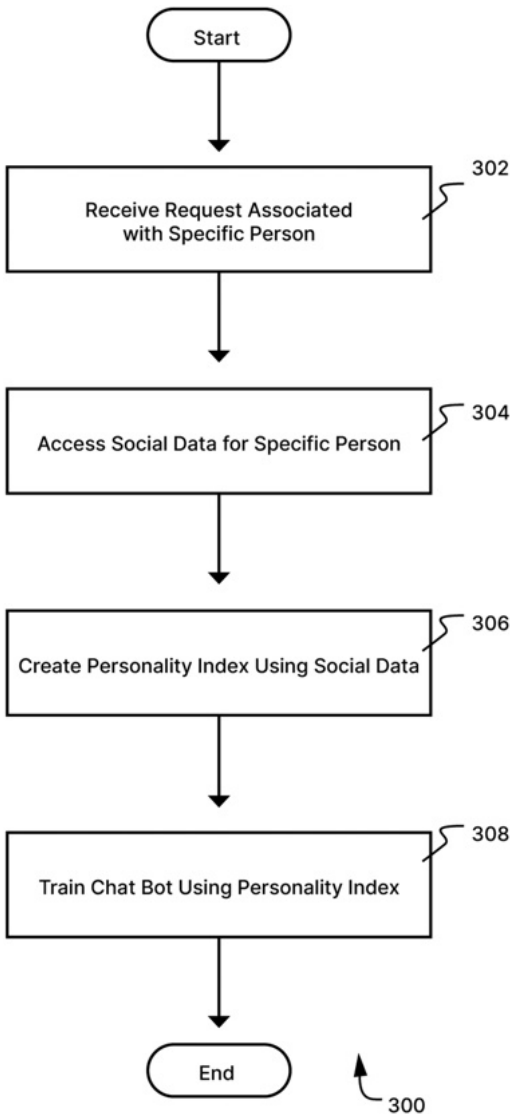


Figure 8.2: A figure from Microsoft patent that 'illustrates an example method of creating a conversational chat bot of a specific person' (Abramson and Johnson, 2020: 5 and 11).

conversational chat bot of a specific person . . .’ (2020: 11). Importantly, the patent describes not only that this person can be a present, but also a *past* ‘entity (or a version thereof), such as a friend, a relative, an acquaintance . . .’ (2020: 11). That is, included here is that they see a potential to reproduce also *past friends and relatives*. This is, in part, caused by recent advancements in methodologies for using machine learning to reproduce voice, imagery, text behaviour, etc. based on large sets of data not only as a general approach, but also as a specific individual approach. It is due to a combination of machine learning methodologies, processor power and access to data.

A similar sentiment was delivered by an Alexa-developing Amazon executive in the summer of 2022. He spoke of the possibilities of having a past grandmother reading bedtime stories as a feature in the AI-powered speaker (Heater, 2022). We return to the specific methodologies shortly, but first it is of interest to see what types of data that the authors of the Microsoft patent see as ‘social data’, that ‘may be stored by, and/or collected from, various sources’:

it may refer to images, image data, voice data, emails, text messages, dialogue data/commands, social media posts, written letters, user profile information, behavioral data, transactional data, geo-location data, and other forms of data about a specific person (Abramson and Johnson, 2020: 11)

That is, nothing recorded escapes the engineers’ vision of useful building blocks for a chatbot representing a specific individual, alive or dead. While this patent distinctly points to the idea of individualised training data emanating from one specific person, the ‘resurrection technologies’ are mainly fuelled by recent advancements in what can be referred to as *generative AI*. That is, machine-learning-based methods drawing from often large-scale datasets of text, pictures or sound (most relevantly voice).

