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Title:
Automating Digital Afterlives

Date:
2021-08-26

Citation:
Fordyce, R., Nansen, B., Arnold, M., Kohn, T. & Gibbs, M. (2021). Automating Digital Afterlives. Jansson, A (Ed.). Adams, PC (Ed.). Disentangling: The Geographies of Digital Disconnection, (1), pp.115-136. Oxford University Press.

Persistent Link:
https://hdl.handle.net/11343/311341

The question of how the dead “live on” by maintaining a presence and connecting to the living within social networks has garnered the attention of users, entrepreneurs, platforms, and researchers alike. In this chapter we investigate the increasingly ambiguous terrain of posthumous connection and disconnection by focusing on a diverse set of practices implemented by users and offered by commercial services to plan for and manage social media communication, connection, and presence after life. Drawing on theories of self-presentation (Goffman) and technological forms of life (Lash), we argue that moderated and automated performances of posthumous digital presence cannot be understood as a *continuation* of personal identity or self-presentation. Rather, as forms of mediated human (after)life, posthumous social media presence materializes *ambiguities* of connection/disconnection and self/identity.

digital afterlife, death, self-presentation, automation, online identity, self, algorithms, digital trace, platforms, artificial intelligence

P2 # Part II

(Dis)connected Lives

C5 # 5

Automating Digital Afterlives

Robbie Fordyce, Bjorn Nansen, Michael Arnold, Tamara Kohn, and Martin Gibbs

C5.S1 ## Introduction

C5.P1 > We hope Facebook remains a place where the memory and spirit of our loved ones can be celebrated and live on. (Sheryl Sandberg, Facebook's chief operating officer)[1]

[1] See Sandberg, 2019.

C5.P2 The question of how the dead "live on" by maintaining a presence and connecting to the living within social networks has garnered the attention of users, entrepreneurs, platforms, and researchers alike. Digital traces of personal communication, accumulated over many years and enclosed within corporate-owned social media platforms, servers, and databases, have informed a range of responses about the persistence, bequeathment, ownership, and potential repurposing of personal data following biological death. Efforts to preserve the dead are not unique to digital media, and can be traced through historical examples of storage and communication media, from phonographs to photographs to facsimiles (Gumpert, 1987; Peters, 2000; Sterne, 2003). Nevertheless, studies in the area of death and digital media have shown that increasingly users seek to maintain a mediated connection to the deceased by posting messages, while platforms like Facebook have responded to such desires by enabling profiles to be placed into a memorialized state

(Arnold et al., 2018). Thorny issues have also emerged, including the legal management of digital assets (van der Nagel et al., 2017), the technical design of online memorialization and posthumous communication services (Brubaker & Callison-Burch, 2016), the hype of Silicon Valley digital immortality start-ups (Kneese, 2019), and social and ethical questions about the rights and responsibilities surrounding posthumous data and the political economy of digital entities inherited by the living (Meese et al., 2015; Öhman & Floridi, 2018; Stokes, 2012).

C5.P3 Attempts to maintain connections with the dead on social media do not always run smoothly. Examples of contested presence include the human generation of prank death reports that lock users out of their accounts (Notopoulos, 2013); automated notifications nudging users to connect or communicate with a dead friend (Kohn et al., 2018); social media that falsely announce the death of

celebrities (Nansen et al., 2019); and the use of artificial intelligence (AI) to identify and disable accounts that are not memorialized but are suspected of belonging to someone who has died (Sandberg, 2019). In this chapter we seek to extend this area of research based on case study analysis examining various online services that explicitly engage in the promise or performance of posthumous digital presence. We investigate the ambiguous terrain of posthumous connection and disconnection by focusing on a diverse set of practices implemented by users and offered by commercial services to plan for and manage their social media communication, connection, and presence after life. In particular, we consider the increasing use of algorithms and AI to fashion posthumous bots that continue to communicate through social networks. We identify four categories of posthumous digital presence that have been developed in these contexts:

C5.P4

- the *surrogate*, a human agent who manages social media on behalf of the absent deceased,

thus *representing* the deceased (e.g., *@ChazEbert*);

C5.P5 • the *automated*, a set of one or many preplanned messages that are released on social media triggered by a date or by an event, thus *re-presencing* the deceased (e.g., *If I Die*);

C5.P6 • the *algorithmic*, a semi-automated digital-social hybrid mechanism that reposts remixes of past content as if it were new again, thus *re-personifying* the deceased (e.g., *LivesOn*);

C5.P7 • and, finally, the *artificially intelligent*, a chatbot system that relies on a corpus of existing user data from the deceased to engage in new conversations and produce new content that *re-animates* the absent deceased (e.g., Roman bot as detailed in Newton, 2016; the Bina 48 bot detailed by Lifenaut, 2014, and *Eterni.me*).

