

Afterlife of digital user data: analysis of posthumous data policies development on social media platforms

**Posmrtný život dat: analýza vývoje přístupu sociálních sítí k
posmrtným datům uživatelů**



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Thank you.

Declaration

Prohlášení

I hereby declare that I wrote this diploma thesis solely by myself and that I have cited all the sources used while writing this thesis. This text has not been used for applying for the same or a different university degree or during another university programme.

Prohlašuji, že jsem diplomovou práci vypracovala samostatně a že jsem řádně citovala všechny použité prameny i literaturu. Tato práce nebyla využita v rámci jiného vysokoškolského studia či k získání jiného nebo stejného titulu.

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Abstract

This diploma thesis focuses on the topic of posthumous user data management concerning social media platforms. This topic is rarely discussed from the viewpoint of new media studies in academic literature. My thesis endeavours to unveil, contextualize, and critically assess the development of the posthumous data policies in order to uncover the level of control users and survivors have over the deceased users' data. Thus, three case studies of chronological posthumous policy development of major social media (Facebook, Twitter, and LinkedIn) were conducted and results were compared. The analysis has shown that platforms are rather reluctant to change their posthumous policies. One of the primary triggers for change comes from the users' feedback. Across all three cases every platform provided limited or no information about these policies in their terms of use or privacy policies. The case studies demonstrated that users have very limited choices regarding their data after death directly on the examined social media platforms. Individuals who were close to the deceased account users have the ability to request account deletion or have limited access to the account granted by the platform. The level of data preservation demanded by platforms seems dependent on a given social media's communication specificity and target audience. This thesis aims to contribute to the debate about the possibilities of storing and using data after the death of a user on social networks and to help better understand the current behaviour of platforms regarding their policies. It attempts to outline more clearly the potential direction of their further development. This debate forms the context for the future formation of international and national legislation and is directly related to protecting users' privacy.

Keywords

Digital death, digital dying, death and data, posthumous policy, posthumous data ethics, social media and death, personal information management, privacy policy, case study

Abstrakt

Tato diplomová práce se zaměřuje na téma správy uživatelských dat po smrti v rámci platforem sociálních sítí. Toto téma se v akademické literatuře téměř neobjevuje, proto si práce klade za cíl představit vývoj zásad sociálních sítí, jak nakládat s daty uživatelů po jejich smrti, a uvést je do kontextu a kriticky zhodnotit. Snaží se tak zachytit míru kontroly, kterou uživatelé a pozůstalí mají nad daty zemřelých. Za tímto účelem jsou v práci provedeny tři případové studie chronologického vývoje zásad nakládání s posmrtnými údaji na významných platformách sociálních Sítí (Facebook, Twitter a LinkedIn) a jejich výsledky jsou poté mezi sebou porovnány. Následná analýza ukázala, že se platformy zdráhají zásady měnit, jednou z primárních příčin změn je zřejmě odezva samotných uživatelů. Ve všech případech poskytly platformy pouze omezené nebo téměř žádné informace ohledně posmrtného nakládání s daty v rámci *podmínek užívání a zásad ochrany osobních údajů*. Případové studie vybraných platforem sociálních sítí také ukázaly, že uživatelé mohou o osudu svých dat po smrti rozhodovat jen omezeně. Studie rovněž ukázaly, že sociální sítě umožňují pozůstalým požádat o smazání účtu zemřelého nebo jim k němu dávají pouze velmi omezený přístup. Do jaké míry platforma po smrti uživatele data sociální síť uchovává zřejmě závisí na způsobu komunikace na dané platformě a její cílové skupině uživatelů. Tato práce přispívá k debatě ohledně možností uchovávání a užívání údajů po smrti uživatele sociálních sítí a pomoci lépe pochopit nynější chování platforem a jejich způsobům nakládání s uživatelskými daty. Práce se též snaží odhalit možný směr budoucího vývoje těchto zásad. Téma uživatelských dat v kontextu úmrtí uživatele také přispívá do debaty, jež ovlivňuje budoucí národní a mezinárodní legislativy a přímo souvisí s ochranou soukromí uživatelů.

Klíčová slova

Virtuální smrt, virtuální umírání, smrt a data, politika dat po smrti uživatele, etika dat po smrti uživatele, sociální sítě a smrt, management osobních informací, zásady ochrany osobních údajů případová studie



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1. Introduction

The beginning.

We are now living in a society where death is present everywhere and nowhere. Although it is usually claimed to be the only certainty of our human lives (Schopenhauer, 1957), the event of dying and also the word *death* itself have grown into a contemporary taboo. With a tint of romantic emphasis, it seems distant when observed from our living rooms via mass media (see f.e., Ariès, 1975; Kearsley, 1989; Walter et al., 2012).

The human relationship with death has been gradually shaped and transformed since the very beginning of humankind. The practices and customs associated with passing away and mourning vary hugely across cultures, places, and religions, yet, one aspect remains constant. It marks the end – a terminal cessation of human physicality, the very end of one's memory, but also the interruption of the present connection with others. Nevertheless, the desire of survivors to connect with the dead is still present. (Lim, 2013)

When we observe how this relationship has developed over time, we might conclude that current Western society has reached a turning point in this matter. To clarify, we will turn to Ariès (1975), who guides us in his essays on

*the Western attitudes toward death: from the Middle Ages to the present*¹ through the chronicles of this relationship. He describes the evolution starting from the open acceptance of death a thousand years ago to growing individualism during the 17th and 18th centuries, eventually leading to the current denial of death in Western society. Indeed, in the 21st century, we are virtually surrounded by death. It is regularly depicted in the news, TV shows, movies, video games, books, and other media; but real death remains invisible to foster the ideal of infinite youth and immortality. Death is fascinating and attractive, and it also sells newspapers. Especially in the light of current events, it seems that our fear of death has resurfaced, commanding our actions in dealing with the Covid-19 pandemic.

What has led to this change? In the 1970s, Ariès (1975) pointed out that the it was related to growing individualism, but most affected by the power of technology, particularly in medicine. This technology has allowed us to push real death out of our everyday lives and see it more as an error in the system, rather than the natural end of existence. However, after almost half a century, we are witnessing another technology – the Internet – with social networking sites as pioneers, bringing the theme of death back to us (Walter et al., 2012). Indeed, social media has evolved into a place in cyberspace, where we can store and share our digital memories, construct our digital selves, and co-create our digital bodies. Death seems to permeate back into our lives, bit by bit, as social media transforms from a simple service to a technology gradually more intertwined with our everyday lives and self-reflection.

In today's reality, social media is stimulating the bloom of individualism, self-consciousness, and newly emerging digital communities that need to face

¹ Official translation from the French original: *Essais sur l'histoire de la mort en Occident: du Moyen Âge à nos jours*

the departure of users belonging to that community (f. e., Sofka, 1997; Sumiala, Hakola, 2013; Walter et al., 2012). With more than 4 billion active social media users worldwide (“Global digital population,” 2020) and millions passing away every day (Öhman, Watson, 2019), the platforms need to decide what will happen to the digital remains of individuals. This power lies almost absolutely in their hands. How can social media affect the practices and customs surrounding death? What role will they play in the future retrieval and mapping of our history? Where will deceased users find themselves in the digital community of social media?

Unfortunately, these questions regarding the macro-level examination of the link between technologies and users are far beyond the scope of this thesis. Instead, this text tries to enrich and illustrate the theory with concrete examples about what the death of a user means for different platforms. On that account, we will touch upon some key theoretical notions, such as the themes of *mediated self*, *digital immortality*, *embodiment*, or *digital memory*.

The presented thoughts and case studies are framed by the mostly Western understanding of death and dying in advanced industrial societies. This thesis aims to examine the relationship between selected social networking sites (namely Facebook, Twitter and LinkedIn) and their users in the context of death, which represents one of the most critical points of users’ activity. Hence, it endeavours to unveil, contextualise, and critically assess the development of their posthumous data policies by identifying pivotal triggers. In this account, posthumous policies were selected because they not only represent a tool for setting the playing field for users, but also the social media platform.

To better specify, this text will present a comprehensive chronological analysis of these policy strategies in the form of case studies, identifying key development phases. Information for the analysis will be obtained primarily through the mentioned social networks and officially available documents, but

also from descriptions of posthumous practices and policies in the academic literature.

In terms of structure, the first chapter introduces a systematic literature review on the topic of posthumous user data across various fields of study, particularly concerning notions of *digital self*, *digital immortality* and the posthumous labour in the context of users and survivors. Part two describes in detail the methodology used in the case studies, as well as the research questions derived from the literature. Subsequently, in the third - analytical section, three case studies are presented to illustrate the development of posthumous practices. With each case study focusing on one of the selected platforms, the cases follow the same structure, so conclusions can later be drawn. Finally, the results, along with their limitations, are discussed at the very end.

This thesis aims to contribute to the debate on the possibilities of storing and using data after the death of a user on social networks and to help better understand the current behaviour of platforms regarding their policies. It could also help to outline more clearly the potential direction of their further development. This debate forms the context for the future formation of international and national legislation and is directly related to the protection of users' privacy.

2. Literature review

Death is one of the inevitable stages of human life. In today's society, it gradually returns into the public sphere in all its forms, and its media in particular play a crucial role in this process. Indeed, the media reveal and present death to us in a myriad of visual or lateral forms. Hence, as many experts agree, media also considerably influence how we perceive, understand, and deal with death on both individual and societal levels (e.g., Moreman, Lewis, 2014; Sofka, Cupit, Gilbert, 2012; Sumiala, Hakola, 2013). Within this framework, Walter (2015a) asserts that the presence of death depends at least partly on the type of prevalent communication technology in a given society. This technology then affects the way we communicate with both the living and the dead but also leads to a more visible and conceivable presence of the deceased within society (Gibson, 2014; Sofka, 1997; Walter, 2015a). To illustrate this fact, Carl Sofka (1997) coins the term "*thanatechnology*", which describes such linkage between death and technology. Ultimately, all of this is also reflected on social network platforms, which became the domain of communication at the dawn of the 21st century and which are under scrutiny in this thesis.

Regarding the afterlife, until recently, the media provided imaginary immortality exclusively for the famous and wealthy. However, hand in hand with the expansion of the Internet and Web 2.0, this option of extended eternal life has spread to the average member of society. Today, as people, we have the opportunity to create our digital memories on social platforms, which we

eventually erase or leave to the bereaved. These digital footprints are stored in the form of data, literally individualised bundles of zeroes and ones, which we will examine more in depth. (Bassett, 2015, p. 1135; Walter, 2015a)

As already outlined, this literature review is most concerned with the topic of digital data and information of the deceased on social networks. This issue will be examined from the perspective of death studies and information studies. We are deliberately avoiding other approaches, such as medical, philosophical-ontological, or analytical-legal. However, some passages contain necessary overlapping.

The review will gradually acquaint the reader with the current state of knowledge about the connection between death and social networks, the relationship between digital identity and data concerning these platforms, and, finally, the reasons for preserving and using user data and related ethical and legal aspects.

2.1 Methodology, challenges and limitations

The scope of this thesis and the literature review, respectively, focuses exclusively on the death of a social media² user in terms of personal data production, along with reasons for their preservation once the user is not active any longer.

² „Social network services are ‘web-based services that allow individuals to (1) construct a public or semipublic profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system’” (boyd, Ellison, 2007)

Relevant literature was drawn from the databases of Google Scholar, Web of Science, and Scopus primarily through search terms: 1) *death and data*; 2) *death and social media*; 3) *economy of death*; and 4) *immortality, data, and social media*. Simultaneously, the academic journals *Mortality and Death Studies* (both Taylor & Francis Group), *OMEGA - Journal of Death and Dying* (Sage), and *Thanatos* (Finnish Death Studies Association) were examined. Other existing literature reviews on death, the Internet, and the media were also identified as a particularly valuable source of information. Namely, *Introduction to the special issue on death, afterlife, and immortality of bodies and data* (Graham, et al., 2013), *Introduction: Media and Death* (Sumiala, Hakola, 2013), and *Who Wants to Live Forever? Living, Dying, and Grieving in Our Digital Society* (Bassett, 2015). However, a narrowly focused systematic review addressing death, data, and social media is yet entirely lacking in academia. Though, a brief chronological overview compiled by Gotved (2013) may serve as an apt introduction to the studies of death in the context of the Internet. Lastly, some relevant references were also extracted from the papers mentioned above.

Some monographs dealing with death and social media are also worth noticing. The whole initial part of the book *Digital Death: Mortality and Beyond in the Online Age* (Moreman, Lewis, 2014) deals with the theory of death, mourning, and social media. However, most articles focus on Facebook or Twitter and regrettably omit other platforms. Simultaneously, only limited space is devoted to the topic of death centrally concerning data. In a like vein, neither the publication *Mediating and Remediating Death* (Christensen, Sandvik, 2014) nor *The Social Construction of Death: Interdisciplinary Perspectives* (Van Brussel, Carpentier, 2014) do not provide a direct data approach, although the former offers unique case studies covering social networks. Finally, the latest monograph called *A Networked Self and Birth, Life, Death* (Papacharissi, 2018) significantly broadens the number of studied social networks and presents several views on the topics of data retention as well as information sharing.

The limitations of the presented literature review mainly stem from the intricate mapping of relevant literature due to the substantial interdisciplinarity of relevant articles and studies. Moreover, the lack of previous literature reviews focusing exclusively on posthumous data and their economic use plays its role. That is the principal reason why this text does not offer a compilation of individual thematic articles, but rather a selection and synthesis of relevant key and recurring themes contained in the literature that are further contextualised.

Therefore, this review is divided into four parts, initiated by a general introduction to the relationship between social networks, death, and data, along with a discussion of the link between a user's identity and the data that this user creates on these platforms. These two theoretical chapters are followed by an overview of research in posthumous data management on social networks. Finally, a section on ethical and legal aspects is presented, since these two foci directly shape legal regulations and the posthumous data policies.

2.2 Death, data, internet and social media

Initially, we will focus on foundations of the relationship between data³, death, and social networks, that will provide us with necessary theoretical

³ In the scope of this thesis, personal data are broadly understood according to the OECD definition as: “*Any information relating to an identified or identifiable natural person ('data subject'). An identifiable person is one who can be identified, directly or indirectly. Where an individual is not identifiable, data are said to be anonymous.*”; while data represent “*Characteristics or information, usually numerical, that are collected through observation.*” In terms of social media, we are considering data provided directly (such as name, e-mail address, phone number, etc.) by users but also data collected while they were using the platform (provided indirectly, namely liking and sharing content, the content of their messages and

context for various practices related to posthumous data management discussed later in this review.

We are able to observe manifestations of death on the Internet at the early stage of its mass spread. Some of the authors elucidate that the very first digital cemeteries, i.e., places on the web for publishing information about the deceased and for collective mourning, can be found as early as in 1995 (Pitsillides, et al., 2013, p. 79; Walter, 2015a, p. 226). A significant breakthrough in online death mediation comes hand in hand with the mass expansion of social networks. The most significant change took place in 2007 as a direct repercussion of the massacre of students during the Virginia Tech shootings, when survivors asked the social network Facebook to keep victims' accounts *alive* (viz e.g., Vicary, Fraley, 2010; McCallig, 2014, pp. 117-118; Bassett, 2015, p. 1127). Therefore, the social network officially decided to memorialise the accounts of deceased users rather than switching them off. The memorialisation process meant locking the profiles so that no data could be further edited or erased and preventing those who left from signing into these accounts. At the same time, however, the network allowed the survivors to continue to interact with these accounts after their owners died. Until then, Facebook, as well as other social media platforms at that time, used to employ its strict policy of deleting the account of deceased within 30 days from the death being reported. (McCallig, 2014)

Walter et al. (2012) and Sofka, Cupit and Gilbert (2012) agree that social networks can substantially contribute to transfer the previously taboo subject of dying from the individual dimension to collective everyday life by allowing accounts on the platforms after users' death. This may lead to extending the once exclusively private communication with the deceased to a broader audience than

comments, etc.). Term *information* reflects data put into a further context having a particular meaning. ("Glossary of Statistical Terms," 2020)

only close family or social circles. On the other hand, Sofka et al. (2012) emphasise that we should still not forget about the digital divide, since many are cut off from this newly emerging thanatological system. Indeed, some sections of the world population have largely been neglected to date as, for instance, certain parts of Global South and developing countries (q.v. Graham, et al., 2013).