2.2 State-of-the-Art: Mona Lisa Speaks

Many were baffled by the ‘speaking Mona Lisa’ that was published in May 2019 by researchers at Samsung AI. They presented yet another step in the race to see what could be done with so-called adversarial methods for training neural networks. The significance with this step was that it was sufficient with one or a few images to create convincing facial movements—they could look like they speak. These types of generative AI-models (based on what’s called GAN’s, Generative Adversarial Networks), and the so-called *deepfakes* they enable had already spurred both politically charged misinformation and deepfake revenge porn, which led to ethical concerns and legal debate (Chesney and Citron, 2019; Meskys et al., 2019).

2.3 Elements of Resurrection: Generative AI

With regards to specific technologies, much has happened in a short time in terms of capabilities for synthetic and generative AI. One by one, the different modalities of text, imagery and sound can be seen as elements that enable necrorobotics.

One can here firstly mention the generations of generative pre-trained transformers (GPT), where GPT-3 was first released in beta version on 11 June 2020, developed by OpenAI (and used in one of the necrorobotic cases mentioned above). Its architecture was of a then-unprecedented size, and the quality of the text generated by GPT-3 makes it difficult to determine whether or not it was written by a human. The chatbot version built on top of what has been called ‘GPT-3.5’ was launched as a prototype on November 30, 2022. It is meant to function as a conversationalist, but is very versatile in the sense that it can propose programming code, compose music, student essays, etc. The subsequent GPT-4 was initially released on March 14, 2023 and seems to have contributed to a further development of ChatGPT. GPT-3 was also the basis for *DALLE-2*, a potent image-creating model activated by human prompts (see Figures 8.1, 8.3, 8.5), similar in capability but not in style to Midjourney and StableDiffusion. It is not hard to see how images from individuals can be animated through these types of AI-models, generating new output in the style if the provided images.

For sound, a team of researchers at Microsoft published the *VALL-E* model on January 5, 2023, which they claim can be used to synthesise high-quality ‘personalised speech’ with only a 3-second enrolled recording of an unseen speaker as an acoustic prompt (Wang et al., 2023). In necrorobotic terms, this means that a single sound recording from a person speaking can be enough to enable generation of new speech in the sound of that person. The ethical concerns expressed by the authors of the *VALL-E* paper are limited. On a final note, the authors admit that *VALL-E* ‘could synthesize speech that maintains speaker identity, it may carry potential risks in misuse of the model, such as spoofing voice identification or impersonating a specific speaker’ (Wang et al., 2023: 12–13). They do not offer much more of a mitigation to such problems than stating that it is possible to build a ‘detection model’ to discriminate whether an audio clip was synthesised by *VALL-E*. They also state that they will put Microsoft AI Principles into practice when further developing the models, but without stating how they will serve as a guide specifically.

Lastly, the capabilities for resurrection should not be seen as limited to the non-embodied digital domain. In surgical robotics, for example, there are attempts to have the robot directly observing a surgeon or video to learn how to move (cf. Panesar et al., 2019). This is indicative of an increasing body of literature on robots learning from human demonstration (cf. Dechter and Haslum, 2022).

3 The Uncanniness of Robotic Necromancy



Figure 8.3: DALL•E 2 prompt: ‘Humanoid social robot with face-painting in the style of the Mexican Day of the Dead celebrations looking at a sad woman’.

The ‘necropolitics’ of how the relationship between the dead and the living are maintained is key for the philosopher Hans Ruin’s analysis. This notion of necropolitics, in Ruin’s account, lies close to the Greek roots of the word for cemetery, ‘necro-polis’ (2019: 8). This points to an agency in the activity of keeping the relationship an active one, an act of maintenance for the commemoration—if one sees it as based on memory—of *being* with the dead. Both these elements are relevant for chatbots created from dead people, the memory in terms of training data, and the maintenance performed by the living. However, just as a photograph is only a representation of some aspects of the person in it, a necrobotic resurrection will always fail to be a full representation. Much thought has gone into the question of uncanniness of artefacts that resemble a living human, but are slightly deviant. James Vlahos, the journalist mentioned in the introduction, has described his fears of uncanniness in developing the ‘DadBot’, based on his interviews with his dying father:

The bot may be just good enough to remind my family of the man it emulates—but so far off from the real John Vlahos that it gives them the creeps. The road I am contemplating may lead straight to the uncanny valley (Vlahos, 2019: 254).