C5.P8 Our typology and analysis are informed by the work of Erving Goffman and Scott Lash. Goffman's (1959) work on self-presentation and a binary between frontstage and backstage in everyday social life has become an influential framework for understanding peoples' online behavior. The prevailing interpretation is that users have a public frontstage where they perform their identity, and this performance is coordinated and planned in a private backstage. Yet, we suggest this application of identity construction is problematized by automated forms of social media communication, connection, and presence that persist after the end of life. Extending Goffman's theory of self-presentation through the concept of 'technological forms of life' (Lash, 2002), we argue that such moderated and automated performances of posthumous digital existence cannot be understood simply as a continuation of personal identity or self-presentation. Instead, as forms of computer-mediated human (after)life, they reassemble the self and its social connection through what Lash describes as the

conditions of technological cultures and digital forms of life. These conditions collapse a range of binaries operating across spatial, temporal, and ontological dimensions, complicating digital connection beyond death. A machine learning program informed by a database of an individual's digital communication, has, as Lash's ideas suggest, re-created a posthumous entity that is disjointed, decontextualized, and discontinuous from the life it seeks to represent. Automated social presence is then not easily aligned with notions of self-presentation, a frontstage identity performance, or a continuity of self. As forms of mediated human (after)life, we argue that these performances should be understood by the way they materialize ambiguities of connection/disconnection and self/identity. They are performances that are enabled and constrained by technological possibilities and imperatives to maintain digital connection beyond death, offered by a range of automated afterlife services discussed in this chapter.

C5.S2

The Afterlife of Self-Presentation

C5.P9

Goffman's seminal work from 60 years ago is often invoked in contemporary studies of interpersonal communication, and especially in the study of social media interaction. Goffman (1959) argued that an individual's social identity is a product of a series of conscious and unconscious presentations of self, which he described through a dramaturgical model based on a frontstage (the place of a public form of the self which is performed and represented in different contexts) and a backstage (the pre-public space of intimacy and self-reflection that precedes and prepares one for the frontstage). Goffman's focus on a frontstage and a backstage provides a framework to understand the relationship between social media (a type of frontstage) and the offline lives that feed into it (the backstage). A person conceptualizes an impression of themselves in the backstage, and then presents this impression to specific publics in a targeted way in the frontstage. Because

this relationship involves a component of reflection and curation of impressions prior to public dissemination, the presentation of self can be understood as an attempt to performatively construct an idealized version of self, a packet of information bundled up for particular specific uses.

C5.P10 The application of Goffman's theatrical framing to online identity has, in turn, highlighted how the performance of identity is increasingly shaped through more distributed and co-constructed networks of friends, acquaintances, and strangers, who are in turn embedded within the curatorial functions and corporate logics of social media platforms (Belk, 2013; Hogan, 2010; van Dijck, 2013). For research into death and social media, Goffman's work is relevant for a number of reasons. Firstly, the notion of the self that is being preserved is a self that has already been curated in some manner by conscious and unconscious decisions that an individual makes in the course of their life about how they act in online publics. Secondly, the process of performing some

kind of posthumous self involves accessing databases of archived social media account—accounts that once upon a time constituted aspects of the deceased's frontstage presentation of self—and using them as a backstage resource to re-create and/or continue the deceased's frontstage identity work posthumously. These posthumous performances of self become the social performances of a person engaged with others—precisely what posthumous social media services seek to represent, re-presence, re-personify, or reanimate.

C5.P11 Such social curation practices are, however, complicated in the contexts of automated afterlives in which impressions and audiences are collapsed. The concept of online context collapse emerged out of readings of Goffman by scholars danah boyd, Alice Marwick, and Michael Wesch.[2]

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[2] As boyd notes, the development was simultaneous, as these different scholars were not aware of each other's research; see boyd, 2013.

Context collapse refers to the situation where specific personal impressions that have been directed to specific audiences break out of their contextual silo and are encountered by wider groups or in other contexts. For Marwick and boyd, the complication in social media is that it involves multiple contexts that arrive already pre-collapsed: The Twitter platform does not segment easily, so myriad social contexts are available at any one moment (2011: 116–117). Equally, as users we are generally nonexperts in compartmentalizing social contexts; we are not as adept at managing our social media lives as we might be, and consequentially, we "leak" information between contexts that we otherwise would not intend (Marwick & boyd, 2011: 123–124).