Mediation of death via social networks has brought new possibilities for further research. Other related topics have been identified in the literature in the field of contemporary death studies. However, their detailed analysis substantially exceeds the scope of this thesis. Nevertheless, we will propound a brief list of the most represented themes and examples of authors:

- transformation of mourning (f.e., Brubaker, Hayes, Dourish, 2013; Walter, 2015b);
- suicides and their prevention (f.e., Robinson et al., 2016);
- communication of terminally ill patients (f.e., Taubert et al., 2014);
- bereavement and communication related to a child loss (see Hayman et al., 2018);
- sharing grief, digital cemeteries and memorial groups (f.e., Klastrup, 2015; Walter, 2017);
- impacts of social media on funeral services (f.e., Nansen et al., 2017);
- accidents and catastrophes (f.e., Altheide, 2003);
- media representations of celebrity death (f.e., Brown et al., 2003; Sumiala, 2018);
- death and video games (f.e., Mazzeo, Schall, 2014);
- and the transformation of mourning rituals and the role of religion (f.e., Gamba, 2018; Sherlock, 2013).

In the following section, we will look at the theoretical concept of a user in relation to social networks and herself, since these relationships underlie the current debates surrounding ethical and legal regulations and policies.

2.3 Death, data, identity and immortality

2.3.1 The relation between posthumous digital identity and data

The relationship between death, data, and information on social media is embedded in a long-term human effort to preserve the memory and identity of the deceased for the survivors (f.e., Walter et al., 2012). Essentially, the moment we share data on social networks, we are virtually creating our *digital self* (Bollmer, 2013; Pitsillides, et al., 2013; Kasket, 2013, cf. Bolter, Grusin, 1999). In fact, it is the concept of the *digital self* associated with personal data that represents the common thread running through research on this topic. The following lines will, therefore, map its development in the literature in greater detail.

In their pivotal paper, Graham, Gibbs, and Aceti (2013) conclude that research of the *digital self* and related personal data management is still in its infancy. However, already a few years earlier, in 2009, authors Pitsillides, Katsikides and Conreen (as cited in Warburton, 2012) call for the formalisation of the topic of digital death and digital identity.

Bollmer (2013, p. 143) builds on this discussion and accentuates the discrepancy between the *self* and the *digital self*, from which, according to him, the cultural and social tensions surrounding the afterlife of personal information germinate. It is not only the taboo of death itself, nor the loss of the physical body, but the fear that data will completely replace a living person. In other words, the user's *digital self* would be substituted by the *self* and identity create by the user. More importantly, the author concludes that after the user's death, the information is separated from the deceased and is owned and controlled by the network in which it is located. At the same time, he draws attention to the

fact that technology becomes the equivalent of something alive only if it is positioned within a discourse that defines data as such, referring to the idea of contemporary posthuman condition (viz Hayles, 1999). In his argument, he uses the online afterlife of human (i.e., the period when a person dies but their data remains on the Internet) as a tool to define their relationship with the *digital self* per se, and claims that this data can form an authentic copy of user's identity. This fact then results in the tension mentioned above. It is also worth noting that Bollmer (2013), as well as some other authors (as, f.e., Sherlock (2013)), approaches the discussion of the *digital self* by its effects on the living user while sees their death as a turning point in the debate.

The question of the *digital self* as a representation of an authentic copy of our true *self* can be viewed through the lens of philosophy as well. Several researchers in the field of death studies refer to the philosophical-sociological conclusions (see Graham, et al., 2013; Pitsillides, et al., 2013; Bollmer, 2013; Poster, 1995) that the human *self* does not consist of one compact identity, but is rather formed by multiple identities and roles. These identities are then transmitted through data to the Internet. Data, in the case of social media, mean a set of technologically produced categories or parameters. The process of transmission can even construct new parts of our identity that might stay hidden from us as users, or we have no conscious control over them. However, this new complex digital identity should eventually fix and stabilise the user's identity (for more details, viz Bollmer, 2013, p. 144). Similar discussions are most often linked with the work of philosophers and researchers, such as Goffman (1959), Foucault (1977), Derrida (1996), or Freud (as cited in Van Dijk, 2007). (Bollmer, 2013; Graham, et al., 2013; Pitsillides et al., 2013)

Keeping this in mind, do data construct some kind of a false (inauthentic) identity, or do they provide new possibilities for self-knowledge? Bollmer (2013, pp. 149-150) circumvents this question and concludes that it eventually depends on whether the social media user will consider their own identity as true

and authentic as the one created online. depends on the social media user whether she will consider as true and authentic her own perceived identity or the one created online. He also remarks, in the same breath, that today's discussion about social networks defines online data as a key representation of human beings. However, any of the current discourses, positive or negative, actually do not suggest a direct correspondence between the two defined identities. Regardless, the divergence between the identity representations results in the aforementioned tension, where the offline identity loses its importance compared to the online one.

Pitsillides, Waller, and Fairfax (2013) offer a different perspective in their article *Digital Death: What Role Does Digital Information Play in the Way We Are (Re) Membered*. They look at the problem through the lenses of information archives with reference to van Dijck (2007). They incline to the notion that we, as humans, are the best possible archives of our *self* and identity and, hence, no external medium can play this role. Reversely, if we consider the *digital self* to be an exact reflection of our *real self*, the questions about their mutual relation raise again. Despite the vagueness of possible answers, the authors conclude that digital identity (i.e., in this context, a reflection of what is considered the real identity in the online world) already plays an important role in creating and reshaping ways and culture around preserving memories and legacies (Van Dijck, 2007; Pitsillides et al., 2013, p. 87).

Following the information archiving narrative, this idea is further developed by Acker and Brubaker (2009) in their article *Death, Memorialization, and Social Media: A Platform Perspective for Personal Archives*. They push the concept of the *digital self* beyond the human's individuality by stating that the identity on social networks, in the sense of a personal digital archive, is always co-created by the community of users through their posts. However, it is also in response to content created by the individual and, in general, interactions with the community. They also show ample

evidence in former research that this process usually continues after an individual's death. This notion gives the user's representation a new layer of context unmanageable by the individual per se. After the user's death, his profile is often immortalized and becomes an online memorial, which can only be further nurtured by the community of survivors. According to the authors, this co-creation not only significantly complicates ownership relations, but also blurs the boundaries of who should have access to this type of digital archive. In essence, it leads us back to the above-mentioned concept of construction of various digital identities or roles within one user profile in a social network. (Acker, Brubaker, 2009, p. 6)

Concerning our original question, Bassett (2015) sees the *digital self* as a possible authentic representation of our *real self*, arguing that the more we interact with technology and virtual worlds, the more our *digital self* becomes a more faithful representation of *real self*. She further follows this idea in her literature review and tries to systematize the terminology related to digital identity, *digital self*, and data. She draws attention to the frequent overlapping of the terms "*digital data*" and "*digital self*", while "*digital legacy*" is collectively used in the literature for manifold forms of digital footprints in a virtual environment. She also refers to the article by Pitsillides, Waller and Fairfax (2013), who tried to provide the reader with a list of key terms and definitions at the very end. Bassett (2015) also suggests using the term *digital legacy* in the context of digital data (such as passwords, social media information, digital property); that is to say, a kind of posthumously static information. Furthermore, she proposes to call objects, namely personal videos, news, photos, blogs, and others, as digital memories within the *digital self*. Yet we rarely find these concepts in other literature, where the authors are most often dealing with digital memories (e.g., Burgess, et al., 2018).

2.3.2 Data, death and physical body

The motif of death and data on social networks in the context of a physical body repeatedly appears in the literature, and it is also closely intertwined with posthumanist theories concerning corporeality (see, for example, Hayles (2008)). Much earlier, it was Marshall McLuhan (1964) who particularly advocated that technology is an expansion of the cognitive properties of the human body (Bollmer, 2013). In the context of death, data, and physical body, technology has virtually altered to a specific extension of the physical embodiment. Yet we must further explore the idea of data revealing a part of a user's otherwise unobservable identity to better understanding this notion (Moravec, 1988; Kurzweil, 2005; Bollmer, 2013). From the vantage point of death studies, a user's online identity (comprised of data) detaches from the user's physical body at the moment of death (Ibid). Thus, if we want to equate the user's *real self* with the *digital self*, we will have to further re-examine the elemental connection between our virtual and physical bodies and their transformations in cyberspace (Pitsillides, et al., 2013).

Bollmer (2013, p. 144, 147) also points out that the representation of our lives online significantly differs from the ones we consciously experience via embodied perception and that new media theoreticians heavily criticize the idea of autonomous living of our data. The user's body and being are often regarded as antagonistic to the user's online data. Either the data are presented as something that contributes to the annihilation of humanity, or something that might gradually substitute the human corporeality and eventually the humanity per se. Thus, the *digital self*, without an expiration date similar to the physical body, at the moment of the user's death detaches from the body and become a representation of the user's corporeality, simultaneously liberating itself from the direct user's control (Bollmer, 2013, p. 150). This digital form of representation sometimes lives on social networks until a third party intervenes and ceases it (Gibson, 2014; Pitsillides, et al., 2013).

To better illustrate the idea of the body as information, Gibson (2014) sought to explore privacy and property in relation to the body by analysing the BBC online documentary of a deceased Facebook user. Focusing on the realm of grieving practices, she argues that there are clear parallels with medical technology considering virtual death. Interestingly, the bereaved face a decision about similar liminal statuses of neither dead nor alive when turning off life support machines in hospitals as this decision is also associated with specific mourning practices. This notion implies that posthumous data are closer to the concept of embodiment, rather than physical remains as objects. (Ibid)

Floridi (2014, p. 121), a prominent theoretician in online ethics, offers an answer to this question by asserting that our data are essentially our “*digital bodies*” and should be treated as such rather than as inanimate objects (f.i., our car or other belongings). Importantly, his idea brings together the topics of information privacy and the physical body. Later Floridi, this time in collaboration with Öhman (Öhman, Floridi, 2017), takes the problem of dealing with the physical and virtual corpses one step further and proposes the concept of the so-called *informational body*, which should be treated in the same way under the law as the physical body post mortem. Consequently, it should prevent a violation of human dignity (Gibson, 2014; Öhman, Floridi, 2017). Despite its rather radical standpoint, this concept remains further undeveloped in later literature.

To conclude, there appears to be a tendency to perceive the posthumous data as a solid part of human embodiment, rather than an object simply owned by user placed in the cyberspace. We shall further examine the link between posthumous data, third parties, and survivors in the next chapter.

2.3.3 Religiosity and immortality via data

What is the notion behind the humans' effort to preserve their digital footprints after death? As mentioned earlier, a virtual identity can survive our real *self* in the form of our personal data. At that moment, a specific type of symbolic immortality can take place as described, for instance, by Sherlock (2013), Wright (2014), or Bassett (2015, p. 1133). It reflects the effort to preserve memory and a posthumous influence on future generations. Sherlock (2013) takes the concept of *digital immortality* one step further, to the idea of digital resurrection but also points out the contemporary disenchantment with traditional religious and spiritual practices. This resurrection, she writes, has a somewhat symbolic meaning following the notion of immortality we recognise in Western religions.

In Western societies, the general understanding of death and a basic approach towards the end of life and bereavement changed dramatically with the Enlightenment period, but even more notably in the nineteenth century and with the advent of modern science (Ariès, 1974). Despite the ambiguity regarding the link with the human *self*, new technologies and data represent one way in which today's society overcomes the finality of death and disappearance. In a similar vein, this representation is appreciably connected with the consumption of media entertainment and also with efforts to maintain a relationship with the deceased after their departure. (Sherlock, 2013, p. 164; Wright, 2014)

Both Bollmer (2013, p. 147) and Sherlock (2013) also touch upon the ideas of posthumanism in their reflections. Sherlock, for instance, discusses not only the resurrection as the possibility of reproducing user via data collected about her, but also cases where the *virtual self* (f. e., accounts under the administration of survivors) is aware of its death. Indeed, we can find ample evidence of the latter practice on social media of deceased celebrities (Gil-Egui, et al., 2017; Sumiala, 2018).

In connotation with the virtual identities remaining “active” in the digital society and thus “alive” after the death of their primary users, Sherlock (2013), supported later by Bassett (2015, p. 1128), coined the term *digital zombie*. She refers to a physically dead but virtually living person while pointing out a significant distinction from the term *internet ghost*, which mainly describing fake online identities. In chime with former religious beliefs, the reappearance of celebrities on social networks after they pass away might be even understood as a type of hierophany (Sherlock 2013, pp. 165, 172). It follows from the work of Eliade (1959)⁴, who argues that even people without religious faith still perceive the world to some extent through the lens of religious values (Sherlock, 2013, p. 64).

As immortality ceases to be a prerogative of celebrities, new questions begin to emerge. They are not only associated with the practical problem of data selection and preservation, but also the right to total obliteration. Furthermore, it provokes new debates about which parts of our hybrid *digital self* should be erased, as mentioned in Banks, Kirk and Sellen (2012) or Graham, Gibbs and Aceti (2013, p. 6). Some online services, such as Eternime, attempted to tackle this issue while promising virtual immortality by mimicking users' communication patterns (Leaver, 2019). In this particular case, by analysing user data with artificial intelligence, the service would continue the communication with survivors after the user's death (Bassett, 2015, p. 1128; Gibson, 2015).

⁴ Eliade (1959) proposes that human demand for religious practices thrives from ontological need. The religion makes the world more comprehensive.

2.4 User's death on social networks, reasons for data preservation and posthumous work

In this section, we shift from the theoretical definition of digital identity and its relationship to death to the possibilities of the users and survivors to handle the posthumous personal data. Unlike the chronological order set by Gotved (2014), we will look at the literature from the users' perspective and the ways of storing and sorting data with a greater focus on social networks.

2.4.1 Posthumous data management on social media: a users' perspective

Manifestations of both ends of the user's life, birth and death, are increasingly penetrating the online world, and therefore social networks (Leaver, 2018). According to Meese et al. (2015), since the user might retain a meaningful relationship with the living after her physical death, digital media play a crucial role as they equip survivors with new tools to communicate with the deceased. Earlier, however, Gibson (2014) argues that the deceased accounts usually lack reciprocity typical for communication on these social networks. Correspondingly, this notion might not be entirely true in the future, since many other authors mention newly emerging online services and other options for managing data after physical death (Bassett, 2015; Bollmer, 2013; p. 147; Meese et al., 2015; Leaver, 2013; Sherlock, 2013). Some of these services, namely *ifidie.net* specialized in online posthumous messaging or *yes.thatcan.be/my/next/tweet/*, a system able to infer and compose new *tweets* from a user's previous tweeting activity, might become a starting point for the

analysis of user's entire online life resulting in user's posthumous replication. As a consequence, the preservation of data for a potential digital survival of the user's identity raises new questions about its value for profit and advertising. We will address this topic separately later (Meese et al., 2015).

Bollmer (2013, p. 148-9) adds that data we, as users, upload to one of the social networking platforms essentially begin to live their own life (see also Bell and Gray, 2001) and cease to belong exclusively to us. The ownership is partly taken over by the given platform, which then co-determines the fate of digital identity after the user's bodily death (Bollmer, 2013).

From a different angle, Massimi and Charis (2009) assess these post-mortem data in terms of human-computer interaction (HCI). According to them, technology is far from offering adequate solutions regarding posthumous data related to the occasion of death, an issue with a profound impact on most social networks. These platforms see the user as a relatively stable and essentially immortal entity; even a design solution considering product lifespan does not apparently take the user's death into account (see also Wright, 2014). Accordingly, Messimi and Charis (2009) ask whether there could be genuinely functional services for the user's data management, which, for instance, would enable to segment data for different groups of recipients and thus ameliorate posthumous communication. Acker and Brubaker (2014) likewise discuss this issue.