The concept of the uncanny valley was introduced by the Japanese roboticist Masahiro Mori in 1970, reflecting on prosthetic hands and wax dolls and the eeriness he experienced as humanoids became near human-looking. In his famous graph, he included prosthetic hands, corpses, and even zombies in the very bottom of ‘the valley’, see Figure 8.4. Even if the uncanniness in the sense of a considerable drop of acceptance for a high level of robotic realism is contested in robotic research (cf. Bartneck et al., 2009), it can be used as a way to discuss the possible eeriness of creating bots based on dead persons’ data.

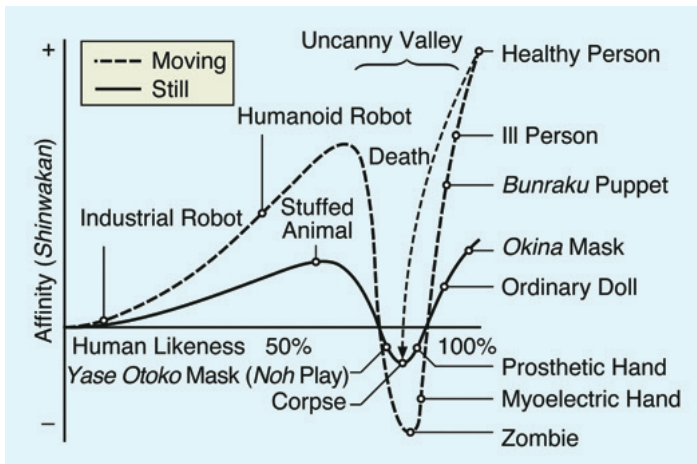


Figure 8.4: The Uncanny Valley, by Mori et al. (2012; original from 1970).

Interestingly, and while Mori makes no explicit references to it, the linking of the phenomenon of uncanniness to corpses or automated dolls (‘automatons’) was also done by Sigmund Freud more than 50 years before Mori’s, in a text on uncanniness (‘Das Unheimliche’, 1919). Freud states that many people experience uncanniness ‘in relation to death and dead bodies, to the return of the dead, and to spirits and ghosts’ (1919: 13), and refers to the concept of the haunted house, which in German would have the same word as for ‘uncanny’, that is, ‘an unheimliches’ house. Furthermore, Freud claims the uncanny to be ‘that class of terrifying which leads back to something long known to us, once very familiar’ (1919: 2). He was inspired by slightly earlier work made by the psychiatrist Ernst Jentsch (1916), ‘On the Psychology of the Uncanny’, originally published in 1906, where Jentsch points to ‘intellectual uncertainty’ as an essential part of uncanniness.

4 The Ethics of Resurrection

This final section returns to the notion of agency of the dead in order to elaborate on the cultural norms embedded in being with the dead (Ruin, 2019). In connection, the discussion turns to possible changes in these practices, over time and place, that contemporary resurrection technologies may impose.

The issue of ‘a market for resurrection’ is addressed in order to stress ethical and legal questions emerging in connection to necrobotic resurrection technologies, mainly with regards to who ought to be able to make decisions over resurrection. Lastly, before the conclusions, possible risks for misuses of resurrection are pointed to, that perhaps most fittingly can be described in terms of how they can be set to *haunt* the living, in a weaponised form.