C5.P12 Crucial to the construction of the archive are the questions of who or what is included or excluded, and how the information is disciplined and ordered through the archiving processes of data that may be unstructured or 'wild'

(Poster,1990). As Featherstone (2006) notes, there are questions of power, privilege, and control enrolled in the creation of the archive, which raises new questions in the context of who is capable of pursuing—however quixotic—a digital afterlife. We see the process of constructing a personal record of utterances in a digital context as a curatorial process involving the development of an archive of personal representations involving the posting of words, images, videos, links, and more, and also the development of a personal social community through practices of friending, liking, and following. It is the curation of this archive that builds the corpus that will become the basis for posthumous social media.

C5.P13 Clearly, these issues are important when we consider how various posthumous digital archiving techniques might record things about us that are intended only for specific individuals or contexts. Further issues arise through the logics that inform curation and aggregation—logics which are

performed algorithmically. For example, what "rules" do algorithms use to curate and aggregate and thus moderate frontstage performance and backstage functions? Wesch suggests that the ultimate result of context collapse is a disrupted order: "Like a building collapse, context collapse does not create a total void but a chaotic version of its once-ordered self" (2009: 23). Context collapse can create enough difficulties when it is accidental or unintended, but the prospect of a chaotic, disordered, contextually murky record of our utterances, operating past our lifetimes, complicates the take-up of these services. Accordingly, researchers have suggested a need for impression management features extending to the profiles of the deceased (Brubaker & Callison-Burch, 2016; Marwick & Ellison, 2012). Notions of self and identity online have become further challenged by the growth in AI software, and especially web bots, that not only assist, moderate, and transform online communication, but

unsettle notions of presence, agency, and personhood (e.g., Baron, 2015; Gehl & Bakardijeva, 2016).

C5.P14 The use of media that are managed through automated services to represent deceased "selves," when framed by Goffman's dramaturgical model of social interaction, invites us to consider the different performances that posthumous digital presences might conduct. Our analysis focuses on the role of algorithms and AI in shaping posthumous persistence, informed by Lash's theories of "technological forms of life" (Lash, 2002). We suggest automated forms of afterlife complicate approaches based on Goffman's emphasis on the self and selfhood. Posthumous social presence—however partial or crude—reveals forms of agency that exceed the individual construction (or even social co-construction) of the self. Indeed, posthumous presence is remediated by commercial digital platforms, protocols, and processes in ways that complicate Goffmanian binaries of front- and backstage, or of embodied and social selves, by re-mediating

technological afterlives that collapse context as well as temporalities, spatialities, and ontologies.

C5.P15 Scott Lash's work (2002) is valuable because he demonstrates how our online lives have been shaped by digital technology in ways that extend and elaborate upon Goffman's social categories of identity performance, through dynamics of separation, speed, compression, and discontinuity. The premise of Goffman's idea of self-presentation relies on the description of conscious and subconscious acts and utterances that are put into public view. In the context of social media, acts and utterances are not just expressed, but archived. It is this archive that is used as a reference point by algorithms and AI as the basis for creating posthumous acts and utterances. Following Lash, by their nature as technological social events, these digital acts and utterances are shaped by their mediation in digital technology.

C5.P16 Lash identifies eight traits that constitute social interactions in technological cultures (Lash, 2002: 15–24):

Interactions are experienced at the interface and have a strange surface quality to them; they are experienced at a distance, rather than immediately at an intimate level; some differences are flattened out while others are heightened; content appears in a nonlinear fashion; large time differences are compressed to the point where years might have passed between adjacent utterances; rates of content are sped up while remaining discontinuous and disconnected; and, finally, all utterances and experiences are geographically lifted out from any particular space into a global digital non-space. There are myriad consequences for these disruptions when applied to the idea of the self that is remediated through automated afterlife services.

C5.P17 This is a significant observation for posthumous identity, as these automated and algorithmic processes rely on archives of online utterances to create representations of the deceased. Lash points to the way that these archives of utterances are not neutrally created, but are subject to a

particular mediation of the way that the deceased lived. In particular, the order of events in their life can be represented in a disjointed, stochastic, and disruptive manner. Technological forms of life simultaneously experience a temporal flattening such that all moments appear immediately within one singular context; equally, technological forms of life are geographically disconnected from any one place, or even place altogether. More prosaically, our lives are different because of digital media inasmuch as we would behave differently if we did not have social media; for Lash, this leads to a degree of self-conscious commentary about using technology. The consequence is a disconnected representation of the deceased, which comes from no particular time and no particular space, with a tendency toward self-referentiality, rather than identity development. And yet it is precisely these complex arrays of dislocated, deracinated, and dehistoricized individual utterances that get folded into the different types of

digital posthumous identities that emerge from the distinct solutions that people can take to retain their existence online.