Later, Gibbs et al. (2015) examine under scrutiny the visual social platform Instagram and the means of dissemination of information about funerals within this digital community. They have inferred that each social network has a specific way of expression and communication, which further impacts the remembrance of the deceased (Ibid).

Bollmer (2013) and Acker and Brubaker (2014, p. 20) agree that a user has considerably limited power over their estate on social networks, particularly because of the unclear conditions of use, which usually do not cover death nor the posthumous fate of personal data at all. Boddy (2004) asserts that most social networks in their early years, namely MySpace, or Friendster, generally adopted one of two prevalent strategies for management of the accounts of deceased: either to erase the account when someone from the platform's community reports that a user has passed away, or to preserve it but not to interfere more in its existence. Later, some networks, such as Facebook, moved to a strategy of separating deceased accounts from those still alive, in this case by a process of *memorialisation* (Bollmer 2013, p. 146, McCallig, 2014). Wright (2014) describes Twitter's former policy (2013) when a user could authorise another person to handle the data after verifying the user's death. To be authorised, Twitter required an official signed statement from a user that also must be presented to deactivate the account. In general, social networks are not forced to radically change their practices for their users, as Acker and Brubaker (2014, p. 11) further illustrate, since the main emphasis in the field of cybersociology is on the present activities rather than on the long-term legacy of the user.

If we look at the process of creating and maintaining a social media account through the lenses of information archiving, a perspective raised by Acker and Brubaker (2014), we might interpret the users' activity on social networks as a creation of their personal digital archive. In this respect, the authors further expand their conception. According to them, it is the platform or social network that should be primarily involved in compiling this archive and provide the user with the necessary tools for creation and management (Acker, Brubaker, 2014, p. 4). Apart from this, we must not forget that the content of a user's archive, i.e., her virtual identity, is also jointly formed by her surroundings and other users interacting with the account in cyberspace (Acker, Brubaker 2014, p. 15; Gibson, 2014; Leaver, 2015).

As these authors further describe, however, social networks do not officially allow any form of archiving practices before or after the user passes away. In other words, the users are not entitled to choose in advance what will be preserved or eventually deleted from their profile. This option is neither available to an officially authorized person, even if the account still exists, for example, in the case of Facebook's memorialised accounts. As a result, an account on Facebook does not transform into an archive in the true sense of the word, but rather only turns to a static page and a reflection of the user's digital identity frozen in time. Thus, sharing a password with survivors still seems to be the only option for posthumous information selection. (Acker, Brubaker 2014, pp. 6, 15-6)

Yet, there is another approach to understanding death except for the context of the bodily expiration and subsequent survival of digital identity. Omitting the physical death altogether, we can also involuntarily or voluntarily "kill" our *virtual self*. Bollmer (2013, p. 148) pursues this focus and cites online services such as *Vanish*, *Legacy Locker*, and *Suicide Machine*, which promise a quick and painless death to the online *self*. These platforms defend their existence by saying that online data should be controlled by the user or erased. In this conception, our data become uncontrollable not only on the occasion of death but also when we quit the network voluntarily. The service providers reflect the discrepancy between digital and real *self* by mentioning that a voluntary virtual death might raise an emotional emptiness. Nevertheless, the emptiness soon disappears since no relationships on social networks were actually real. (Bollmer, 2013)

Hitherto the academics generally agree that the user has a minimal range of options to decide on the storage of her data after death. Regarding posthumous policies, the literature describes the practices of social networks relatively thoroughly in their beginnings. However, a more detailed analysis of the development of these policies on a specific platform is currently lacking,

especially in the case of widely-spread local social network sites such as Chinese *Renren* or Russian *Vkontakte*, or across multiple platforms under the same owner.

2.4.2 Posthumous data management on social media: a survivors' perspective

Social networks enable continuance of communication with the user after her death (Irwin, 2015; Sherlock, 2013, p. 165; Wright, 2014) and, in addition to that, the relationship between the deceased and those who left may not even differ significantly from other common relationships among the living (Bassett, 2015; Meese and et al., 2015). Indeed, Cesare and Branstad (2018) suggest Twitter as an example of a network that offers relatively unique options of posthumous communication associated with the account of the deceased on both a personal and public level. In addition, Bassett (2015, p. 2015) further develops these notions and calls for an essential redefinition of the relationship between the living and the dead due to the strengthening influence of social networks. According to Irwin (2015, p. 143), a fundamental change in the transformation of mourning occurred when it shifted from the original purpose of final farewell to a new concept of the afterlife enabled by the accumulation of data and emerging technology. In this respect, Bassett (2015) asserts that the relationship does continue after death until the moment when the survivors decide to delete the account along with the posthumous data. This action can escalate to a "*second death*" concerning the digital identity of the deceased this time (also viz Gibson, 2014). Mitchel et al. (2012, str. 28), or Öhman and Floridi (2017) withal aim their research on survivors' long-term efforts to keep the dead virtually alive.

The connection and communication with the deceased principally occur via users' information on the social network (Bollmer, 2013, p. 147; Irwin,

2015). However, the content is rather co-created by the interaction among users than only by the user alone. In line with this, Bassett (2015) proposes a simple division of the dead accounts in her literature review: a) *a memorial site*, if the account remains inactive; and b) *a zombie site*, if the account is further managed by a third party (Bassett 2015, p. 1132). Earlier in this context, Sherlock (2013, p. 171) used the term *digital necromancy* to describe the practice of keeping a site active by a third party, either directly by communicating on behalf of the deceased user or by external contributions. We should not omit that such practices may also include, for instance, the attacks by internet trolls on "dead" accounts (Wright, 2014) or the expressed mourning of a broader range of users who did not even know the deceased, namely by establishing remembrance groups (Gibson, 2015). Veale (2004) labels the dynamic co-creation of online remains by the term *collective memorial landscape*, because, as Acker and Brubaker (2014, p. 6) write, the resulting personal archive is not only important for the circle of loved ones but is part of *collective memory*, i.e., how users remember the past through mutual interactions. Later, Meese (2015, p. 408) offers the following threefold classification in the context of third-party data management, which we have alluded in this literature review: a) another living person manages the data; b) the management is performed by a semi-autonomous software that allows automatic interaction, for example, to some topical issues and; c) data management is executed by artificial intelligence algorithms and services that revitalize the dead since they create content based on the analysis of past user's social media activity.

Regarding the direct access to the posthumous data, as Wright (2014) or Acker and Brubaker (2014) point out, the social media policies practically grant survivors no right to log in to the account of the deceased. The social platforms thus autonomously regulate the access to the posthumous data as well as the involvement of survivors to affect these regulations. Therefore, as in the case of Facebook and its memorialised accounts, the survivors are denied access to the profile after the user passed away immediately if any other user on the social

network reports the death, even if the survivors legally hold the password (Acker, Brubaker 2014; Edwards, Harbinja, 2013b). In other words, the social network does not allow them to sort or edit posthumous data in any way (Ibid). We will focus on the most probable underlying reasons for these restrictions in the following section.

2.4.3 Reasons for digital data preservation and posthumous work

The literature deals with the value of data and the reasons for social networks to preserve them only marginally. According to Pitsillides et al. (2013, p. 82), internet research tends to focus predominantly on data collection rather than on data utility or relevance, as their value might be uncovered subsequently in the future. However, new reasons for data preservation are gradually emerging due to extensive data collection on social networks and the fact that data enables the creation of a complete archive of the user's life online. Within the scope of this thesis, we divide them into two categories of reasons repeatedly brought up in the literature: a) media archaeology and anthropology, and; b) economic aspects and commercialisation of posthumous data.

Firstly, data recorded on the social networks allow the users to preserve their digital identity post-mortem (e.g., Pitsillides et al., 2013; Van Dijck, 2007). In particular, Pitsillides et al. (2013, p. 87) and other researchers (Drake, Miah, 2010; Shanks, 2007; Sofka, 1997) emphasise that this reason leads to building infrastructure for the circulation and long-term storage of the data. Simultaneously, however, they question whether this infrastructure is suitable for such an enormous data storage or archive and further ask how the infrastructure should function in order to be more efficient (Pitsillides et al., 2013).

These questions arise from the reasons for the prospective data usage and follow the previously mentioned idea of creating a *collective memory* via data on social networks (Pitsillides et al., 2013; Sherlock, 2013; Van Dijck, 2007; Veale, 2004) and our *digital heritage*, as described by Lusenet (2002). Accordingly, Graham, Gibbs and Aceti (2013) as well as Shanks (2007) suggest examining this vast quantity of data with the help of digital archaeologists. Pitsillides et al. (2013, p. 84) and van Dijck (2007) warn, however, that personal data on social media consist not only of a myriad of formats which determine the storage, such as images, texts, and compound statuses, but also interactions with other users or with a given platform. Otherwise, data might become unreadable after some time due to their quantity or technological progress. The problem seems all the more pressing, as it could potentially distort research results as part of the digital identity vanish (Pitsillides et al., 2013). Acker and Brubaker (2014) studied this preconception, examining how respondents perceive users based on parts of their digital persona. They concluded that we could not describe the persona comprehensively enough if only a limited number of digital tracks are available.

The second reason mainly concerns the commercial use of data and identities on social networks. Yet, as Öhman and Floridi (2017) assert, academic literature has hitherto neglected this topic, although its importance should gradually increase (Öhman, Watson, 2019). Nevertheless, other theoretical contributions at least allude that data created and stored on social networks during the user's life are instrumental for various types of transactions and become an essential part of the online market (Acker, Brubaker, 2014; Bollmer, 2013; Sofka, 1997; Sumiala, 2018). However, this reason has never been the main focus of interest. Due to data storage outside of the user-owned devices, the data can survive in cyberspace and later be reinterpreted and used (Van Dijck, 2008, pp. 14-15; Gibbs, 2015). On Facebook, for instance, this notion is supported by the fact that account immortalisation belongs to basic settings and is opposed to erasure. This example shows the importance of such accounts within the entire user ecosystem (Leaver, 2013; Karppi, 2013; Wright, 2014).

Importantly, as Leaver (2013) epitomises, the interaction with a profile of the deceased still allows the service providers to continue collecting information about other users to personalize advertising more effectively. Last but not least, posthumous data preservation may open up new possibilities for data mining in the future (Leaver, 2013).

The aforementioned work of Öhman and Floridi (2017), an article called “*The Political Economy of Death in the Age of Information: A Critical Approach to the Digital Afterlife*”⁵ about the ethical ramifications of economic use and data preservation, represents the mainstay for the second approach. The authors coin the term *Digital Afterlife Industry* and examine various political and economic interests within Marxist thinking with specific examples. Although this viewpoint marks a relatively radical departure from the prevailing approach to posthumous data preservation and its importance will probably bolster in the next years, it remains further unexplored. (Öhman, Floridi, 2017)

Seldom do we find quantitative research of posthumous data. Only one, by Öhman and Watson (2019), focuses directly on the quantitative evaluation of data on deaths on social networks. Hence, the authors develop a mathematical model to forecast the amount of accounts of death users on Facebook and compare their results with a total number of live users of the same platform. (Ibid)

Overall, the above-mentioned authors agree that the quantitative and macro-economic examination of posthumous data should provide, together with relatively well-studied micro-economic and philosophical aspects, a baseline for further debates about the ethics of preservation and the relationship with the

⁵ The article also provides the reader with the overview of categories of posthumous services

deceased in the context of social media (Öhman, Floridi, 2017; Öhman, Watson, 2019; Meese, 2015).

2.5 Ethical and legal aspects of posthumous data preservation

Although the legal perspective is not the main interest of this literature review, it significantly overlaps with the topic of ethics and data policies. Several studies about posthumous data adopt legal (Conner, 2010; Edwards, Harbinja, 2013a, 2013b; Gaied, 2016; Hollon, 2013; McCallig, 2014; Mayer-Schönberger, 2011) or ethical and privacy perspective (Bennett, 2012; Grafenstein, Schulz, 2015; Öhman, Floridi, 2018; Rosen, 2011; Stokes, 2012; Wright 2014) examining miscellaneous social networking platforms as well as existing legislation, policy, and regulations. Notwithstanding the variety, they all deal predominantly with cultural and social aspects of the afterlife concerning data but ignore that user data are co-owned and used by commercial social networking platforms representing their primary source of income in their business models (Bollmer, 2013; Mayer-Schönberger, 20011; Öhman, Floridi, 2017).

Within this framework, Bollmer (2013) asserts that digital contracts among users and platforms do not regularly mention the fate of the posthumous data. After a user passes away, the data remains the social network's property, and access is ultimately denied or deliberately and considerably restricted. Who, then, should have access to the posthumous data, and who should be able to handle them? This vexed question remains mostly unanswered (Acker, Brubaker, 2014, p. 16; Politou et al., 2018; Wright, 2014).

Consequently, current debates related to data ownership, copyright, and personality rights switch from several individuals - celebrities - to a broad population of social network users (Öhman, Floridi, 2017; Wright, 2014; Lingel, 2013). Therefore, some academics call for improving the infrastructure of social platforms and their overall design and policies with respect to posthumous data management (Öhman, Floridi, 2017; Pitsillides, et al., 2013). At the same time, it might help to unify legal regulations to address these issues (Wright, 2013).

By virtue of these issues, Öhman and Floridi (2017) propose to legally approach virtual remains, the digital body described above, in the same way as the physical body. After her death, the user loses control over her digital body, which can be further used to generate profit without her prior knowledge. However, this proposal remains undeveloped.

It is also worth mentioning that digital policy experts have long referred to the lack of legislation on digital heritage and data (Mayer-Schönberger, 2011; McCallig, 2014; Öhman, Floridi, 2017). Currently, the topic of posthumous data possession is often associated with the right to be forgotten (Bennett, 2012; Grafenstein, Schulz, 2015; Rosen, 2011) and the General Data Protection Regulation (GDPR) (see, e.g., Buitelaar, 2017; Edwards, Harbinja, 2013a; Politou et al., 2018). At the state level, we can find illustrative case studies in this area in recent years (Malgieri, 2018; Hänold et al., 2017; Resta 2018). However, we shall note that these legal analyses particularly evaluate the legislation and do not extend to other fields.

The literature clearly indicates that technological advances encourage debate on ethical and legal issues related to posthumous user data. Due to the significantly growing number of users of these platforms, we can anticipate that the problem shall likely raise importance in the near future.

2.6 Conclusion

This literature review summarizes research from the field of death, user data, and information on social networks from the perspective of information studies. The literature sources address the issue relatively well from a sociological and legal angle, yet, an analytical approach is rather lacking. Nonetheless, it shows untapped potential as it might serve as a tangible basis for further research. At the same time, the literature provides only marginal references to the ways in which social platforms deal with users' death. Since these practices are evolving rapidly, some of the available articles are becoming obsolete in their descriptions.

The topic of death in connection with social networks is gaining in importance as the number of social network users increases worldwide, potentially resulting in proportionally growing amount of death accounts. However, current literature lacks a systematic, comprehensive and critical reflection of the practices of today's global platforms in the long term that could provide a basis for further research in this area.

Potential research could therefore lead to a systematic analysis of the data management aiming not only at the largest platforms such as Facebook or Twitter, but also on these targeting specific audiences, such as Twitch, etc. However, we must keep in minds that the research on stances towards death in the cyberspace in various geographical regions goes hand in hand with the international use of social networks in a universal form across countries. Further studies should also place more emphasis on the value of the posthumous user data intertwining with their societal importance from the perspective of archiving, archaeology, but also the now almost overlooked economic potential and commercialization.

Furthermore, the pronounced multi-layered nature of this topic clearly indicates that related future research, as well as the development of new national and transnational legislation, should include an interdisciplinary discussion.

We will take these conclusions into account in the following methodology section, which will present researched questions derived from the theory summarised in this literature review.

3. Methodology

3.1 Research Problem

The topic of death on internet rises in importance along with a changing approach to dying in current society and the gradual penetration of online technologies to diverse aspects of our lives. Indeed, in light of the current events, tendencies for massive digitalisation of the Western World (f.e., OECD, 2019; (Science, Research and Innovation Performance of the EU, 2020) and environmental debates, the preservation of user identity online raises new questions about the reasons if, why and in what manner to do so. Furthermore, these discussions have another essential facet – the power over personal information is passed from governments to the social media providers (West, 2019; Van Dijck et al., 2018; Zuboff, 2015). As the result of this shift in power balance, the preservation of user information depends practically solely on the decision of these providers.