4.1 The Agency of the Dead

The dead, at least according to Thomas Laqueur’s grand study of mortuary culture in Europe, *The Work of the Dead* (2015), have continuously had a significant role as ‘active agents in history’ (cf. Ruin, 2019: 87). The question here is to what extent the AI-supported versions of post-mortem agency offer anything new at all to these very established ways of mortuary cultures. Possibly, one may reflect upon what type of agency that necrobotics may offer to the reanimated deceased, in what way it may implicate the practices of the living. Should we somewhat modestly understand necrobotic resurrection as nothing more than photography to talk to, as a more or less individualised app that bears some resemblance to a person we once knew? But, if it in some capacity learns from, or adapts to, the interaction—should we see that as a change in kind rather than degree of mortuary practices? The examples in the introduction point to several aspects that can be more thoroughly unpacked. For example, the South Korean resurrection in virtual reality of a deceased 7-year-old to once again appear before the grieving mother. Given that the norms and ethics around the relationship to the dead is a highly culturally embedded construct, one could of course imagine various ways that this relationship could be impacted by AI-driven technologies. Would it, for the sake of argument, be feasible that future ways of interacting with those whose bodies have died may be normalised in some way? That is, can digital resurrection be normalised as just another technologically mediated aspect of mortuary cultures? In terms of the afterlife of people’s digital remains, philosopher Öhman (2024) argues that we already ‘co-dwell’ with the dead, in a *post-mortal condition*. He connects a moral obligation to it, a set of duties for each one of us, as custodians of the digital remains of our beloved ones.

How the dead have been treated is indeed a story of multiplicity and change. Cultural and religious diversity, the changes over pre- and post-industrialisation, as well as the impact of wars have all been studied from this perspective. One example is

Kevin O'Neill's account of the changes of how the relationship to the dead related to the American Civil War and its subsequent industrialisation of the handling of dead bodies, including a professionalisation and homogenisation (O'Neill, 1999). Apparently, the pre-war portraits of the dead, displayed them as being part of a family still. This meant a presence of the dead, in a sense, shown on photographic representation in mid-1800s middle class American homes.

This changed over the war. The embalmed, post-war, were meant to be dead and disciplined, so to speak, and to 'remain unchanged in their deaths for as long as possible' (O'Neill, 1999: 228). This was, according to O'Neill, an outcome of a professionalisation around the American Civil War. It included a financialisation—where the handling of the dead became an economic activity, also leading to a homogenisation of the post-war cemeteries, which played into a professionalisation of their management. The military cemeteries meant a rationalisation, but according to O'Neill also a 'greater distance between the living and the dead' (1999: 225). A 'new form of denial of death' (O'Neill, 1999: 228) in the post-war culture, perhaps a *disenchantment*, in Weberian terms (cf. Ruin, 2019). Speculatively, in contrast, can necrorobotics add to a *reenchantment* of the dead in a more tangible sense?

There are normative questions of particular interest to be addressed in light of necrorobotic capabilities. Firstly, if there should be a legal answer to this question, who should have the right to resurrect the dead? Should the handling of an individual's data be seen as a matter of property or privacy? And, consequently, to the extent consent was given from the biologically living and as technologies develop, where are the limits of that consent? How should conflicting wishes among remaining family be handled?

Related to the property/privacy issue, we'll consider 'the market for resurrection', in line with what the above-mentioned Microsoft patent points to. While it is hard to predict the possible size of such a market—to what extent will people have a will to resurrect the dead as a service to be paid for?—the policy-question may be even more relevant: To what extent should the law-maker intervene in the shaping and functionality of this market? An already addressed policy-area of relevance is of course data protection and how information stemming from the deceased should or should not be protected. Recent studies point to European regulation that to a large extent has not satisfactorily addressed the question, likely due to that the possible uses focused in this article have not been considered when drafting, for example, the GDPR (de Vries, 2022; Harbinja, 2023). In short, your personal data simply becomes just data when you die, regardless of the possible necrorobotic implications of this.