C5.S3 Curating Technological Forms of Afterlife

C5.P18 The development of affordable cloud computing services in combination with big data personal information has facilitated the development of bots and other automated tools for creating and managing posthumous digital identities. These tools range from automated message delivery services through to curated personal profiles that will continue operating after death. We have identified four primary categories of bots and tools within this purview: the surrogate, the automated, the algorithmic, and the artificially intelligent.

C5.S4 The Surrogate

C5.P19 The surrogate is the least technical (and most likely the cheapest) solution for maintaining an online postmortem existence, in which the deceased person has provided their account access information to a third party. This third party is

asked to maintain the account on behalf of the deceased, and operate it indefinitely. One of the most well-known accounts to operate in this way is the Twitter account for the late Roger Ebert (@ebertchicago), whose will stipulated that his wife, Chaz Ebert (who operates @ChazEbert), was to continue operating his account after his death in April 2013, and thus represent him and represent him. While more recently the account has shifted to predominantly retweeting @ChazEbert, the initial operation of the account after Ebert's death was conducted in his voice. The role of the surrogate has a fuzzy legal status. Some social platforms do not allow users to bequest their accounts. For instance, the videogame distribution platform Steam has a persistent social component to its operation, however, accounts are tied to purchases and Steam's terms and conditions specify that such accounts are not transferrable.

C5.P20 What the surrogate option questions in our analysis is the performance of the role of the deceased. Within

Goffman's (1959) self-presentation framework, the performance of the self in public spaces is a process of context-specific curation of a personal life. The extent to which individual moments of personal and private life are made public, and the extent to which these moments are true or false (Goffman, 1959: 37–44), are based on decisions that are made in an individual's backstage. The person who is given the role of the surrogate is making a second-order approximation of the backstage of the person who has since passed away. As a result, subjective forms of knowledge, perceptions, emotional cues, and so on have disappeared, to be replaced by a performance of a self based on interpretation and approximation. Ultimately, the verisimilitude of the posthumous presence remains ambiguous as the backstage is no longer accessible, replaced instead solely by a performative and interpretive frontstage.

C5.S5

The Automated

C5.P21 The Automated is a non-persistent use of digital media after death. Instead of a user stipulating continued use of accounts in their will, they set up a digital version of the "dead man's switch"—a device used in trains to cause the train to stop if the driver dies or is incapacitated. In this instance, instead of having their accounts used persistently, the accounts operate to send out preplanned messages from the deceased. In some cases, this is built into existing social media systems, while in other cases it comes in the form of a message sent through email from the site's server. The sites *If I Die* (2008), *If I Die App* (2011), *If I Die 1st* (2012), and *Dead Man's Switch* (2007) are typical of this format. These sites advertise themselves as systems for automating one-time message delivery after death and function in similar ways: An individual signs up to the service, writes a series of messages, and stipulates email addresses for each message. These emails are held in a cryptographic escrow system, and are inaccessible to the site owners. The system periodically sends

confirmation messages to the owner's nominated email address, and the owner must acknowledge receipt in some manner to prove they are alive. As long as proof of life is indicated to the site, then the messages will be indefinitely delayed. However, if proof of life confirmation fails multiple times in a row, then the messages will be sent from escrow. In the case of *If I Die*, proof of life failure is not sufficient, and an additional set of checks and balances exists: Users nominate specific trusted parties to confirm their death.

C5.P22 With these systems the communication model is a unidirectional broadcast model; the non-reply design obviously lacks any capacity for dialogue or meaningful response. This leads to these sites advertising themselves as a means for disclosure. *If I Die App* (2011) has—in a now-deleted video—suggested that the service could be used to pass on messages of undeclared or unrequited love after death; to disclose personal or family secrets about adoption or history; or to pass on messages of abuse, disgust, or hatred.

These systems propose the use of disclosure specifically for saying things that the author wants to communicate to particular people, but, crucially, were not able or prepared to disclose during their lifetime. Within a Goffmanesque framework, we can look to this method of posthumous digital communication as being a sort of represencing of the self, in which the person is able to insert their presence into the future, and in doing so manage information disclosure beyond death. These services operate on an expectation that the author wants to disclose sentiments, views, or information from their backstage while avoiding awkward or difficult communications during their lifetime.