The literature review in the previous chapter reveals a lack of systematic research of posthumous policies in a broader context and time-frame from the perspective of new media studies and information studies. However, these documents are not only one of the essential tools of the self-regulation of platforms but also the tool for setting terms of use. In other words, they play a key role in uncovering the relationship between the user and the platform.

Hence, this research might provide us with a deeper understanding of underlying notions regarding the linkage between users, aggregated to a bundle

of data and information, and their value to the social media platforms (Esteve, 2017; Van Dijck, 2013, p. 169; West, 2019). It has the potential to reveal patterns in posthumous policy development and recognise possible instigators for future changes in light of the inevitably growing number of dead internet users (Öhman, Watson, 2019). Finally, it can help us better comprehend the changing narratives surrounding death and *digital immortality* in the current society.

3.2 Research Goals & Research Questions

The research goals and questions are directly derived from the aforementioned theory. Two dominant themes were identified based on the literature review: 1) preservation of the deceased user's information by the social network, and: 2) the possible interaction with the account of the deceased by survivors. In this case, the former reflects the level to which is the *digital self* of the user preserved and the latter shows the possibility of survivors to influence the inherited content, a topic that touches upon the *digital immortality* and *digital self* as a personal archive, as well as *digital inheritance*.

This thesis's research goal is to critically analyse the development of practices regarding posthumous user data of three selected social media platforms⁶ heavily and consistently used worldwide. The study will examine patterns in their approach to the posthumous data preservation and level of possible interaction with this data by both users and survivors.

⁶ The platform selection will be further discussed in the next section of this chapter.

Building on the presented literature, this analysis aims to contribute to a better understanding of events leading to policy changes, but it also attempts to illustrate the course for policy development and posthumous data utilisation in the future.

Hence, the next chapters focus on four research questions:

- Q1:** What circumstances trigger development in the posthumous data policies of these social media platforms?
- Q2:** To what extent do the social media platforms inform the user about the terms of data preservation after the user's death?
- Q3:** How does the users' control over their data post-mortem change over time?
- Q4:** To what extent can survivors interact with the data of a deceased user over time?

3.3 Methodology – case study

Considering the relative lack of previous research in this particular field and the goal of this thesis to uncover and explain the relationship between users and platforms, the case study seems to be the most appropriate methodical approach. (George, Bennett, 2007, p. 42; Yin, 2018, p. 33) This is because it allows us an in-depth study of phenomena in particular instances related to contemporary events⁷ (f.e., Stake, 1995; Van den Bulck et al., 2019; Yin, 2018), which is useful within the fast-changing social media landscape. Furthermore, as Van den Bulck et al. (2019) assert, it is especially suited to policy-related

⁷ Besides, this approach was also used in research conducted by McCallig (2014), even though it was not directly specified in the text.

research since it enables a researcher to describe the complexity that media policy inherently involves. Due to its investigative and descriptive nature, the approach falls into a category of “naturalistic” research of the real world, as opposed to experimental research (Gillham, 2000).

Correspondingly, this thesis presents a multi-case study to accommodate complex causal relations, interactions and paths of dependency in the policy development (viz George, Bennett, 2007, p. 46). Since all the questions are intertwined by the theme of an evolution, the chronological approach was selected as the overarching analytical strategy (Yin, 2018, pp. 215, 235). As a result, this methodological path enables us to search for patterns across the cases.

3.3.1 Method

Taking into account the relevant and available sources for examination of the research questions, the presented explanatory research in the form of multi-case study will predominantly employ a qualitative method of document analysis (De Vaus, 2001). This approach equips us with flexible options to study various types of documents and articles (Van den Bulck et al., 2019, p. 77).

3.3.2 Selection of the social media platforms

Three social media platforms, namely Facebook, Twitter, and LinkedIn, were selected as cases for this study for multiple reasons.

Firstly, each of these social media services belongs to a different owner within the so called Big Five (viz Figure 1), representing five major companies

that dominate North American and European online space (De Gregorio, 2019, Van Dijck et al. 2018, p. 12; Gillespie, 2018). All of these social media platforms were launched for public more than fourteen years ago in roughly the same time span of 3 years (with the LinkedIn in 2003, and both Facebook and Twitter in 2006) and became pioneers in their domain (Boyd, Ellison, 2007). Interestingly, Twitter represents a relative stand-alone social media within this ecosystem, albeit Alphabet Inc. is chaining with it to form a partnership and create a stronger microsystem (Van Dijck, 2013, p. 163).

Secondly, the selected social media services are based on the user-generated content disseminated to the broader audience of other users (as opposed to, for example, applications for instant messaging). In addition, this

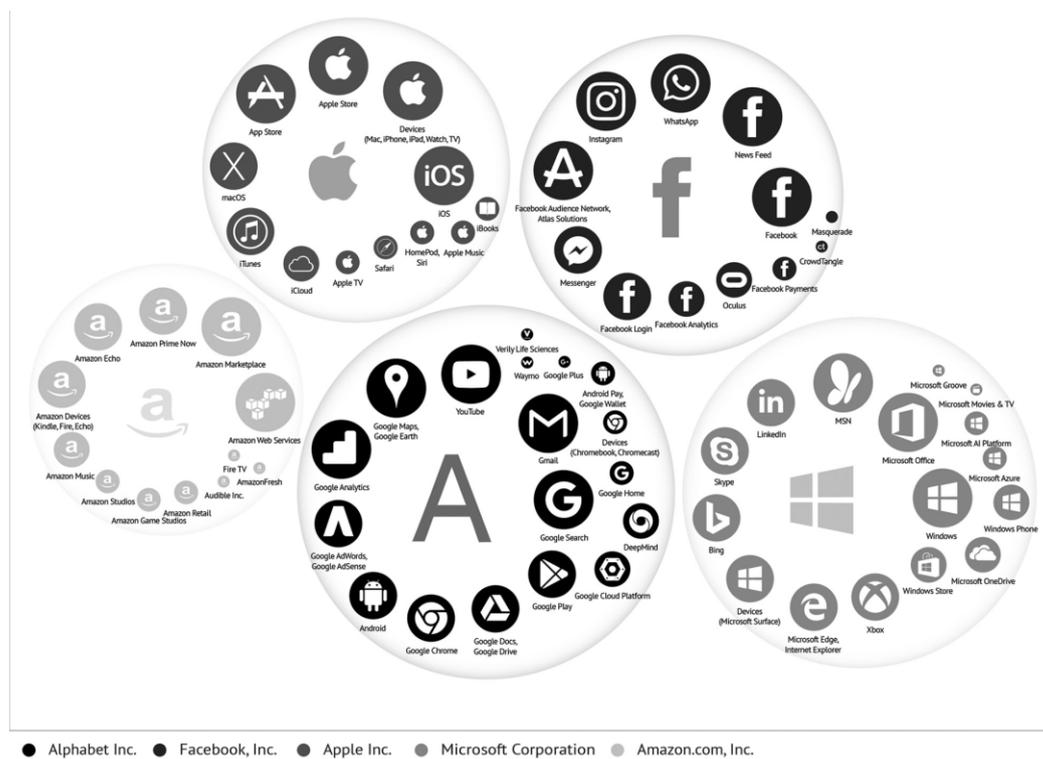


Figure 1: Schematic illustration of the infrastructural services provided by the Big Five platforms (retrieved from Van Dijck et al., 2018) - Google+ and Windows mobile, are currently out of service.

content in various forms, such as *tweets*, statuses, posts, articles, photos or videos, has an unlimited lifespan and creates a cumulative archive on the user's profile. Importantly, as van Dijck et al. asserts (2018), each of these social media platforms has the monetisation of users' data as a primary pillar of their distinct business models.

Finally, two of the platforms were selected from the most expanded social media sites in the Western world ("Global digital population," 2020), namely Facebook and Twitter, with millions of active users every day. LinkedIn, in particular, was selected as a case of the largest professional networking site, occupying a niche market position. Due to their popularity, these platforms are also frequently mentioned in the relevant literature (f.e., Cesare, Branstad, 2018; Gibson, 2015; Gotved, 2014).

Last but not least, it is vital to mention that the business models are inherently reflected in the social media policies examined in this thesis (viz f.e., Van Dijck, 2013; Zuboff, 2015).

3.3.3 Data

Posthumous social media policies and the official press releases concerning these policies on Facebook, Twitter, and LinkedIn will serve as primary sources for the case analyses.

To further specify, the social media policies are summarised and issued in a form of a written document placed on the social media platform, and the selected media are no exception. These documents will serve as pillars for the analyses. Since the former policies are not archived directly on any of these

platforms, they will be retrieved by the WayBack Machine⁸, a third-party digital archive preserving copies of past webpages. The archives of press releases are available on the official websites.

Sources			
Source category	Type of source	Strengths	Weaknesses
Primary	Social media posthumous policies	<ul style="list-style-type: none"> • comprehensive • consistent during a certain period of time • available for all users 	<ul style="list-style-type: none"> • issued only by the social media platform (one-sided) • older versions are not archived directly on the official website - they need to be retrieved by another source
	Official press releases & announcements concerning posthumous policies	<ul style="list-style-type: none"> • archived on the official website • available for all users 	<ul style="list-style-type: none"> • one-sided • reflect the stances of the social network
Secondary	Academic literature	<ul style="list-style-type: none"> • helps to trace pivotal events in policy changes that might get lost due to uncomplete archiving 	<ul style="list-style-type: none"> • does not provide a complete list of policies or case description • fewer resources for LinkedIn
	Online news articles	<ul style="list-style-type: none"> • balance the social media viewpoint reflected in policies and press releases • provides information about the initial reasons for policy changes 	<ul style="list-style-type: none"> • provides only fragmental information • hard to retrieve • language and geographical limitation - only articles are written in English; US and European News

Figure 2: The strengths and weaknesses of selected sources (source: author)

Due to their possible incompleteness, these documents will be supplemented by **secondary sources**: the academic literature on the topic of posthumous practices of social media networks, relevant news articles and other

⁸ Wayback Machine is a digital archive of the World Wide Web developed by a nonprofit library called Internet Archive. (<http://web.archive.org/>)

official statements of the social media platform representatives. The news articles from the USA and European countries written in English will be traced using Global Newsstream by ProQuest⁹ and other related sources.

The scope of analysis of social media policies addressing specifically the posthumous practices along with other materials is set in the time-frame from 2006 to November 2020, since two out of three selected social media became broadly active in 2006 (boyd, Ellison, 2007). For a detailed overview of the strengths and weaknesses of each category of sources, consult Figure 2.

3.3.4 Analysis

The analysis focuses on the differences in former versions of social media policies, namely *terms of use*, *data policies*, and *privacy policies*. Additionally, the platforms' *help centres* were examined. The information about the posthumous processes was retrieved using keywords: *death*, *die*, *deceased*, *departed*, *passed away*, and *memorialisation*. The news articles and press releases are put into chronological order and examined for information about posthumous policy changes.

All the sources were then compiled in a chronological case study for each platform, with regard to the research questions stated above. For Facebook and Twitter, the development was divided into multiple phases for clarity.

⁹ Combinations of keywords used: *death*, *memorialised*, *die*, *user*, *social media*, *posthumous*, *policy*, *change*, *data*, *account*, *LinkedIn*, *Facebook*, *Twitter*, *deceased*, *pass away*

The details about the analysis and location of posthumous data policy information are specified for each platform as a part of the case study.

3.3.5 Limitations

Certainly, there are some pitfalls of this research coming hand in hand with the selected method. Firstly, the triangulation (Denzin, 1978) enhancing internal validity of the case studies is only partially abided by, since only a single method (document analysis) is used across multiple sources (Bowen, 2009; Van Selm, Helberger, 2019, p. 168). Another potential problem in case study research can be the selection bias (George, Bennett, 2007, p. 48). For instance, all of the analysed cases fall into the Western cultural sphere and omits other social media populations.

Drawing on these issues, the important limitation is the questionable generalisation of case study results to a broader level (Yin, 2018, p. 328; Van Selm, Helberger, 2019, p. 168) as well as the necessity to avoid pure description (Micova, 2019, p. 83). To prevent this, the following case studies offer a conclusion section, summarising each case's findings before presenting the results.

Another method option could be, for example, an interview with employees dealing with the policy-making process within the platforms under scrutiny. However, their employees are not officially presented on the platforms' websites, making them practically unreachable for an ordinary user. The author of this text also tried to reach representatives of each platform via their customer service, however unsuccessfully. Thus, the study is limited to other broadly available online sources.

Finally, the data selection might lead to incomplete results since the sources solely comprise written documents.

4. Analysis

The following chapters present three case studies examining social media posthumous policy development of three different providers, namely Facebook, Twitter and LinkedIn, in an attempt to answer the research questions stated in the methodology. We will explore their histories shortly.

To maintain clarity, each of the cases follows the same arrangement. Initially, the social media platform service is briefly introduced, along with the commentary about their posthumous policy and the case study analysis. Then, the chronological development of the deceased policies is presented, as well as the context of internal and external factors which shaped them. Finally, the conclusion is made regarding the proposed research questions.

The findings from all the cases are eventually summarised in the results section and further discussed.

4.1 Case study 1 - Facebook

4.1.1 Facebook services

Facebook¹⁰ is currently the largest social media platform worldwide, with over 2,7 billion monthly active users (“Number of monthly active Facebook

¹⁰ In terms of this case study, we are referring to the SNS Facebook, not the whole company and its portfolio

users,” 2020). It began in 2004 as a closed network dedicated exclusively to university students in order to interconnect them. That is why students and, arguably, the younger generation in general, accounted for the biggest user group in the early years. Facebook has been opened to the public since 2006 and gained massive popularity during next years of its existence. It is also worth noting that the SNS with a blue logo called Facebook is only one of many other services provided by a company of the same name, Facebook, Inc. For instance, the whole company lists another social networking site Instagram or instant messaging service WhatsApp in its acquisition portfolio. (boyd, Ellison, 2007; Phillips, 2007; “Facebook.com: Company Info,” 2020)

Facebook is populated by individuals who create their personal accounts (*profiles*) that are supposed to represent them (“What names are allowed on Facebook?”, 2020). These accounts cannot be co-owned by multiple users, with Facebook directly prohibiting logging into somebody else’s profile (Facebook: Data Policy, 2020). However, anybody can create an account for another (still living) person. Users can share various types of content via their accounts, such as messages, updates, photos, or statuses (Facebook: Terms of service, 2020). They are also able to create, maintain and participate in groups or pages and submit add content to the profiles of other users. The interaction among users and pages can take place via, for example, likes (a button signalling appreciation of a certain content), comments, messages, etc. Regarding privacy, users can currently decide who is be able to see and interact with their content posted on their accounts or who can find them using the *search* tool.

Users can invite, accept or reject other users (called *Friends*) to their personal social network, a group which usually follows different individual privacy settings than the rest of the community (Facebook: Data Policy, 2020). Users can interact with each other’s timelines (called *walls* in the past) and the level of this interaction is determined by the owner of the timeline. These interactions can contain, for example, messages, pokes, shared content or links,

pictures, but also information about the interaction per se. From the very beginning, Facebook offers users to find other profiles via a *search* tool to encourage users' interaction. Later, the platform also introduced a feature that automatically suggests potential friends. The interactions among users are also encouraged by several other features, such as birthday or anniversary reminders and other types of notifications about other users' activities on the platform.

Other platforms and services are built upon the platform. Facebook provides them with aggregated users data which can be used for various purposes, such as targeting advertisement within the platform. Indeed, Facebook is free for users and its business model relies from the biggest part on providing advertisement (Van Dijck et al., 2018). The third parties, including individual developers, can interact with the platform via APIs or *Oauth*. ("Facebook Developers Tool", 2020) Facebook can also serve as a payment intermediary.

The digital remains left behind after the user's death, such as the password, account, log-in credentials, and other sub-elements like messages, groups, pages, interactions, etc., depend on a contractual relationship between the user and the platform. However, no one is allowed to access the account of another user, even if they legally obtained the password and login details.