4.2 A Market for Resurrection?

The question if there is a market for the resurrection of the dead may come across as a bit morbidly laissez-faire, but at least one normative question can be pointed to—are

there any causes for state law, or any other normative body, to intervene? The basis for the market is in a sense simple—if there is a will for people to remember their beloved ones in this particular way and to pay for it, and if there are those that want to sell these functionalities, there is a market. The speculation from the Amazon executive mentioned above speaks to the commercial side of at least voice resurrection, seemingly picturing a very mundane and non-problematising approach. A similarly mundane approach can be seen in how services for the tracing of heritage and ancestry, like the website MyHeritage, use technologies for resurrection. Linked to their online ‘genealogy platform’, first introduced by the Israeli company in 2003, they recently released an AI-tool of sorts (remember the speaking Mona Lisa above) which offers to animate images of past relatives. This feature is ‘intended for nostalgic use’, according to the company.

When Vlahos—one of the necrorobotic cases mentioned in the introduction—published the story of the Dadbot he had created, he was approached by people from all over the world wanting to do a similar ‘memorialising’ chatbot of a family member. In his book, then, he asks if ‘virtual immortality’ ever will become a business. Consequently, Vlahos later created HereAfter, a service that offers to resurrect persons digitally. As part of it they offer a conversational version for Alexa. Similarly, in South Korea there is a company called Deepbrain AI that offers what in the terminology of this chapter can be called *necrorobotic resurrection services*. The service is branded as *re;memory* and offers ‘more than just a place for remembrance’ and ‘directly interact’ with lost ones.² The company website states that about 7 hours of interview and filming is required and ‘then a virtual human is created with every aspect of your loved ones copied with deep learning technologies—from their physique to their voice’.

Another commercial practice that reacts to the AI-driven capabilities is the creative industries that create movies and animations based on the same material as generative AI—the voices, images, and sounds. That is, the movie industry is increasingly including IP-based licencing as part of the actors’ wishes of how their faces and voices and recorded performances can be used, also after they pass away. It is, in a sense, a will describing the post-mortem distribution of the creative building blocks linked to a person. This has been noted as a part of the digitalisation as such (Bode, 2010), but also a need to amend the rights linked to, for example, faces, in the US called ‘the right to publicity’ (Duquette, 2020). This development leads to everything from new attributing practices in the credits of deceased actors (who tend to receive the major acting credit, while doubles receive lesser or no credit at all, Fisher, 2021), and a range of legal challenges emerging as a result from (unapproved) deepfakes (Pavis, 2021), to strikes in Hollywood in 2023 regarding actors’ and screenwriters’ rights.

² <https://rememory.deepbrain.io/en>

So, if there is a market of sorts already, for necrorobotic resurrection, then one ethical question would be if law ought to intervene, and if so, how. If we for the sake of reflection imagine necrorobotic resurrection as a mundane and normalised practice and service in an automated future, what would that mean in terms of accountability for the services being offered? Should they have to be set up in ways that can ensure longevity and sustainability? That is, consider the Canadian example from the introduction. As the credits for accessing the underlying language model ran out, his individually trained chatbot was terminated, in a sense killing his resurrected girlfriend a second time.

Yet another, related, and central question regards who should have the right to make decisions about the resurrection of the dead.

4.3 Who Ought to Decide over Resurrection?

The question of *who* should be able to make decisions about the dead is far from a new one, but is additionally stressed in light of new resurrection technologies. The main idea advanced in recent scholarship on post-mortem privacy is that the interests of individuals to decide what happens to their data on death should be recognised and protected (Harbinja, 2023). In medical ethics, for example for anatomy research, there tends to be an attempt of balancing between wishes of the dead while the person was still (biologically) alive, and the remaining family's wishes (Wilkinson, 2014). There can be clashes where for example the family wishes to overrule the consent given by the deceased.