C5.S6

The Algorithmic

C5.P23

The algorithmic identity is a semi-automated digital media profile that is built from a corpus of user data. This produces what Wendy Moncur calls the "post-self"—an identity which exists as a digital/social hybrid that "operates from beyond the

grave" (Moncur, 2016: 111). This post-self-identity is developed by applying a chatbot system to a database of existing user behavior drawn from various sources. The generic method involves taking users' social media data as a set of pre-generated phrases for the bot to produce or recombine in various circumstances and in response to various cues. In a recent survey, more than 10% of people aged under 65 thought existing as a chatbot algorithmic personification of themselves after death would be appealing (Death.io, 2018).

C5.P24 Dadbot is a recent example of an algorithmic identity. Dadbot is a project by James Vlahos to record conversations and interactions with his father, motivated by his father's diagnosis of stage IV lung cancer. Vlahos writes in *Wired* about his experience under the title "A Son's Race to Give His Dying Father Artificial Immortality" (Vlahos, 2017):

C5.P25 > In all, I have recorded 91,970 words. When I have the recordings professionally transcribed,

> they will fill 203 single-spaced pages with 12-point Palatino type. . . . But by the time I put that tome on the shelf, my ambitions have already moved beyond it. A bigger plan has been taking shape in my head. I think I have found a better way to keep my father alive. (Vlahos, 2017)

C5.P26 Vlahos had his conversations with his father transcribed, then fed into a chatbot creation program called PullString. The result, Dadbot, is capable of simulating dialogue with a predilection toward a wealth of personal family history. Vlahos engaged in some structuring of the dataset in order to make it more streamlined for functioning as a chatbot, and the overall method itself suggests new techniques for archiving family history.

C5.P27 Other forms of algorithmically generated identities inhabit Twitter. Twitter is widely populated with the accounts of dead notables, periodically tweeting out quotes from their

works; Spinoza (@BenedictSpinoza), and Kierkegaard (@SorenKQuotes), for example, are bots that quote directly from the works of these famous academic historical figures. It is notable, in the context of legal personhood, that accounts quoting directly from the works of the living, or indeed the recently deceased, are few and far between; the legal status of accounts that tweet material protected by copyright or intellectual property law is likely to constrict the creation of such bots. While the algorithmic is a form of digital presence and posthumous communication, it builds on automated forms of messaging by re-presenting the front stage of the deceased in a chatbot or social media form. These entities both repost and remix past content in ways that do not just represent the deceased person in living communication, but re-personify them through posthumously engaging in the creation of new posts or scripted responses that mimic interactive conversations. In doing so, the algorithmic performance of self is one that deploys databases and algorithmic curation to

create the impression of a backstage through a novel or interactive frontstage interface and performance. As these presentations are directed by algorithmically programmed instructions the impressions may be affective but fail Turing's well-known test of verisimilitude. For the algorithmic, we should ask ourselves what might be achieved through using this service? Dadbot presents an idea of a system that could act as a unique lens into family history, while erudite Twitter bots present an idea of serendipitous encounters with quotes from philosophy, science, and theory.

C5.S7

The Artificially Intelligent

C5.P28

What distinguishes the artificially intelligent from the other categories of posthumous digital presence is the implication of persistence and reanimation in the branding. The presentation of technology that "intelligently" repurposes the data trail of a deceased person into grammatically and contextually accurate material is core to the artificially

intelligent digital presence. These platforms offer services that are similar to but extend algorithmic forms of posthumous identity, insofar as they use AI software and machine learning on a corpus of data built from the user's online accounts. The artificially intelligent identity is the most speculative of the identities associated with posthumous computer-mediated communication. Rather than representing the state of the field, it represents a speculative outlier for posthumous digital presence.

C5.P29 Eterni.me operates as a well-known paradigmatic example of the artificially intelligent. While still—and seemingly perpetually—in beta development, their privacy policy indicates the array of services that they are willing to draw from to develop a profile (Eterni.me Privacy Policy, 2015). While the document has not been updated since 2015, the service would require authorized access to all aspects of a user's Facebook and Twitter accounts, as well as all relevant data from Google Analytics, personal cookie, and usage data,

with a footnote indicating that Eterni.me will also require credit card information and all appropriate login and access codes. While this material is clearly necessary for the service to work, the volume of personal data is far from negligible. Indeed, because this data is collected, collated, and aggregated within the one, single system, it far exceeds what any of the individual companies could access and represents an enormous volume of data about the individual with unparalleled value in today's data-economies.