4.1.2 Facebook posthumous policies

Facebook does not provide users with one summarising document or part of the document regarding its posthumous policy. Instead, the user may find partial information in Facebook's *Terms of Service* on the official Facebook site. The information is usually placed under "*Additional provisions*" or it is related to "*Account Termination*". The information about deceased users accounts was also often moved from one policy text to another (f.e., from *Terms of Service* to *Data Policy*).

However, additional information can be reached via the *Help Centre* divided into sections and questions expounding various topics. Currently, the questions and topics about posthumous options are arranged into two main branches, one dedicated to the users called “*Choose a Legacy Contact*”, and the second aimed at the survivors – “*Managing a Deceased Persons Account*”. Since about 2018, the branches are hierarchical (viz Figure 3 for questions concerning users, and Figure 4 for questions targeted at survivors), with the root containing an overview of the questions and answers and an option to click on the “*full article*” button for further information. Before that, Facebook simply offered a database of questions and answers, which were neither sorted nor interlinked.

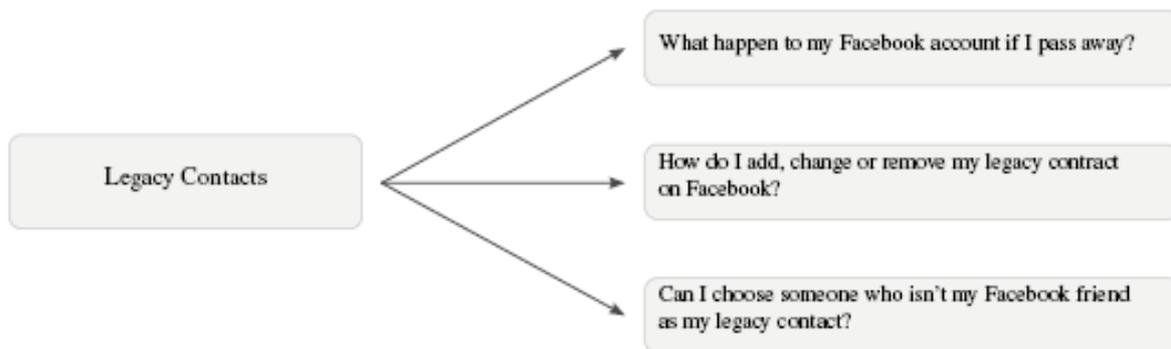


Figure 3: Facebook Help Centre: Question hierarchy - user

4.1.3 Data & Analysis specification

Regarding the issues above, information on the posthumous policy for the case study was retrieved from the official Facebook website in English, specifically the *terms of use* and the *data policy*. The older versions were reached with the same URL via the Way Back Machine. Then the policies were selected and sorted according to their legal force. The keywords *death*, *die*,

posthumous, memorialization, termination was used to navigate through the text. The sections “*Termination*” and “*Other*” in *terms of use* were compared across years and changes notices in appendix A. The questions from the *Help Centre* were analysed in the same way and sorted (viz appendix B).

In terms of limitations, some of the questions in the *Help Centre* were not retrievable via the Way Back Machine. Thus, the potential data distortion is recognised and acknowledged.

The overview of the analysed news articles is in the appendix C.

4.1.4 Analysis

The analysis of resources uncovered several major posthumous policy revisions. For clarity, the following report presents the context summarised into four sequential phases assembling key triggers and changes.

4.1.4.1 Early years – temporary memorialisation and deletion (period of 2004-2008)

In its early years, Facebook had a straight-forward policy of deleting the accounts of the deceased after any user reported that the owner had passed away. The time-frame for deletion supposed to be 30 days, but it is not clear whether it started from the event of death or the day that the death was reported. Before the removal, the social network would memorialise the accounts, which means hiding of certain features, such as information about groups that the user was a member of or personal and contact information and status updates. The survivors were able to write messages and post them on the account. Brandee Barker, the

head of Global Communications on Facebook at that time, labelled this policy as “very simplistic”. (Bassett, 2015; Hortobagyi, 2007; McCallig, 2014)

Facebook’s terms of service from 2007 states under the headline “*Termination*” that: “*When we are notified that a user has died, we will generally, but are not obliged to, keep the user’s account active under a special memorialized status for a period of time determined by us to allow other users to post and view comments.*”

Multiple studies agree that the very first impetus for major policy alteration came in 2007 when Facebook had to deal with the consequences of the Virginia Tech shooting, the deadliest school shooting in the United States history (Bassett, 2015, p. 1127; McCallig, 2014; Vicary, Fraley, 2010). As Vicary and Fraley (2010) further describe, after this tragedy, but also after the shooting at the Northern Illinois University not even a year later, students used Facebook as one of the main tools for communication and a place for finding support. Indeed, several media reported about this co-memorialisation practice (including, for instance, Reuters (Pelofsky, 2007), the Washington Post (McCallig, 2014)). In fact, at that time, Facebook used to be mainly a social networking platform massively occupied by a younger generation and especially university students. Additionally, the event also provoked widespread criticism of gun laws, privacy laws, and journalism ethics. (McCallig, 2014; Sanburn, 2017)

More importantly, the students and parents at Virginia Tech started campaigning, protesting and petitioning against Facebook’s “*simplistic*” posthumous policy. However, only one retrievable article mentions that Facebook decided on the change of their posthumous policy as a result of this pressure, leading to indefinite memorialisation of the victims’ accounts which could then serve as tribute pages. The article also implies that the accounts were not entirely deleted even under the previous policy, since the survivors could ask

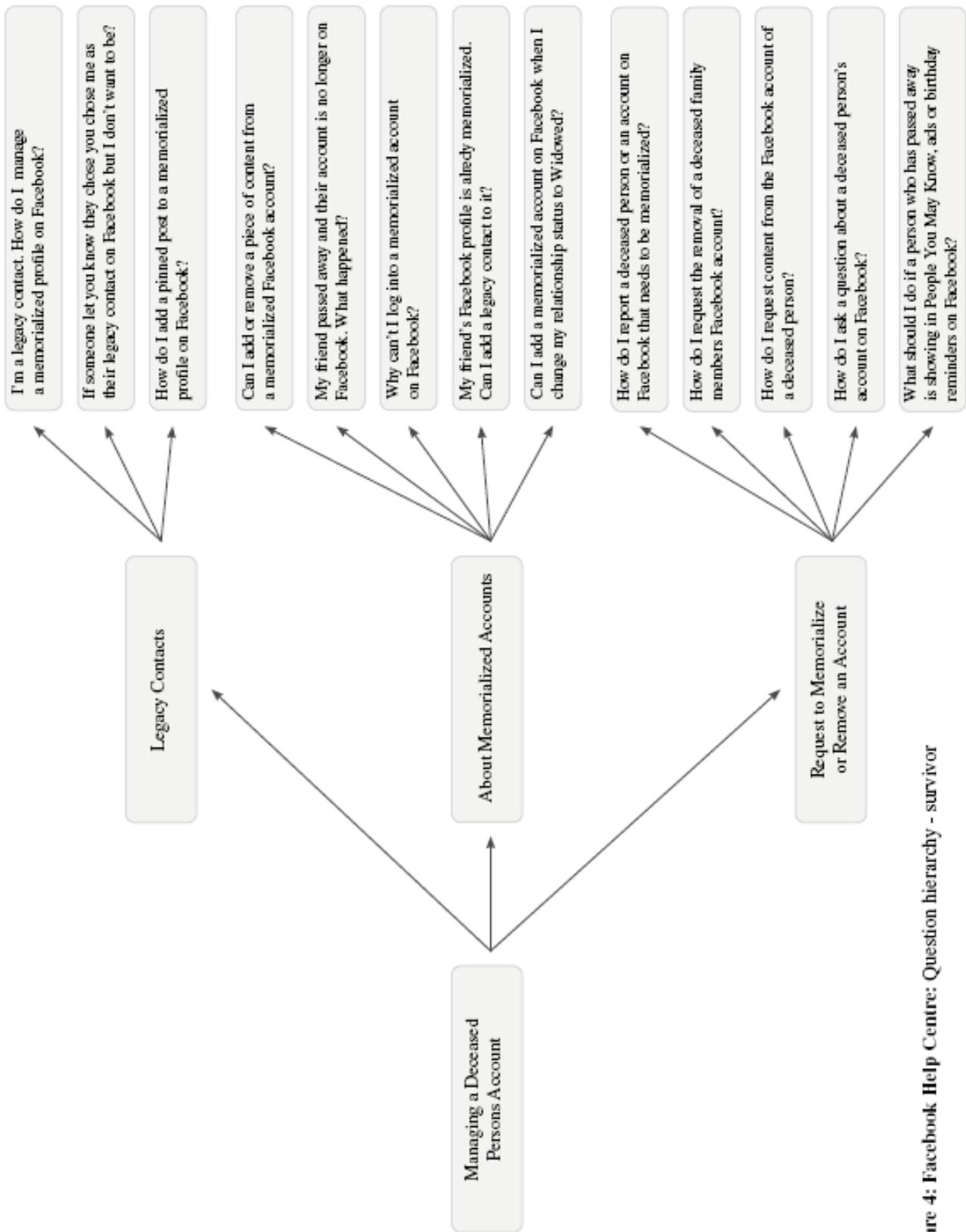


Figure 4: Facebook Help Centre: Question hierarchy - survivor

for restoration of accounts of people who had died before the shooting. (Hortobagyi, 2007) Interestingly, Facebook was able to deal with the backlash quickly enough, so this case did not attract greater media attention.

When memorialised, the accounts were practically frozen in time, as they were turned into static “inactive” sites. (Bassett, 2015, p. 1127; McCallig, 2014; Vicary, Fraley, 2010) Thus, all personal information on the accounts was left unchanged and, moreover, it could not be further altered by those who left. Facebook defended this stance by referring to user privacy protection, an argument also repeatedly used in later discussions. (Hortobagyi, 2007)

Eventually, it is worth mentioning that the practice of unlimited access to memorialised accounts enhanced the trend of co-creating of a *collective memorial landscape*, as the survivors posted messages with their memories to the victims’ accounts. (Veale, 2004) However, nobody, not even close relatives, could access, change, or delete the original information in the memorized profiles. Furthermore, the user had no direct option before or after the policy revision to determine whether her data should be posthumously deleted or not.

4.1.4.2 Memorialisation of accounts as a default option (period of 2009 – 2014)

In 2009, Facebook made another important step beyond their posthumous policies. Initially, their new *Terms of Service* provoked debates about data ownership and Facebook’s responsibility for user data (Schroeder, 2009). Moreover, just several months later, Facebook informed users about the improvements to their *Privacy Policy* via press release. Back then, it should have granted users greater control over their information shared with a third-party application (“Facebook Announces Privacy Improvements,” 2009). One of the many outcomes should lead to, in the span of one year, a better description

of „*account memorialization for deceased users*“ and „*the distinction between account deactivation and deletion*“ (Ibid). The changes are said to be a result of the platform’s work with the Office of the Privacy Commissioner of Canada, which prepared a critical report assessing Facebook’s policies (as described in detail by McCallig (2014)).

However, it is questionable whether Facebook’s new description was truly sufficient. From 2009 to 2010 (viz appendix A), their official privacy policy stated this: *“If we are notified that a user is deceased, we may memorialize the user’s account. In such cases we restrict profile access to confirmed friends, and allow friends and family to write on the user’s Wall in remembrance. We may close an account if we receive a formal request from the user’s next of kin or other proper legal request to do so.”* For instance, the wording does not imply if the accounts are deleted or just hidden from the public.

Furthermore, in the same year, Facebook introduced a new policy of memorialising departed users’ profiles as a default option. In addition, the loved ones could choose to memorialise or to delete the account, which officially broadens options of bereaved people for posthumous data control. (McCallig, 2014; Leaver, 2013; Moore, 2009) However, the Guardian (Moore, 2009) points out that the memorialisation is a lengthy process, and it takes even longer to obtain the content in case the account is to be deleted. Facebook also required a court order to fulfil the content request.

Since the social network controls all the personal data on profiles during and after user’s life, this action meant a large step in preserving user information. It seems that Facebook started to more urgently demand the memorialisation to not lose the user data and instead enhance connections among users, even after the death of some community members. (Conner, 2010) Due to this power over the data, the platform can make use not only out of these

pieces of information but also out of the interactions with them carried out by survivors. (Leaver, 2013)

Policy changes, however, had significant consequences on the interaction with the account of the deceased. In cases of unsolicited memorisation, many survivors lost the possibility to log into the accounts of the departed users, even in cases where they inherited the password. In other words, the stewardship implications prevented survivors from maintaining or managing the account and, thus, prevented the archival practices. (Acker, Brubaker, 2014, p. 16; Wright, 2014; Leaver, 2013, Gaied, 2016; Smith, 2012) Furthermore, due to the fact that the memorialised profiles are restricted to friends-only and cannot make any new connections, the public memorial pages grew in popularity, especially on the occasion of the death of celebrities, accidents, murders, or death of young people (Leaver, 2013). Finally, regarding the friends-only interactions, it is still not clear what happens with the accounts if everybody de-friends the deceased user, or all other users-friends die.

In 2009, Facebook also introduced the new friend recommendation feature, a tool to reconnect old friends who might know each other. Simultaneously, potential acquaintances of the already dead users with still active profiles started to show up (Wortham, 2020). Since many users expressed concern, Facebook decided to encourage the community to report the departed users and thus reintroduced the memorialisation feature (Moore, 2009). Before that, this situation led many times to the unpleasant actions of de-friending departed users by the community, disrupting the primary idea of user retention by reconnecting with the dead. (“Remembering Our Loved Ones,” 2014; Pennington, 2013; Wortham, 2020)

The reintroduction caused some issues within the user community since not everyone wanted to have the account memorialised, so many of these accounts rest active regardless. (Leaver, 2018) Moreover, the media reported

about occasions when living users' accounts were memorialised by accident or deliberately as a joke or revenge (referring to the "*Facebook Dead Prank*"), leading to temporary overburdening of Facebook's community management (Notopoulos, 2013; "Facebook Dead' Prank," 2013).

In 2014, the platform took an important step regarding the preservation of memorialised accounts when it decided to maintain the visibility of the departed person's content as-is, to respect the users' antemortem privacy settings. ("Remembering Our Loved Ones," 2014)

4.1.4.3 Introduction of the legacy contact (period of 2015-2018)

Since 2015, Facebook has allowed its users to designate another user as a so-called legacy contact, to take care of the account after death and memorialisation. ("Adding a Legacy Contact," 2015) Thus, as Washington Post (Tsukayama, 2015) summarises the situation, Facebook at that time offered 3 options after a user's death: 1) do nothing - the account can be memorialised by other users; 2) ask for deletion by survivors; 3) account management by the *legacy contact*. It also reports that in case a user decides to have a legacy contact, she will be reminded each year about her decision, so it can be revised if needed. The users were also informed about the existence of legacy contracts via their accounts directly on the platform (Ibid).

An important step has been taken in the level of preservation, as the deceased user can enable the *legacy contact* to download the profile archive, which consists of photos, posts and profile information. The user can also choose to delete the account after her own death, but it is seen as a secondary option to the memorialisation (Wright, 2014; Leaver, 2013; Karppi 2013; Tsukayama, 2015).

Furthermore, creating a *legacy contract* has been a noticeable step forward in terms of interaction with the deceased. As a legal administrator, this contact can write posts on the memorialised timeline, respond to friend requests, and update the profile picture and a cover photo. (“Adding a Legacy Contact,” 2015; Leger, 2015; Linshi, 2015; Kastrenakes, 2015) However, the content can be deleted only under special circumstances, such as a violation of *Facebook Community Standards*. Nevertheless, it is worth mentioning that this type of administrator is nothing new in cyberspace; Google set a similar policy in 2013, allowing users to set “*trusted contacts*” (Linshi, 2015).