James Vlahos, in the example above, when setting up for developing the DadBot, asked his sister, mother, brother, and his dying father. They all, in different ways, approved. So, the consent approach may be one normatively accepted way. But, what if they hadn't all agreed? How should disagreement be treated? Vlahos also noted how indifferent his father's terminal diagnosis had made him, speaking to that he may not really have taken the full implications of the question into account. And, realistically, can a person ever do that? This is particularly pertinent in light of how AI-supported (resurrection) technologies radically shifts what it means to be digitally or robotically represented. While regulations are being drafted, and many concerns are lifted around implications of generative AI, the implications of dead persons' data as training data for the development of AI-models are far from fully understood.

Perhaps the case with the South Korean mother resurrecting her dead daughter offers an even starker example on the potential dilemma of *who should be able to decide*. Perhaps a mother often in culturally embedded social norms would be perceived as that she *should* have that right, but what if there is a father or other relative who rejects the idea? Just like choices of burial practices may trigger conflicts amongst those that are there to plan a funeral, the use of recordings, imagery, and texts for the animation of the dead will most likely drive controversy too. This also brings back the

legal discourse on seeing the rights to data as either about integrity and privacy or as a matter of property (cf. Birnhack and Morse, 2022). For the latter, should simply the parties that have access to the ‘social data’ mentioned in the Microsoft patent—the social media companies, the computer or smart phone providers, the app developers—have the right to make this decision of resurrection? Many would likely disagree to that.

Should law intervene and offer better guidance in the handling of the deceased? As an analogy, yet another strand of regulation deals with dignity of the burial remains. For example, the Geneva Convention state that the dead must be ‘disposed of in a respectful manner and their graves respected and properly maintained’ (rule 115), which was first codified in 1929. The philosopher Hans Ruin brings up the so-called Vermillion Accord, where a general right for the dead is established, as a way to formalise ethical concerns in archaeology (Ruin, 2019: 139). In addition, many jurisdictions criminalise the disturbance of graves too. In Swedish law, for example violation of ‘burial peace’ (*griftefrid*) is criminalised with up to two years of imprisonment (Swedish Criminal Code, 1962: 700, chapter 16, article 10).

Ought this approach to the material side of the dead analogically be stretched out to include the digital remains? Öhman and Floridi (2017) argue for a right for the ‘informational body’ to be treated with respect and dignity also after the end of the ‘physical existence’. That is, dignity applies ‘regardless of whether the producer of data is alive or not’ (Öhman and Floridi, 2017: 650). Even if the dead and their remaining informational bodies should be treated with dignity, it is not exactly clear how. Would that make necrorobotic resurrection undignified? Or does that depend on in what shape, form, and context it is done? That is, if the informational body is intact and (relatively) unaltered. Öhman and Floridi hint in the direction of that there is ‘reason to protect the online dead from undignified forms of commercialisation’ (2017: 656; further elaborated upon in Öhman, 2024).

Furthermore, while the digital non-material aspects of resurrection may seem far from the ethics of burial dignity, the steps to *embodied resurrection* in social robots as vessels for the trained individual features are not far. The voice and the speech-behaviour (think Alexa), the facial structure (think Furhat), and the growing body of literature on robots learning from human demonstration (think video material).

As mentioned, the contemporary discourse in legal research around how to regulate individuals’ data in the ‘digital afterlife’ (Savin-Baden and Mason-Robbie, 2020) addresses it either as a matter of property or privacy (Birnhack and Morse, 2022; Harbinja, 2023). Of interest for further studies would be to empirically study how necrorobotic practices are normatively perceived, as they are likely to become more common, but also be met differently in various mortuary cultures. Also, can social norms change and allow for something of a normalisation of an AI-enabled resurrection of dead relatives and friends? Will mourning practices change along with technological capabilities in generative AI, perhaps offering a sort of reenchantment of the dead? (cf. O’Neill, 1999; Laqueur, 2015; Ruin, 2019).