C5.P30 Eterni.me and other similar services draw on powerful science fiction and futurist fantasies of immortality, which have accompanied the emergence and development of computing technology. Ray Kurzweil's early writing, for example, suggested varying stances on the possibility of immortality through computers (1990). His later writing, however, suggested that the problem of death was a matter of our human "meaty" hardware failing while our mental software merely required an appropriate site to sustain itself

(1999: 128–129). Moravec (1988) stands out as having one of the most haunting utopic visions of them all, describing the process of being transformed from meat to machine. Moravec's description speaks of a grueling dissection of the brain by a digital lathe, which analyzes each layer of gray matter and replicates it in digital space; what is human to Moravec is mere "neural architecture" to be replaced by a simulation (1988: 109–110). A more recent vision of this concept was presented in the 2020 Amazon Prime series *Upload*, which depicts the head and brain of the protagonist being disintegrated in a flash of light and energy to capture his neural architecture to great comic effect. The message is clear: This is a one-way journey.

C5.P31 The idea of digital immortality is baked into these platforms through public advertising that echoes transhumanist narratives: "Simply Become Immortal" has been advertised on the Eterni.me website (2014) in the past, while more recently the site suggests that one can instead

"become virtually immortal" (2017). The variation between the branding over three years is slight, but significant. The ambiguity of virtual in this context suggests both the prospect of a digital immortality, as well as its fictitious unreality. The dream of technical immortality is present in fictional books and films such as *Frankenstein* (Shelley, 1818) and *Metropolis* (1927), which suggest some prospect of inhuman or nonhuman life after death. In more recent years, Moravec (1988), Kurzweil (1990, 1999), and Geraci (2010) have located discussions around the prospect of an immortality available through the computer, while fiction works such as *Black Mirror*'s "Be Right Back" (2013) and "San Junipero" (2016), DeLillo's *Zero K* (2016), and the recent Amazon series *Upload* (2020) also present digitally mediated forms of life after death. The emphasis on posthumous life being virtual or fictional has not stopped projects from materializing

that seek to implement this in the real world, such as with the Lifenauts projects[3] (see Lifenaut, 2020).

C5.P32 A similar promise of posthumous persistence is found in the service ETER9. ETER9 promises a system with a "unique ability to convert users into eternal beings" (ETER9, 2017a). While less specific about the ideas of immortality itself, ETER9 instead offers a capacity to forget: "ETER9 will attenuate the awareness of life's transience" (ETER9, 2017a). ETER9 is also different in terms of its manner of function; it does not require access to a corpus of personal data. Rather, ETER9 (2015) has its own social media system that the user

[3] The LifeNaut project is an endeavor to create autonomous robots that house a digital posthumous presence. In practice this is the creation of robotic heads with the external appearance of a person. The robot uses a digital synthesizer and a set of audio files to re-create speech and allow dialogues with a simulated person.

commits to in order to train a bot, known as a "counterpart." The goal of this process is to generate an entity that is capable of mimicking their respective human user. The counterpart takes on a name that is a version of the original user's name, transliterated into so-called *leet speak* (an online typography derived from the visual similarity between some numbers and letters). Users of ETER9 can set their counterpart's autonomy on a scale from 0 to 100%, which will dictate to what extent the automated service will operate in their absence. The site also promises the prospect of "Niners" (ETER9, 2017b). Niners are digital entities that will periodically awaken out of the algorithmic soup of interactions across the platform as semi-functioning entities, but are not based on any one individual on the site. Niners are born and can be adopted by users, and "they may die if they are not adopted or if they have no purpose within the ETER9 universe" (ETER9, 2017a).

C5.P33 While statistics are not readily available about the number of users or interest in either ETER9 or Eterni.me, the numbers are likely low with the service acting more as an indicator of where posthumous media might head. In this sense, these services are speculative, rather than practical, but in this speculation, they act as provocations for thinking on how posthumous social media might introduce complications for civil society.