In regard to the memorialisation of the accounts, we must acknowledge another serious aspect. The survivors still have very limited access to the data of their relatives. Since anyone can report the account of the dead, the relatives may lose access if not designated as a legacy contact even if they legally hold the login details. This situation caused serious issues in many countries with distinct privacy policies, particularly when the users died of suicide and the case had to be taken to a court (Linshi, 2015; Sheahan, 2017; Smith, 2012; Tsukayama, 2015; Luz, Henning, 2018). For instance, in 2018, the German court granted parents the right to access their dead daughter’s account after a six-years-long lawsuit (“Facebook ruling,” 2018; Eder, 2012).

Concerning the amount of information given to users, the studied material showed that the number of questions concerning posthumous policies and legacy contacts rose in the *Facebook Help Centre* from March to December 2015. Since 2015, Facebook also introduced a section “*related articles*” in the *Help Centre* to help navigate the user through the content (see appendix B) However, the gaps in explanation of coping with deceased users on social media repeatedly resurfaces (Luz & Henning, 2018; Linshi, 2015, Matsakis, 2019).

Less than a year after the introduction of memorialisation, Facebook faced an incident while the platform memorialised the accounts of living users

along with Facebook's owner, Mark Zuckerberg. The message spread rapidly, claiming that Facebook glitch kills millions of users. More importantly, however, it brought Facebook's new feature to the spotlight. (Woolf & Solon, 2016)

Interestingly, in 2017, Facebook issued a press release with the title: "*Hard Questions: What Should Happen to People's Online Identity When They Die?*" in which the company defended its past decisions regarding posthumous data policies. Facebook claimed that it had faced many difficulties in understanding what users want them to do with the accounts. However, the user was still not granted any option in the system how to directly express details of their will, except for writing directly to Facebook, deleting the account, or appointing a *legacy contact*. ("Hard Questions," 2017)

4.1.4.4 Current policy (period of 2019-2020)

Eventually, in mid-2019, the platform decided on improving its posthumous policy to solve some of the major issues mentioned above. Facebook openly announced that the goal is to turn accounts of the deceased into a place for grieving for family and friends and therefore introduced a new *Tributes section* in the memorialised profiles as a response to users' feedback (Matsakis, 2019; "Making It Easier to Honor a Loved One," 2019)

Thus, the *Tributes section* allows friends and family to post messages to a separate part of the memorialised profile to keep the timeline unchanged. Furthermore, the legacy contacts can newly moderate the posts shared in this tribute section. Since children under 18 years old are not permitted to choose their legacy contact, their parents can request to become one ("Making It Easier to Honor a Loved One," 2019).

Newly, only “close” friends and family are allowed to announce a user's death to have less chance for false announcements. Facebook also decided to use an artificial intelligence algorithm to spot potentially deceased user profiles that have not yet been memorialised (Shu, 2019; Matsakis, 2019; “Making It Easier to Honor a Loved One,” 2019).

In terms of communication, for the very first time in the history of Facebook, the users were informed by announcements on their timeline, via PR campaign and a dedicated video (Shu, 2019; Matsakis, 2019, “Making It Easier to Honor a Loved One,” 2019). With a new design of the website presented in 2020, Facebook offers a new version of their *Help Centre*. It now offers hierarchical branches of questions and answers referring to the deceased user's account (viz Figure 3 and 4).

4.1.5 Conclusion

Q1: What circumstances trigger development in the posthumous data policies of these social media platforms?

Regarding our first research question, the case shows us multiple triggers of the change of Facebook's posthumous policies. As regularly mentioned by Facebook itself, one of the essential impetus comes from the users: survivors and their feedback. The media's influence is minor, except for pivotal events such as the Virginia Tech shootings or smaller individual cases. However, the platform tends to cope with the issues rather effectively and quickly so it does not provoke additional media attention. Another important factor is the legislators, who can directly influence Facebook's policies. Nevertheless, for them, the topic of posthumous data still remains mostly out of the spotlight.

Q2: To what extent do the social media platforms inform the user about the terms of data preservation after the user's death?

Neither the terms of use nor the privacy policy fully informs the user about the fate of her posthumous data. During the examined period, the information was moved multiple times from one part of the official policy text to another (viz appendix A), making it hard to reach for the average users. It does not have a separate section; hence, the information is usually part of sections such as “*Termination*” or “*Other*”. Interestingly, Facebook must actively work with this information when moving it from one place to another during policy revisions.

However, Facebook decided on a major step in communicating with users in 2020, as it now offers multiple questions regarding the deceased users and memorialised accounts. Yet these questions are not heavily promoted per se.

Ultimately, Facebook seems to want to prevent inconveniences with the survivors since they represent a severe burden for their community management and prolong waiting time for responses. Thus, the platform encouraged users to create legacy contacts via targeted notifications and regularly reminded users about their choice to keep the information up-to-date. All of the actions are in accord with the primary goal of Facebook to retain users on the platform and encourage interactions among them.

Q3: How does the users' control over their data post-mortem change over time?

Based on the presented case study, a simplified timeline was created (viz Figure 5) to illustrate key policy changes and the amount of control over

posthumous data granted to users and survivors. In fact, users always had almost no control over their own data post mortem. They also have little range of options to determine what will happen to the data directly in the platform, except for deletion of the whole account. Facebook regularly defends this stance by claiming that it protects user's privacy. Gradually, the platform allowed the user to select her *Legacy Contact*, a curator of the memorialised account with limited rights to alter the content of the profile. If allowed by the account owner, this designated user can also download the data from the memorialised account. Otherwise, the profile with all of its information remains as-is after memorialisation. Finally, it is still not clear what will happen to the memorialised account in case the *legacy contact* or all users from the friend list die.

Q4: To what extent can survivors interact with the data of a deceased user over time?

Survivors are, understandably, the key motor of development since they tend to interact with the deceased users within the social media community. In the first years, they had very limited options to interact with the dead, as the reported accounts of departed users were deliberately deleted from the platform. As a result, they had no control over the data of the deceased. After nine years since Facebook started, a *legacy contact* was introduced, or a special status for an individual survivor to manage certain parts of an account of the deceased and moderate the interaction of other users with the memorialised account. However, even after later revisions, this status does not grant survivors with the power to alter or delete any user data, except for the decision to delete the account as a whole. Finally, only Facebook friends can interact with the memorialised account. Since children under 18 years old are not officially allowed to choose their *legacy contact*, their parents were allowed to become one in case of their children's death in 2019.

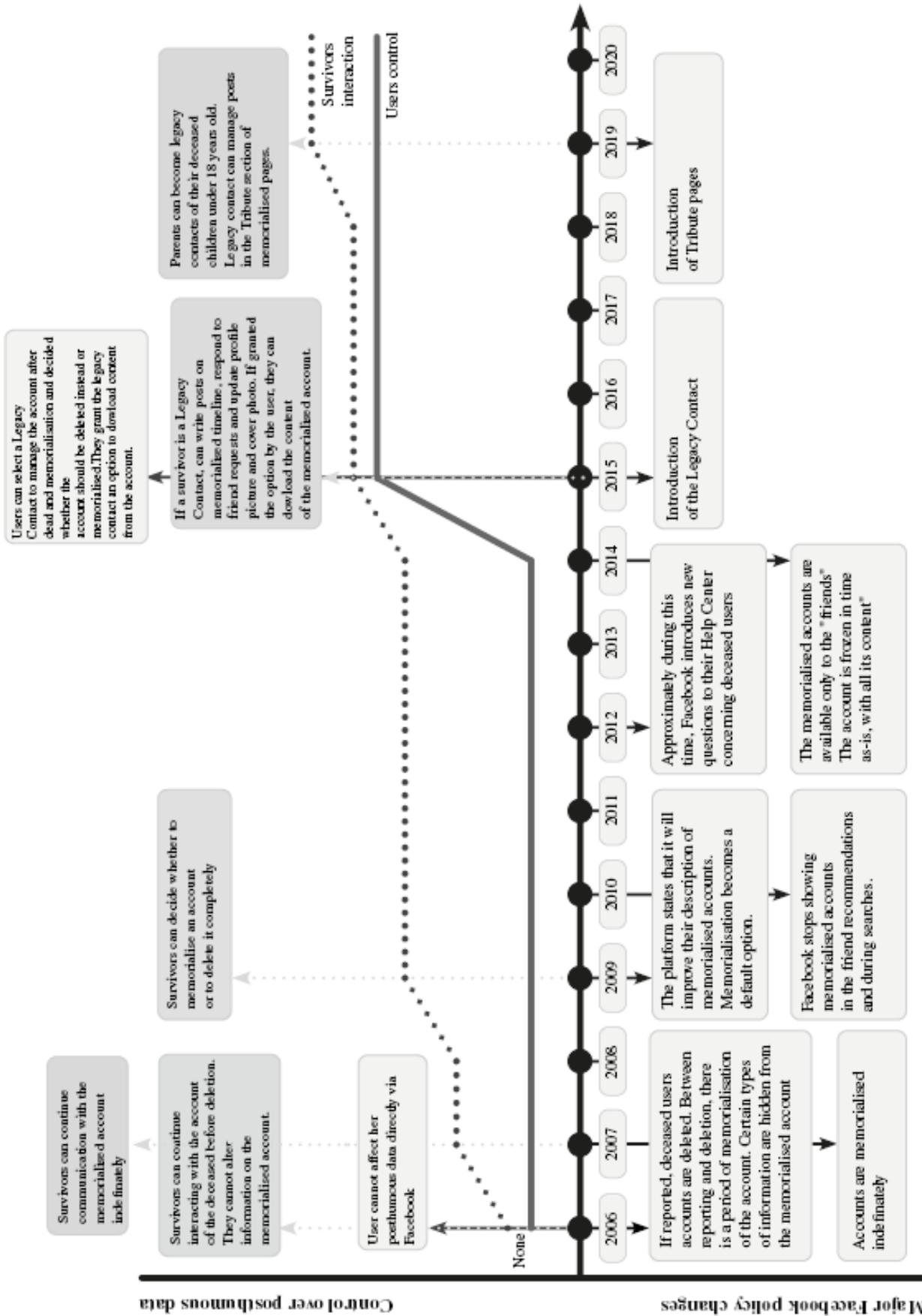


Figure 5: Timeline of Facebook posthumous policy development

4.2 Case study 2 - Twitter

4.2.1 Twitter services

Twitter was founded on 21st March 2006 and had been rapidly growing until hitting 303 million users in 2015 (“Twitter: number of monthly active users 2010-2019”, 2020). In 2020 the platform has approximately 353 million daily active users (“Global social networks ranked by number of users 2020”, 2020). In contrast to Facebook, Twitter does not employ the one-account-per-user policy, and allows users to have more than one account in their possession. Moreover, each account has a unique username, which does not have to match the user’s legal name. The account can be either private when only followers can read the content, or public when the content is available to anyone. (“How to manage multiple accounts”, 2020) It started as a place where users could post short messages called "*tweets*" with up to 140 characters on their feeds (*Twitter timelines*) (Marques, 2016). Twitter offers to its users some basic communication options, such as tweeting, retweeting (sharing *tweets* of other users on their own timeline), replying to other's *tweets*, and following accounts of other users.

Twitter has gradually introduced options to publish other types of content such as images, videos, pools, or live streaming. Twitter was a pioneer for today's use of hashtags (#) on social media, with a very first # used in 2007 (Marques, 2016). The hashtag became one of the tools to share important news in the community, but, as mentioned by Gillespie (2018, p. 185) or Bruns and Burgess (2015), it is still the algorithm that distributes content to the user and does a certain content moderation. In 2017, there was a significant change in sharing messages when Twitter doubled their signature character limit to 280

(“Tweeting Made Easier”, 2017). Shortly after in 2020, the platform added a feature to create threads, allowing users to link multiple *tweets* together into one string of text and an option to record voice and publish it to the user's timeline (“Your Tweet, your voice”, 2020).

Unlike Facebook, Twitter users usually follow people with whom they do not know personally, but they are interested in their content, actions and ideas. The platform recommends users whom to follow and popular hashtags to explore (Duggan, Smith, 2016). Anyone over 13 years old can create an account and use it to its fullest as long as his actions do not violate the *terms of use* of the platform. Twitter provides its users with only one version of an account, with no core distinction between personal and company accounts as other social media mentioned in this thesis do - Facebook has its business Pages (“Facebook Business Help Centre”, 2020), as well as LinkedIn (“LinkedIn Pages - Overview”, 2020).

Communication on Twitter is not limited to friend groups or separate audiences and the messages are kept short. Hence, it allows an easier information flow and consumption of information from a wider range of sources. The users also do not have to be reciprocally connected to each other to communicate. That is why the platform became a popular communication channel, particularly for politicians, public figures, and journalists (Cesare, Branstad, 2018, pp. 82-83, 90).

Twitter provides third parties with aggregated user data and also allows them to manage users' content via automation. For example, they can analyse Twitter content, create and report advertisement, publish and schedule content and even link direct messages to *tweets* to create personalized conversational chatbots (“Programmatically create and manage Twitter Ads campaigns”, 2020). User data used for advertising are in the heart of Twitter's business model (Van Dijck et al., 2018).

Digital assets, such as passwords, account details, and other sub-elements related to the account: *tweets*, *retweets*, photos, videos, depends on a contractual relationship between the user and the platform as agreed in the *terms of use*.

4.2.2 Twitter posthumous policies

Currently, Twitter has information regarding deceased individuals summarised in an overview on its official websites in the Help Center under the headline General guidelines and policies. However, the analysis has shown that the platform does not mention departed users neither in their official *terms of use* nor in the *privacy policy* (viz appendix E).

The *Help Center* contains, except for the overview, two additional questions on this topic: 1) how to contact Twitter about a deceased family member's account, and 2) how to contact Twitter about media concerning a deceased family member. The questions changed wording throughout the years. Interestingly, the questions used to be listed in the section *report and violation*.

4.2.3 Data & Analysis specification

Despite the lack of information about deceased users in the *terms of use*, *privacy policy*, and *data policy*, it was necessary to shed light on the term *account deactivation* and *ending of terms*. This analysis is particularly targeted at the first two documents. These were well retrievable because Twitter official website contains a list of the past versions and revisions.

One of the questions, “*How to Contact Twitter About a Deceased User*”, found for the first time, changed its wording in 2015 to “*How to contact Twitter*

about media concerning a deceased family member". The Help Center changed its name as well and used to be called "*Support Center*", which significantly shifts the tonality. This fact complicated the data retrieval via the WayBack Machine, since the URL has changed as well. (see appendix E)

Twitter does not have a typical press centre. Instead, it usually uses its *Twitter Support* account to report users about news or blog (where no additional information was found). ("Twitter Support - user", 2020)

In comparison to Facebook, there is much less academic literature concerning Twitter in terms of posthumous data. However, the platform has heavy media coverage.

4.2.4 Analysis

In Twitter's case, the key policy development events can be summarised into the following three phases.

4.2.4.1 Early years – deletion and content preservation (2006 – 2013)

In Twitter's early years, its *terms of use* were admittedly heavily inspired by Flickr ("Twitter: Terms of Service;" 2020) and did not mention deceased users at all. Indeed, as Boddy (2004) argues, most social media, even before Twitter existed, adopted a strategy to delete the accounts if these were reported. Similarly, in our case, the platform deleted the inactive users only if they violated the terms of the community or were reported by other users. ("Death and social media," 2010).

In August 2010, Twitter introduced a new question in their Support Center under *reports and violations* that it will remove the account of the deceased if notified and that they can assist family members in saving a backup of their public *tweets* (“Death and social media,” 2010). (viz appendix E) This step significantly broadened options for users’ posthumous data *preservation* for family members outside of the network. It is not clear why the platform decided to include this information, but it probably came as an answer to users’ feedback.

Two years later, in 2012, the platform added additional information to this question, stating that it can “*work with a person authorized to act on the behalf of the estate or with a verified immediate family member of the deceased to have an account deactivated.*” This step requires a signed statement. Twitter also mentions that it will not provide the password to the bereaved, regardless of the relationship to the deceased. However, it is worth noting that the platform did not prohibit users from logging into accounts of other users if they legally obtained a password. (viz appendix E; Wright, 2014)

Interestingly, there is an article from the same year arguing that Twitter should memorialise the deceased's accounts to prevent unpleasant situations in the community. It also mentions the US Library of Congress and its agreement with Twitter to archive public *tweets* on the platform to preserve them for future research. The platform was also criticised for general lack of storage due to huge amount of content. The library and Twitter began to cooperate from 2010 (Plaugic, 2017; Zimmer, 2015).