4.4 Uncanny Misuse

Lastly, if we flip the perspective towards the eerie ‘haunting’ characteristics of resurrecting the dead, as developed through Mori and Freud above, we can first point to the uncanniness developed in robotics research as well as the increasing capabilities of individualised attacks developed in security research (cf. Brundage et al., 2018). That is, this haunting can potentially be an active way of *weaponising* necrorobotic resurrection. As rich sets of data remain while the bodies die, it is of course feasible that this data can be retrieved and used for various onerous objectives. As the tools for training individual bots and robots become easily accessible and democratised, one can imagine a targeted use of haunting families or partners of dead persons for various reasons: extortion, harassment, and more. Similar misuses, while not regarding dead people, have been pointed to for so-called revenge porn where images of a specific person are merged with pornographic material as a way to harass that person (Chesney and Citron, 2019). The latter, however, is drawing from how security and AI experts warn for more personalised hacks and spam (Brundage et al., 2018), and in that sense point to resurrection that is not intended for the sake of the friend or family, but to be weaponised against them. There are already known examples of fake voices used for fraud, but to my knowledge not the combined but individual examples of methodologies described for bots in this chapter. Nor is the automated generation *at scale* seen, with replicas of our past friends or relatives set to haunt us in our everyday lives with their uncanny resemblances of persons we once knew. At least not yet.

5 Concluding Remarks

By drawing from recent progress in data-dependent machine learning and generative AI, this chapter scrutinises a specific aspect or imaginary of automated futures: the possible resurrection of the dead. But, to be clear, this is not about the dead mind’s resurrection—we will not live forever and be aware of it—but about mortuary cultures amongst the living; about commemoration, grief, and remembrance, and the norms that guide these practices.

The chapter refers to the technological and often machine-learning-based inventions as *resurrection technologies*—that is, methods for the training of AI-models based on data from a specific individual, such as imagery, text, and voice—to discuss interconnected ethical and normative questions. Under this purpose, this chapter introduces the concept of *necrorobotics* as a field of studies with regards to this. That is, the critical studies of use of data and design based on one specific dead individual in order to ‘resurrect’ that individual. That is, mimic or create some level of robotic agency for ‘human-necrorobotic interaction’.

The emphasis on agency is a core part for the stressing of ethical and legal questions to be addressed. Who should be allowed to make decisions of resurrecting a person? Is there a market for necrorobotic resurrection? It seems so. Should lawyers think more about integrity and privacy than property when addressing legal rights over the agency-enabling personal data used for AI-modelling? What does it mean that a large tech-company has a patent for the creation of conversational chatbots based on one single individual's data?



Figure 8.5: DALL•E 2 prompt: ‘Simone de Beauvoir resurrected as a humanoid robot, photorealistic, standing next to an actual robot looking sad’.

This analysis should be seen as a speculation drawing from recent advancements in the field of generative AI in order to point to key normative questions, rather than an attempt to offer a more thorough normative structure. There are many well-established ways of being with the dead, philosopher Hans Ruin teaches us, and a multiplicity have to be accepted. Perhaps it is like Simone de Beauvoir (Figure 8.5) notes when she sees her sister's unwillingness to discard their deceased mother's little things—‘it is useless to try to integrate life and death and to behave rationally in the presence of something that is not rational: each must manage as well as he can in the tumult of his feelings’ ([1964] 1999: 98). This implies that de Beauvoir accepted that the manifold ways of meeting those outside this closest relationship have to be less judgemental:

I can understand all last wishes and the total absence of them: the hugging of the bones or the abandonment of the body of the one you love to the common grave ([1964] 1999: 98).

In mortuary cultures, and in light of AI-supported capabilities, there is seemingly something new to be added to the very old. This in terms of agency as well as possible uncanniness of the reanimated dead, that arguably needs to be more thoroughly addressed in terms of social norms, ethics, and culturally embedded practices. This means comparing what is new to the already established in terms of necrorobotic resurrection, drawing from ideas on what is technologically possible, potentially uncanny, as well as traditionally mundane about ways of being with the dead. To what extent this speculative sort of immortality offers any consolation for death, to return to de Beauvoir's reflection from the introduction, remains to be seen.

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