An Ethical Framework for the Digital Afterlife Industry

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The web is increasingly inhabited by the remains of its departed users, a phenomenon that has given rise to a burgeoning digital afterlife industry. This industry requires a framework for dealing with its ethical implications. We argue that the regulatory conventions guiding archaeological exhibitions could provide the basis for such a framework.

The number of "dead" profiles on Facebook has been estimated to increase at a rate of roughly 1.7 million per year, only in the US[1]. Depending on the future rate of growth in Facebook users, the dead may even outnumber the living before the end of the century. Meanwhile, technological development has enhanced how we "socialise" with the dead online. Firms such as Eterni.me and Replica now offer consumers online chat bots, based on one's digital footprint, which continue to live on after users die, enabling the bereaved to "stay in touch" with the deceased. This new phenomenon has opened up opportunities for commercial enterprises to monetise the digital afterlife of Internet users. As a consequence the economic interests of these firms are increasingly shaping the presence of the online dead.[2]

The sociological and legally oriented literature has mainly focused on social practices of grief on social media. This debate has largely focused on the role of technological development in shaping modern practices of online grieving, and has, with few exceptions[3], left the economic and ethical aspects of the phenomenon mostly unexplored. The fact that the online dead are generally mediated by *commercial* platforms therefore tends to be neglected. This is problematic, considering the recent growth in the industry. There is a plethora of start-ups now investing in death online, and tech giants are also beginning to join the trend. Facebook, with its two billion (living) users, has made significant advances in supporting users who wish to mourn and stay in touch with the profiles of the departed. Likewise, Google has recently launched an "inactive account manager" to deal with the inevitable deaths of its users, thereby following in the footsteps of numerous digital afterlife start-ups. Although they differ in their respective business models, these enterprises may all be placed under the same umbrella term, the *Digital Afterlife Industry* (DAI)[2].

Mapping the DAI

The DAI includes a wide range of actors,[2,4] from small start-up applications, like Afternote and Departing.com, to technology giants, like Facebook and Google. It also includes a variety of consumer services, from advanced AI-based avatars to simple password deposits. A conceptual map of the industry (Table 1) indicates the presence of four categories of firms: (a) information management services, (b) posthumous messaging services, (c) online memorial services, and (d) "re-creation services".

a) Information management services help users deal with problems regarding digital asset management, which may occur in the event of their own, or someone else's, death. Such firms are seldom very technologically sophisticated. They generally create only a form of "digital will", ensuring that assets are passed on (or destroyed) on death. A report released by the online security company McAfee claims that the average Internet user puts a value of $37,000 on their digital assets. Although many information management start-ups have become obsolete since Google launched its "inactive account manager" feature, recent industry investment indicates a thriving business.

b) Posthumous messaging services provide a more personalised product. The typical firm sends out an email to the user. If this goes unanswered, it triggers a number of messages and/or other forms of digital content to be sent to some specified recipients. Whereas one or two messages are often sent out free of charge, almost every site urges their users to upgrade to some kind of premium service for $10-$50 per year.

c) Online memorial services are more explicitly directed towards the bereaved. They provide an online space for a deceased individual or group to be mourned and/or remembered. Sites often include features such as logs and other forms of communication channels, where the bereaved can mourn together and upload photos, videos, and other content, which function as a sort of digital grave marker. This kind of service is typically delivered by a start-up with around 50,000 users. However, Facebook currently hosts the majority of online memorials, despite the feature not being part of its primary business model. Just like Facebook, most services advertise themselves as free, but almost without exception there is some form of paid "premium" version; although notably not in the case of Facebook.

d) Re-creation services use personal data in order to generate new content replicating a dead person's social behaviour, often through a chat-bot like application that generates new messages based on past data. Re-creation services are typically provided by fairly young start-up companies. Unlike with the previous categories, this kind of feature has yet to be adopted by mainstream technology giants. Nevertheless, user numbers are growing rapidly, Eter9 being one of the fastest growing examples. Likewise, MIT start-up Eterni.me also has about 33,000 beta-subscribers, and Replica (not *primarily* a DAI service) claims to have around half a million users.

To summarise these categories, Table 1 illustrates the four types as a gradual progression of interactivity, i.e. ordered by degree of posthumous presence. While this doesn't represent the only possible way to organise said categories, it is the one that best illustrates the above summary.

	Digital remains as estate	Digital remains as preserved memory	Digital remains as communication	Digital remains as artificial agent
Information Management Services				
Online Memorial Services				
Posthumous Messaging Services				
Re-creation Services				

Table 1. Progression of posthumous online presence.