Since 2012, Twitter has added an information about possible deliberate deactivation of accounts to its *terms of use*. However, the policy was quite vague and did not attract any media attention. It further mentions in the *Help Center* that inactivity is translated to six months of not logging into the account. (see appendix E) Notably, as a minor example, in 2013 Twitter users started a

hashtag campaign #DontDeleteCorysTwitter, after a Canadian comedian and actor of the same name. His followers (the account has over 1 million of them) expressed their concerns and did not want the profile to be deliberately deleted by the platform (Khatchatourian, 2013).

4.2.4.2 Removal of imagery and tweeting from beyond the grave (2014 – 2018)

In 2014, Twitter decided to change its policies due to the aftermath of an unpleasant situation regarding the death of Robin Williams, a famous actor and comedian. His daughter was sent abusive messages after he passed away and shared on the platform that she would stop using the service. As a result, Twitter decided to add “Removal of certain imagery” to its policies to prevent incidents with the dissemination of inappropriate photos containing the deceased. It newly informs the users, that: “... *Twitter will remove imagery of deceased individuals in certain circumstances. Immediate family members and other authorized individuals may request the removal of images or video of deceased individuals, from when critical injury occurs to the moments before or after death.*” It will also consider public interest factors, namely newsworthiness, when executing the request. In other words, Twitter admits control over the data of the deceased and has a final word in case of account deletion. Moreover, the platform promised to exceed the services for the deceased, but it is not clear whether that actually happened. (viz appendix E; Thomson, 2014; O’Sullivan, 2016)

In 2016, The Washington Post (Ohlheiser, 2016) issued an article discussing the hacked account of the dead. It emphasises the vulnerability of these accounts and the lack of invention from Twitter. Indeed, such incidents with still active or hacked accounts of deceased happened repeatedly over the years. (Owoseje, 2017; Gabbatt, 2020; Leaver, 2015; Schonfeld, 2015)

The original question in the Help Center was split into two in 2018, namely: How to contact Twitter about a deceased family member's account Deceased User, and How to contact Twitter about media concerning a deceased family member. (viz appendix E) As in previous years, no particular reason for this action was found.

4.2.4.3 Current Policy – 2019

Initially, since 2019, the user can also obtain information about the deceased user policies from a dedicated section in the *Help Center*.

In the same year, Twitter reintroduced a measure to deal with inactive accounts of the users. The platform decided to enforce their policy to close the accounts of users who were not active for longer than six months, as was mentioned in their policies since 2011. In spite of the primary enthusiasm about the potential release of taken but inactive usernames, users became concerned with losing the content of their non-active deceased acquaintances of the family. (Welch, 2019; Jee, 2019)

One of the possible reasons for the outreach might be, as suggested by Cesare and Branstad (2018), is that the platform allows its users relatively unique options of posthumous communication associated with the deceased's account. It is easily reachable and allows personal and public mourning practices. Thus, the enforcement of the policy could potentially jeopardise many inactive accounts with loyal follower-base in the community of the bereaved (Cesare, Branstad, 2018).

The pressure from the media and users resulted in Twitter publicly stating that it will be working on a new policy to memorialise deceased user accounts. In addition, the policy will be primarily enforced in European Union due to privacy regulations (GDPR) and halted in other parts of the world, where

the social media company operates (see figure 6). (Collins, 2020; Kelly, 2019; SimonKuper, 2020; Welch, 2019) Besides, the platform spread the news that it will find a way for account memorialisation (Darrell, 2019; Zialcita, 2019).



Figure 6: Twitter Support account replying to users regarding the new inactive user policy (retrieved from “Twitter Support - user” (2020))

Yet, no significant change has occurred since the announcement, with media expressing concerns about the future policy (Collins, 2020; Kelly, 2019). Likewise, Twitter is under pressure since users want to keep the departed users

on the platform and it is a significant mediator for community grief. For instance, the most-liked *tweet* of all time is Chadwick Boseman's posthumously shared announcement of his death (see figure 7). The American actor, best known for leading roles in blockbuster action movies, died in August of cancer. (Johnson, 2020; Pulver, 2020)



Figure 7: Chadwick Boseman's last tweet (retrieved from Johnson (2020))

4.2.5 Conclusion

Q1: What circumstances trigger development in the posthumous data policies of these social media platforms?

Initially, it is worth noting that Twitter has only a basic level of posthumous data policy, which has not significantly evolved during the platform's existence. There are multiple possible justifications:

- The communication via Twitter might feel less personal for users, as the content is distributed publicly to the whole network.
- The platform did not enforce its inactive user's policy until recently, eventually leading to negative responses from media and users.
- The platform does not pursue a strict policy of one user per account and does not take action when users share their passwords.

However, although only a few events were affecting Twitter's decisions on the posthumous policies, we can observe a tendency to listen to media and users' feedback which are often related to the passing away of a celebrity. Legislators seem to have minimal impact since this issue stays out of the spotlight. Overall, the platform is still slow in implementing new features, even if the issue attracts media attention.

Q2: To what extent do the social media platforms inform the user about the terms of data preservation after the user's death?

Twitter does not directly mention deceased users in its *terms of use*, *privacy policy*, or *data policy*. Platform users can obtain information via the official *Twitter Support* account or the *Help Center*, while the latter offers a dedicated section about the policy concerning the deceased users. Twitter added this section in recent years; beforehand, it provided questions regarding the policies under the section *reports and violations*. It is also worth noting that not everyone is following the *Twitter Support* account. Yet, the user is minimally informed about the posthumous data's fate since the questions lack information about their further storage, etc. As the community outreach has shown in recent years, the policy is vague concerning the difference between inactive and deceased users. The stance of Twitter towards the departed users is also unclear.

Q3: How does the users' control over their data post-mortem change over time?

Twitter does not offer any concrete tool to control the posthumous data or decide what will happen to data and the account after death. However, it allows third parties, such as digital inheritance services, to interact with the platform, and it is open to communicate with the deceased user's executor of the digital will. Since the platform does not provide any assistance for users, their posthumous profiles might be vulnerable and potentially abused by hackers.

Q4: To what extent can survivors interact with the data of a deceased user over time?

In fact, the next of kin is not directly forbidden from login into the deceased's account. However, Twitter will not disclose the login details to anyone. The family members or the executor can also deactivate the account by directly reporting it to the platform. Twitter also offers assistance to bereaved families in coping with inappropriate imagery concerning the deceased and allows them to download public content from the account. As a result, survivors can continue to fully interact with the dead's account and maintain it indefinitely. It seems that as of 2019, Twitter decided to apply territoriality to their policy of inactive user policy, which in turn affects the deceased as well. Still, it is not clear whether this approach will be kept for the future.

4.3 Case study 3 - LinkedIn

4.3.1 LinkedIn services

The social media platform LinkedIn was founded in 2002 and was officially introduced to the public on May 5th 2003 (boyd, Ellison, 2008). In 2016 Microsoft bought LinkedIn, it is still their biggest acquisition to date (Iqbal, 2020; Weiner, 2020). It calls itself the world's largest professional network and it claims to have 722 million users (this number is self-reported) (“About LinkedIn”, 2020). To create an account on the platform, you need to be at least 18 years old. Users can create their profile pages related to the name they choose, then after they sign-in, they are enabled to freely browse the profiles of other users. They can create their professional network by offering or accepting approval of mutual connections or following other members (this relationship is not reciprocal). These features are the core property of LinkedIn – connecting a user with colleges and acquaintances (Chang, Lie & Shen, 2016)

The size of the users' network demonstrates their importance in the community. If they have more than five hundred connections, it will be shown on their profile as 500+. Profiles that reach this number are much more likely to be seen in a search and also have more credibility in their field (Mussio, 2016).

Regarding the interface, LinkedIn is designed for sharing information related to users' professions. However, it also allows them to post statuses or share longer articles to their network. This aspect of user profile co-creation is not as strong as in the case of Facebook or Twitter. Users can also interact with the other's statuses and articles via the like button with five different expressions, through commenting, or they can share content. Additionally, users may also exchange messages (Van Dijck, 2013).

After registration, users then become members and they gain access to the vast majority of LinkedIn features, such as a tool for creating users' interactive CV and a search tool to find other members or company pages. They can also join groups or browse lists of job opportunities (Chang, Lie & Shen, 2016). Furthermore, LinkedIn allows users to create Premium Accounts which open additional features, namely private messages to non-connected members, a higher position in searches as well as additional filters in the search for easier exploration of job opportunities or potential job candidates ("LinkedIn Free Accounts and Premium Subscriptions", 2020). LinkedIn treats non-member users as visitors; they are allowed to see and interact only with a limited number of features and pieces of the content ("User Agreement", 2020). This restriction was introduced not only for motivating users to join the community of members, but also because LinkedIn users sometimes share work-related or, to a certain extent, private information. Hence, those who are not part of users' private network or groups are not allowed to see their content (Chang, Lie & Shen, 2016).

Like Facebook, LinkedIn offers users notifications about important events, such as job promotions, information about anniversaries related to other members' job titles or companies, and birthday reminders. Furthermore, users' browsing activity is not private by default, so other users can see who has visited their profile. LinkedIn offers a "private" mode for its premium users; this feature allows them to stay hidden when browsing profiles. The users can set themselves if they want to share their information outside of the LinkedIn network ("LinkedIn Public Profile Visibility", 2020).

Considering third-party interactions, LinkedIn provides API to developers via their official website devoted to them. ("LinkedIn Marketing Developer Platform - API Documentation", 2020)

Users' digital assets, such as the password, account, log-in credentials, and other sub-elements i.e. messages, groups, pages, interactions, etc., depend on a contractual relationship between the user and the platform.

4.3.2 LinkedIn posthumous policies

LinkedIn informs the users about the procedure regarding deceased users via its Help. It contains only one simple site called “Deceased LinkedIn Member” (“Deceased LinkedIn Member”, 2020). Nevertheless, it is not clear which category the question originally belongs to.

4.3.3 Data & Analysis specification

Currently, LinkedIn does not mention the deceased users in terms of use or privacy policy. However, in the period of 2010 to 2012, the privacy policy contained information about account memorialisation. This option is currently not available (see appendix G).

It is also worth mentioning that older versions of the Help question mentioned above are not accessible via the WayBack Machine.

Overall, it was complicated to retrieve former policies via the WayBack Machine. The policies were not usually accessible directly via their URL, so it had to be manually traced from the LinkedIn main page each year.

Furthermore, the platform does not attract media attention. As John Herrman (2019) wrote for The New York Times, it is most likely because of a specific communication style and audience, which is notably distinct from other

platforms. Since LinkedIn is a professional network in the first place, people tend to behave within certain communication boundaries like in the office space.

4.3.4 Analysis

LinkedIn has significantly fewer resources compared to the other two cases. Almost all academic literature mentions LinkedIn's posthumous policies as a marginal example compared to other platforms such as Facebook or Twitter. Thus, information from news articles mentioned in the appendix will provide the basic structure for their development (see appendix G).

The Guardian's article (Lee, 2008) from 2008 contained a short statement from European Director of PR and Marketing of LinkedIn, Christina Hoole, who stated that the platform would close the account of a departed user and hide their profile from the public. The author also mentions that this process is not embedded in the official written policies, but has spontaneously emerged over time. It is not clear whether this process is somewhat a version of memorialisation or not. Moreover, according to the article, if an account user passes away, their family members have the ability to apply for access to the deleted account. In that case, the platform decides the final step by checking the allegedly dead user's profile, the account activity, and its account interactions over time (Ibid).

Notably, in 2010, an option for account memorialisation appeared in the LinkedIn privacy policy (see appendix G). LinkedIn stated that: *"if we [LinkedIn] learn that a User is deceased, we may memorialize the User's account. In these cases, we may restrict profile access, remove messaging functionality, and close an account if we receive a formal request from the User's next of kin or other proper legal request to do so."* Under these terms, LinkedIn manifests its power over user's data, when stating that it could

deliberately memorialise a deceased user's account to restrict access. LinkedIn decided to remove this information from its privacy policy in 2012. Thus, it remains unclear why the platform decided in favour of account memorialisation, why they eventually changed their policies again, and if any account has been memorialised during this short period. (see appendix G) Moreover, none of the retrievable news articles mentions this feature.

In 2010, an article in London Evening Standard (Trew, 2010) discussed the fact that social media networks, such as LinkedIn, are not aware of how many dead users are in their network. This article also provided information about other external services, namely MyDeadSpace, which was created as a tool for spotting dead users on MySpace. According to the author, this option could be the future of SNS, such as like LinkedIn. (Ibid)

As Nansen et al. (2017) assert in 2017, once an account user passes away, their family has the option to leave the account active or delete it by request. The request can be formally submitted by family or a member of the LinkedIn community.

Finally, The Wall Street Journal (Summerville, 2019) published an article in 2019 regarding LinkedIn's introduction to the memorialisation of accounts¹¹. This supposedly came as a response to many users' requests. Currently, if someone possesses the password to a deceased user's account and they do not want the account deleted, they write "the end of the professional career" on the deceased individual's profile. Consequently, the algorithm for suggestions of other similar accounts might lead to other dead people in the network (Ibid).

¹¹ Some information regarding the LinkedIn memorialisation allegedly leaked on Twitter ("Microsoft's LinkedIn is Developing A New Feature," 2020)

Currently in 2020 users can now find a site about deceased users in LinkedIn's Help. This site was not accessible in previous years, but it is still [possible that this site existed. According to the site, LinkedIn "can remove their profile [of deceased a user] from view on your behalf". Apparently, anyone can ask for the removal of an account. However, it is still unclear that once an account is removed, whether the account will be erased entirely or just hidden from the public. There is also no additional information about whether a family member of a deceased will be contacted. After providing information about the deceased, the platform will consider the request and provide updates on this matter. ("Help: LinkedIn", 2020)

In the same year, LinkedIn has also introduced new engagement features to keep the users on the platform. This fact raises the question, whether the demand for a new policy has a link to the development of communication features (Jefferson, 2020).

4.3.5 Conclusion

Q1: What circumstances trigger development in the posthumous data policies of these social media platforms?

Overall, LinkedIn showed little to no development of its posthumous policies. Considering a short period of memorialisation in the early years which was later removed again, there is, in fact, rather a regression in the development. The analysis has shown that the platform seems to be open to users' feedback, while the influence of other media or legislators seems rather small. Nevertheless, LinkedIn seems to act on its own initiative as it broadens its services to a more interactive environment. Indeed, features such as articles or statuses enables users to create a digital identity by cumulation of content related to the accounts and users.

Q2: To what extent do the social media platforms inform the user about the terms of data preservation after the user's death?

LinkedIn provides users with rather vague information regarding posthumous policies. It offers them only one site in its *Help*, with no additional links to other policies or Help sites. It is also unclear why the posthumous processes are not included in terms of use or privacy policy.

Q3: How does the users' control over their data post-mortem change over time?

LinkedIn does not offer its users any option to directly control posthumous data. Users can only ask their relatives or executor of their will (or a posthumous data management service) to delete the account. However, it seems that the stances towards LinkedIn are changing over time, as the platform adds new engagement features. The platform shortly offered memorialisation of the accounts, which would have protected the still active accounts from hacking.

Q4: To what extent can survivors interact with the data of a deceased user over time?

The interaction with the deceased's account is not restricted and the account can stay active on the platform. Family members are not provided with the password, but they are not prevented from logging in to the account if they already have it. The interaction is limited only by the specific LinkedIn interface build mainly for sharing professional information. Furthermore, since its launch,

LinkedIn offers deletion of the account upon request. It is unclear what the procedure will look like for both users and the bereaved regarding the potential account memorialization.

4.4 Results

This chapter presents a comparison of the analysed case studies regarding the research questions. For clarity, the results for each question are summarised in a separate section. Before reviewing the questions and discussing the findings, it is worth mentioning that the posthumous data policies are still in their infancy, with minimal inclination to evolve.