C5.P34 ETER9's implementation of technology also speaks to the narratives drawn up by Moravec and others, partly in terms of the idea of digital/synthetic lives, but also in terms of the metaphor by which they operate. As Moravec also notes in *Mind Children*, we can think of replacing ourselves not just through a meat-to-machine process, but also through a system of computational mimicry. Moravec describes a suitable method:

C5.P35 > A kind of portable computer (perhaps worn like magic glasses) is programmed with the

> universals of human mentality, your genetic makeup, and whatever details of your life are conveniently available. It carries a program that makes it an excellent mimic. You carry this computer with you through the prime of your life; it diligently listens and watches; perhaps it monitors your brain and learns to anticipate your every move and response. Soon it can fool your friends on the phone with its convincing imitation of you. When you die, this program is installed in a mechanical body that then smoothly and seamlessly takes over your life and responsibilities. (Moravec, 1988: 110–111)

C5.P36 Socially interacting within this system generates user data and trains a bot to operate after the user has passed away. Consequently, the longer the bot operates after the user's death using the system's AI machine learning software, the

more the bot diverges from that user's originally archived personality. In this sense, the original ambition of a posthumous persistence is eclipsed by an entity that moves beyond re-presenting the frontstage provided by personal digital datasets to reanimate the self-presentation of the deceased. Paradoxically, this reanimation is most like the original self in successfully imitating but also displaying the capacity to evolve and thus diverging from that verisimilitude to become a separate entity.

C5.P37 The types of posthumous digital presence described before enact and solicit the possibility of maintaining a digital connection that persists beyond death. While the surrogate identity allows for a continuity of connection, and the automated facilitates scripted one-way communicative acts of connection, it is the idea of the algorithmic identity that suggests an attempt to maintain some degree of independent, if programmed, presence of a self after death. The artificially intelligent framework goes even further and posits an idea of

adaptive persistence and performance in reanimating a self after death, yet such entities are not just detached from their biological substrata but also increasingly disconnected from the selves they originally imitate.

C5.P38 As such, the proposition of a machine-based presentation of self poses complications for social scientists who grapple with the interrelationships of self, identity, and personhood in digital platforms. Automated performances of posthumous digital existence extend forms of self-presentation through communicative media like email or programmed technologies like robots as forms of mediated human (after)life. Posthumous social media presences materialize ambiguities of connection/disconnection and self/identity, by enacting new "technological forms of life" (Lash) offered by a range of automated afterlife services discussed earlier. These revolve around technological possibilities and imperatives to maintain digital connection

beyond death by privileging an automated curation of social presence over a more consistent performance of self.

C5.S8

Reconceptualizing the Self in an Automated Afterlife

C5.P39

The thought that we might successfully circumvent mourning or live forever through a digital persona is an idea that is more fantastic than the realities of technology allow. A posthumous digital presence is likely to be doubly shaped by technology. If the method of animating the presence is through a digital service then its methods will draw on a corpus of statements, utterances, or textual data in order to animate its simulation. This corpus is the functional equivalent of Goffman's backstage—it is a set of statements curated by an individual for the purpose of forming a public identity. Yet within Goffman's framing, the backstage for a posthumous digital presence is merely the record of a frontstage of a deceased individual. The intent and context of any utterances is inferred

by a digital service that, unlike the deceased, does not draw in new information and experiences from an individual's life that continues to be lived; rather any new data is sourced from a general approximation drawn from data that is only partially derived from the deceased in the first case, or from reflected data drawn from machine learning and ongoing interactions with individuals and other machines that go beyond the context of the original life-as-lived. The original intent of the deceased is not and cannot be captured in these moments, only its tracings. As such, posthumous digital personas are remediated by commercial digital platforms, protocols, and processes in ways that complicate Goffman's binaries of front and backstage, or of identity and social selves.

C5.P40 The complication to the backstage for the posthumous presence is more than just doubly removed from the intent of the deceased. Each step, from the living backstage to the living front stage, then from the deceased backstage to the

posthumous front stage, also involves as Lash demonstrates, a complicating mediation of life. Computers afford, shape, limit, and corral different kinds of online interaction, thus shaping the corpus that is key to reanimating a representation of the deceased. Accordingly, the infrastructure of Internet technologies both compress the distances between users, while often pushing the interactions from a sense of immediate space into a diffuse space of *out there*—present, but also distant. The forms of separated intimacy that emerge from this type of communication are not dissimilar to the separation between dead and alive (Peters, 2000). The sense of separation, speed, compression, and discontinuity that Lash identifies is found in the way that discrete blocks of information about wholly different contexts are piled one on top of another within random access databases, giving a sense of a *mise en abyme* of personal disclosure. In parallel to this, Lash suggests, any sense of transcendental movements or

relations is completely eclipsed by the flattening effects of media, while a transcendental separation between ontology and epistemology almost entirely disappears as technological forms of life privilege curated performance over consistent or past self-presentation.