Among the firms described above, we have also found different modes of monetisation. Some use a "free of charge" model, selling targeted ads instead. Others offer products for consumers to purchase. But regardless of how they go about doing so, they all share an interest in monetising death online, using digital remains as a means of making a profit. For example, financially successful chat-bot services represent not just *any* version of the deceased, but rather the one that appeals most to consumers and that maximises profit. The remains thus become a resource, a form of (fixed) capital in the DAI economy.[2]

Such capitalisation of digital remains may have far-reaching consequences, especially since capital requires human labour to remain productive. In other words, a growing volume of digital remains necessitates an increase in posthumous interaction online. If not deleting them, what would make the cost of storing billions of *dead* profiles financially viable? Is increasing commercialisation the only solution, or will we rather see something similar to the management of public cemeteries? And *if* the choice will be to delete profiles, what would the selection process look like? Would profiles with a larger audience be prioritised? Undoubtedly, these and similar options raise difficult ethical concerns.

Identifying key challenges and implications

So far, there has been little effort to build frameworks to ensure ethical usage of digital remains for commercial purposes, especially with regards to more sophisticated technologies. To set the direction for a future ethical and regulatory debate, we suggest that digital remains should be seen as the remains of an *informational human body*[5], i.e. not merely regarded as a chattel or an estate, but as something constitutive of one's personhood[6]. This is also in line with EU legislation's terminology regarding "data subjects". Given this approach, the main ethical concern of the DAI emerges as a consequence of the commercially motivated manipulation of one's informational corpse (i.e. the digital remains of a data subject). This approach suggests we should seek inspiration from frameworks that regulate commercial usage of *organic* human remains. A good model is provided by archaeological and medical museums, which exhibit objects that, much like digital remains, are difficult to allocate to a specific owner and are displayed for the living to *consume*. Furthermore, as collections

become increasingly digitised and made available online[7], the ethical concerns of archaeology appear to be increasingly merging with those of the DAI. It is therefore heartening that the former already has ethical and regulatory frameworks in place.

A document of particular interest is the International Council of Museums' (ICOM) Code of Professional Ethics.[8] It stipulates that human remains must be handled in accordance with their inviolable "human dignity". The strength of this concept lies in the fact that it applies irrespective of whether the ethical patient is aware or not. Moreover, it applies to individuals and groups alike, and has thus been key in the process of repatriating remains from marginalised and previously colonized groups such as the First Nations.[9] Finally, the concept of dignity provides a direct link to the domain of informational privacy, where it already plays a central role (see the General Data Protection Regulation in European Union legislation[10]).

Ethically, human dignity requires that digital remains, seen as the informational corpse of the deceased, may not be used *solely* as a means to an end, such as profit, but regarded instead as an entity holding an *inherent* value. This is stated explicitly in ICOM's Code. As museums often sell and produce replicas of exhibited objects (human or not), the Code further specifies that "all aspects of the commercial venture" must be carried out with respect for "the intrinsic value of the original object". Adopting a similar regulative approach to the DAI would clarify the relationship between deceased individuals and the firms holding and displaying their data. Despite sometimes being the sole legal owner of the data, and irrespective of the desires of those next to kin, DAI firms would be obliged to abide by certain conventions, such as preventing hate speech, and refraining from commercial exploitation of memorialised profiles. As indicated by ICOM, human remains are not meant to be consumed by the "morbidly curious".

While the proposed approach would have implications for all four types of DAI services, it would have particularly deep consequences for re-creation services. This is also where the most significant ethical concerns lie. For instance, since chat-bots are frequently enhanced and updated, the image of the person they depict changes over time; even within only five years upon a user's death, the chat-bot for which they signed up will likely have developed into something far more sophisticated and commercially calibrated. Furthermore, since the re-creation services provide the highest degree of presence, they also involve the greatest risk regarding privacy.

Given these concerns, a minimal requirement would be for firms to guarantee that: (1) consumers are informed on how their data may come to be displayed *post-mortem*; (2) users are not depicted *radically* differently from the bot which they originally signed up for; and (3), users only upload data that belongs to them personally, i.e. not making bots out of a deceased relative or friend. Requirements like these could be imposed by regulators, but may just as well be set by internal agreements within the industry, such as the ICOM code of ethics, or even be incorporated within the ethical policy work of individual firms. Today however, there are no—or very few—explicit requirements such as these.

These concerns demand careful investigation and dialogue between policy makers, industry and academic experts. They will only grow in significance as the dead become increasingly numerous online. In developing a constructive ethical approach, the first step is to decide to what extent, and under what circumstances, our memory of the deceased is to be driven and shaped by the commercial interests of industry. The second, and equally important, will be to develop a regulatory framework, commonly adopted, to ensure *dignity* for those who are re-mediated and remembered online.

References and Notes

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