C5.P41 A consequence of the overlapping of Goffman and Lash's work in our conceptualization of posthumous social media is that the categories of person, self, and identity are maintained yet lose their singular reference point of a living, breathing person. These three categories—a legal person, an organizing self, and a represented identity—are coordinated from a common locus, that of the individual. Yet after death, these categories separate, and become managed by different systems. Goffman (1959) describes the self as a method for understanding personal comportment in public and the relationship that this public self has to a private self. In contexts of social media, Papacharissi suggests the self is a constantly evolving abstract reference point that a being uses

to understand its relationship to the world around it (2011: 304). The self is a projection that changes, but remains grounded in an individual, and responds to its experiences in the world.

C5.P42 In contrast to the self, Anthony Giddens describes 'identity' as a phenomenon contingent on social relationships, framed by a set of appearance codes, and is enacted in relationship to other people. Manuel Castells (2010: 6–7) takes the proposition further, and notes that collectively or individually, an identity may be thought of as a singular state or as a combination of plural identities. What is important about this is that identity is not merely an individual human quality, but is something that nonhuman and fictional things may possess. Corporations possess identity through their brands, which shifted from being mere marks of ownership and production to being tied to a personality and social role in the mid-20th century (Lury, 2004: 20–21). Identity, thus, is a set of aesthetics and socially coded meanings that infer

attributes or community about an entity, and the dead, or their avatars, are not excluded from possessing or expressing an identity.

C5.P43 Unlike selfhood and identity that are generated from individuals and their relationships, personhood may be designated by others—it can be understood as an ascribed status that can be granted or removed. Personhood is a legal category that stipulates the rights and responsibilities of identified human beings (Arnold et al., 2017: 12–14). But personhood can also be denied to people, as with African slaves in the United States prior to the Emancipation Proclamation, or Jewish people during the Shoah, or Indigenous Australians who were legally classified as 'fauna' until much-needed law and constitutional reform in the late 1960s. Just as personhood can be denied to people, so too can it be granted to nonhuman things. The corporation is a legal category whereby the rights and responsibilities of personhood is given to a business entity, with the main

function being that the responsibility for acts within the corporation not being passed on to owners. A radical development in Aotearoa New Zealand has seen the Whanganui River granted with legal personhood under the custodianship of the Nga Tūhoe Iwi and the New Zealand government; the consequence of this is that custodians may engage in legal action on behalf of the river against pollution or despoliation (Haunui-Thompson, 2017). So why not extend this category to posthumously curated automated persons?

C5.P44 A posthumous social media presence is not yet ascribed personhood, and yet debate has emerged in the European parliament about the creation of a category of electronic personhood to regulate the actions of robots more generally (European parliament draft report, 2016). Consider, however, ETER9 generating a random sentence from past comments; if the entity had legal personhood, should its utterances be given legal weight in determining the outcome

of a will? Should indications of consumer desire be sufficient to instigate purchases or the retention of debts? Accordingly, how is this complicated by privately owned algorithms that have not yet been publicly audited? Can it be held accountable for slanderous, objectionable, and/or harassing comments? The question of identity too remains fraught. Identity is a mutable thing (Castells, 2010) which changes over time. How might personhood, identity, and the self change in response to shifting social mores and changes in language?

C5.P45 There are, then, many social, economic, and ethical questions raised by automated afterlives, where lifetimes of distributed data are collected and collapsed within a single commercial platform. Technological afterlives not only collapse contexts, but also temporalities, spatialities, and ontologies of presence. In doing so, automated afterlives complicate notions of self and identity by entangling entities with social, ethical, and political questions of persons. Lash's

work shows how the impacts of digital mediation shape not just forms of communication, but also forms of life that are communicated. Social media not only expose us to the problem of an online context collapse, but also produce traces in digital interaction. When these interactions and traces form the basis for automated afterlife software programs, we are left with a situation where the artifacts of production are replicated upon themselves. If one takes a photocopy and copies it again, the output will start to expose the grit, scratches, dust, and errors on the page. So too when Photoshop is used to repeatedly filter an image—the algorithm starts to stand out from the image. When reinserting lived social media content back through an algorithmic afterlife, the residual social spatiotemporal contexts will stand out in stark relief in the new postings. Like an image that has been modified too many times, the posthumous remediation of social media data serves to expose the pixilation of parsing an online self after life has passed.

C5.P46 **Acknowledgments:** The authors would like to acknowledge and thank the Australian Research Council (ARC), for funding through the Discovery Projects Scheme (DP180103148), and the Linkage Funding Scheme (LP180100757), and the Greater Metropolitan Cemetery Trust (GMCT) for their support as a Linkage research partner.

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