Q1: What circumstances trigger development in the posthumous data policies of these social media platforms?

Despite the relatively small number of policy changes across all three case studies, the analysis uncovered multiple triggers for posthumous data policy development. Initially, all of the social media platforms are simply deleting user accounts after death with only one exception – Facebook – which offers a broader variety of options for data preservation. It is worth noting that it was not always clear whether the accounts and data had been eventually deleted or just hidden from the network. Overall, the platforms' stakeholders (Van Dijck et al., 2018) still account for the significant trigger for a change in posthumous policies.

The primary initiators of changes were mostly the users who were not satisfied with the current state of options regarding their posthumous data management. Indeed, the number of users plays a vital role in the business models of all of these SNSs, even though each of them targets a slightly different audience. The primary goal of SNSs is to keep the users on their platform and enhance engagement among them. In all the cases, the platforms tended to take users' feedback into account to improve their service. The users contacted platforms rather individually and rarely formed bigger groups to elicit policy

changes. In that regard, the specific way of information dissemination and character of the platforms' service matters. Hence, we can spot events initiated by users, especially on Twitter such as hashtag campaigns and Facebook, particularly in the aftermath of Virginia Tech shootings or bereavement groups. Some users, notably in the case of Facebook, also sought out legal aid in the privacy matters.

Secondly, in all cases, the media has shown its power to amplify the users' voice when mediating users' concerns. Moreover, the journalists themselves are the SNSs users as well, and that goes hand in hand with the attention they pay to each platform. For instance, due to its nature of communication, Twitter is popular among its users for fast sharing of news and trendy topics, updates, and hashtags, so it often serves as a primary source of information for journalists. To illustrate, although Twitter is a much smaller social network than Facebook, it is heavily under journalists' scrutiny. However, the topic of posthumous data management is still rather underrepresented in the news in general. It is usually linked to a celebrity's death (especially on Twitter), user complaints, and press releases, e.g., information that the platforms want to bring to the forefront. The media as such has the ability to bring the community of users together and bring certain users' needs to the spotlight. Hence, they enhance the pressure to change the posthumous data development.

Thirdly, in relation to the development of posthumous data policies, the legislators play a minor but essential role. All of the presented social media platforms must follow countries' laws to provide their services, and the national and international regulations influence their policies. The case has shown, for instance, that Facebook was examined by the Canadian Commissioner, while Twitter had to reinforce its policies in the European area due to the General Data Protection Regulation (GDPR). Even though the posthumous data policy is not currently a central topic for legislators, other policies regarding data regulation and social media can indirectly stimulate its development.

Ultimately, social media tends to initiate the regulations by themselves, but probably still solely to respond to the users' feedback. The development of posthumous data management in all of the platforms is still very slow or almost none. The analysis has shown that all three social media sees deceased users in the same vein as the inactive ones. Concerning that, Facebook is currently on the lead, with at least acknowledging the existence of dead users in its policies. Interestingly, in the case of LinkedIn, the platform even decided to remove the memorialisation and come back to simple account deletion. The company's intentions have not been stated, however, LinkedIn might eventually re-introduce the memorialisation in the next years. This action also raises the question of whether this revision occurred due to changes in the business model reflected in the gradual inclination of LinkedIn to mimic certain Facebook engagement features.

Q2: To what extent do the social media platforms inform the user about data preservation terms after the user's death?

In all the cases, it was complicated or even impossible to retrieve information about deceased users directly in the *terms of use*, *terms of service* or *privacy policies*. Regardless, all of the platforms informed the user about their posthumous procedures in their version of a help centre. In recent years, both Twitter and Facebook decided to enhance the clarity of their policies, with the former creating a dedicated section summarising information on the topic and the latter providing hierarchical order of questions in the help centre. On the contrary, LinkedIn is falling behind.

Despite some development in all of the cases, the policies remain vague. It is unclear which data are posthumously preserved and under which conditions or how long they will stay on platforms servers after deletion. This issue raises the question of whether the posthumous data should be treated in the same way

as when a user simply intentionally decides to leave the platform or violates the terms or community rules. Hence, under the current circumstances, it also relates to the topic of the meaning of words such as “deletion” and “deactivation” of information after the relationship between a platform and a user terminates. After users’ death, the power over digital assets passes over almost totally to the platform and the policies seems to be one of the ways for self-regulation and communication with users. We must keep in mind that the platform still decides by itself who will be able to use their services.

Finally, we can observe that Facebook tends to inform its users better compared to the other examined platforms, probably due to the pressure from legislators to keep transparency. However, Twitter seems to be relatively transparent as well (and even more so with other policies) and open for discussion to enhance the service.

Q3: How does the user’s control over her data post-mortem change over time?

The cases have shown a disparity in the data control post-mortem across the platforms. Despite the strict policy of deleting dead accounts in the early years, solely Facebook currently offers its users an option to decide whether they want to have the account deleted or preserved in the so-called *memorialised*¹² status. Furthermore, Facebook allows the user to designate a *Legacy contact*¹³, inspired by a similar Google feature, to manage some of the data after her death. The *Memorialised* profile has limited functionality and a certain degree of

¹² More about memorialisation viz Case study 1

¹³ Ibid

protection against hackers and other potential threats. The account is memorialised by default.

On the contrary, Twitter enables third parties, for instance, posthumous data services, which can execute the posthumous data management according to the deceased's will. The family member or executor can also directly decide whether the account should be posthumously deleted. Facebook and LinkedIn have the same deletion procedure as well. However, the platforms always have the last word.

Overall, the options for the users' control over their data post-mortem are minimal across all of the social media platforms under scrutiny. Moreover, this control does not have a tendency to rise along with the development of posthumous policies. This issue is also linked to the question of the users' influence on how their data are used during their lives.

Q4: To what extent can survivors interact with the data of a deceased user over time?

In all three cases, a survivor's interaction with the deceased has proven important for keeping the community and long-term users' engagement. Overall, interaction options are rising over time since it is one of the principal ways to collect additional data about users. The bereaved people can continue the communication with the dead, and, in some cases, they can also take over the control.

The platforms encourage the community to spot deceased user accounts. For instance, Facebook *memorialises* an account only if another user reports it. LinkedIn and Twitter adopted similar strategies for their networks, which considers posthumous account deactivation.

The interaction with the dead also heavily relies on the means of communication and other users' engagement features offered by each platform. For instance, Facebook has developed an AI to spot the potentially dead but not memorialised accounts to prevent inconveniences caused by some engagement features, such as birthday reminders or friends' suggestions. On the contrary, Twitter recommends users popular topics or hashtags and accounts, but it does not include any form of birthday reminders. Interestingly, LinkedIn has been currently forced to change their posthumous policies since it decided to change the service's nature in recent years – shifting from a niche of employment-oriented online service to a much broader business network.

Finally, the options to interact on behalf of the deceased vary on each platform. Twitter fully allows the survivors to have the login details and, it has become a common popular practice, particularly concerning celebrities. Facebook, on the other hand, prohibits login to the accounts of departed users. Lastly, LinkedIn stays relatively neutral if the users' actions do not violate the community's rules. The audience might be limited as well. It is worth noting that Facebook limits the possible interactions to friends-only if the account is *memorialised*.

4.5 Discussion

The presented chapters have proven that the selected social media are somewhat reluctant to change their posthumous data policies. In a like vein, the case studies aimed to examine the dynamics of these changes reflected in the reciprocal relationship between the platforms and their users and recognise patterns across the cases. Since the generalisation is limited due to the employed methodological approach, we instead aim to contextualise the findings in the current debates regarding social media posthumous practices and policies.

Initially, by virtue of the finding related to the **first research question (Q1)**, we can argue the primary initiators of the development are users, followed by media and legislators. No evidence was found about the direct influence of competition among the platforms (cf. McCallig, 2014).

Indeed, in the early years of social media, death seemed to not only be taboo but also a problem for the platforms' business models. However, it has eventually proven to be the opposite (McCallig, 2014; Meese et al., 2015). Death unlocked the growth potential and gave rise to new services (Öhman, Floridi, 2017). Hence, instead of a tendency to obliterate the dead profiles, we are witnessing the emergence of new features across all the platforms, such as the *memorialisation* of accounts or other forms of a continual presence of departed users in cyberspace. Importantly, death does not break the users' connections (Bassett, 2015; Walter et al., 2012). That is why the community wants to preserve information about their loved ones who passed away to continue interacting with them within the platform (Gibson, 2014; Leaver, 2013). The policies can ensure that the deceased user's digital identity and data can safely stay on the social media platform without concerning the still-living community and potentially generate profit for the company (Meese et al., 2015).

Importantly, the business models of all these platforms are based on *datafication*¹⁴ emerging from engagement and interactions among users, which lead to more effective data collection (Mayer-Schönberger, Cukier, 2013; Van Dijck, et al., 2018, p. 35). In chime with that, we could anticipate that the social media platforms would tend to collect users' data more effectively and want them to stay as unchanged and untouched by the third party as possible after users pass away. By this means, they could ensure preservation of a user's unique digital identity which can be further elaborated by the bereaved but first and foremost, by data accuracy (Acker, Brubaker, 2009; Gibson, 2014). However, the presented analysis has demonstrated that these actions heavily depend on the level to which the user's account reflects her digital identity and on the nature of communication on the platform per se. To illustrate, one of the most tangible clues is that Twitter does not pursue a policy of one account per user, hence it is more open to changes in the posthumous data from the third parties as long as the account encourages engagement in the community (Cesare, Branstad, 2018). Indeed, for Twitter, the production of content and further interaction is what matters the most for the platform (Van Dijck, 2013, p. 78). On the contrary, the account *memorialisation* became a default option in case of Facebook, where each user is allowed to own one account, whereas the deletion of the profile turns out to be rather a complicated process if not demanded and set by the users before they die. The missing user's option to directly decide about the posthumous procedure leaves the data, e.g., the digital identity, vulnerable and out of control of the deceased user and the survivors.

However, the social media platforms do not seem yet to find the employment for this type of data, or at least, as the analysis has shown in relation to the **second question (Q2)**, they do not inform the user about it (Leaver, 2013; Karppi, 2013; Wright, 2014). Regardless, some authors mention

¹⁴ For detailed information viz Van Dijck et al. (2018)

that internet research is currently more interested in the process of collecting and preserving the data rather than their utility, which might come to light later (Pitsillides et al., 2013). On the other hand, Öhman and Floridi (2017) suggest that the posthumous data might eventually turn profitable, which raises new ethical challenges and questions concerning the digital assets in the newly emerging economy (which the authors call the *Digital Afterlife Industry*). Indeed, as Leaver (2013) points out, for Facebook, the interaction of the community with the deceased user can still enable the social network to understand the behaviour of the living better. Additionally, it allows the platform to show targeted advertising to the audience (Leaver, 2013). It is also still not clear how much actual control the social media platform has over the user's data, as it is based on cloud services and the data are backed-up or preserved on multiple servers.

Furthermore, this issue with data preservation and the demonstrable relation between data and profit provoke questions about the transparency of policies at large. The social media in the presented cases do not provide users with adequate information about the fate of their posthumous data, but this issue submerges to the broader issue of the vagueness of data policies regulating the users' privacy (Nissenbaum, 2011; Pariser, 2011; West, 2017). We should not neglect the fact that, despite the privacy regulations and influence of international legislation, it is almost exclusively the social media platform that directly operates with the users' data and makes the momentous decisions about them.

Hence, how much control does the user have over the posthumous data? The findings of the **third question (Q3)** imply almost none. As stated earlier, the social media might want to preserve the data due to their business models; however, there can be another, in some ways, simpler explanation. The analysis has shown that the services are primarily designed for living users only and neglects death as a different part of users' activity. In all of the cases, the

platforms are treating the deceased user in the same way as the inactive one, leaving notable gaps in their policies.

To resolve this issue, Massimi and Charise (2009) proposes the HCI approach they coin *thanatosensitivity*, to design services that recognise and actively engage with the facts of mortality and dying of users in their core. In addition, it depends on how the death of the user is perceived. In this context, Massimi and Charise (2009) see the deceased users as a user category, while, for instance, Brubaker (2010) perceives the dead as somewhat extreme users with specific needs which can further influence the design for the living.

Another important aspect is the general approach to digital assets (f.e. Acker, Brubaker, 2014; Politou et al., 2018, Wright, 2014). It is still not clear, how to understand the *digital legacy* and how to treat the data after users' death. As previously mentioned in the literature review, Öhman and Floridi (2017, 2018) propose, in this context, to understand the digital data in the form of a digital body (as also mentioned by Gibson (2014)) that should follow the same legal and ethical norms as for physical bodies. However, these mostly legal questions persist and the approach to them can significantly vary across various countries, in the same way as the approach to death itself (Mayer-Schönberger, 2011; McCallig, 2014).

As a result, concerning the **fourth question (Q4)**, survivors' options to interact with posthumous users' data and their *digital identities* differ across platforms. Importantly, as Irwin (2015) asserts, the bereavement process has notably shifted from simple farewell to a new way of co-existence or life with the dead due to the expanding social media usage. Since the social media usually deny access to the posthumous data or allow it only if the survivors hold the password, the ability to practice posthumous archiving is very limited (Acker, Brubaker, 2014; Wright, 2014). However, in all three cases, the survivors can still interact with the deceased, co-create their digital memorial and potentially

contribute to their *digital immortality* (Bassett, 2015; Sherlock, 2013; Wright 2014). In our cases, the survivors could write messages to the deceased or post them on their accounts.

However, even though it might seem like *digital immortality* is open for everyone via social networks (Walter, 2015b), we must not forget that the use of these networks is not entirely free. If no one interacts with the dead, there is no reason to keep them on the platform. With a dramatically rising number of dead accounts, the question is: who will be eventually able to reach *digital immortality* and who will be deleted? For example, in case of celebrities, their legacy was kept for fans and profit, but it also needed to be protected from abuse (Mitchell et al., 2012). As seen in the cases, users are not usually prone to digital *zombie* accounts, managed by the survivors. Ultimately, the community's interactions still play a crucial role, and it is a question whether to keep an account in the network if it does not generate engagement.

Nevertheless, since, according to some scholars (Grimm, Chiasson, 2014; Mayer-Schönberger, 2011), the majority of users prefer their information to be posthumously destroyed, so we must also ask whether default *memorialisation* is the best option and for whom it is actually made as well as whether survivors or the platform itself benefits. On the other hand, it is important to keep in mind that it is currently primarily the service that has the last word concerning the account deletion and that the untimely obliteration might cause a *second death* (Gibson, 2014), as explained earlier in the literature review.

Finally, memories might persist, but digital memories might not, since the length of their afterlife usually depends on the hardware or their digital format (Pitsillides et al., 2013; Van Dijck, 2007). In the context of our cases, we can anticipate that it also depends on the social network and the specific form of communication. For instance, we still do not know what will happen to a *memorialised* account on Facebook, if all of the deceased user's friends die,

since it is not possible to create new connections within the network. Furthermore, on the macro-level, the issue does not consider only an individual user, but rather the whole social media community and society. The data of individuals or populations can be later used in archaeological research or for various data sets employed by other digital services. However, it is uncertain which identities and data will be preserved and under what conditions (Pitsillides et al., 2012).

5. Conclusion

The end.

In the scope of this thesis, we examined the relationship between users and social media by following the development of posthumous policies regarding user data of three major social media platforms in the Western world. Although most of the existing research in the field of death studies and new media studies focused primarily on users and bereavement processes, this text adopts the perspective of coping with data management. Hence, four presented research questions, based on the existing body of literature, aimed to explore the development and control over data that is granted to both users and survivors. The results were eventually discussed in light of existing research.

The case study was selected as the most suitable method due to the lack of quantitative data regarding the topic and relative vagueness of the posthumous data policies of chosen platforms (Facebook, Twitter and LinkedIn). The results showed that the users' feedback is the primary trigger for development. However, the legislators and media also play their role, even though the topic still remains rather marginalised. The users had, in all three cases, minimal control over their data directly on the platforms. Nevertheless, some of the SNSs are open to solutions from the third-party posthumous data management services. There is also an evident tendency to introduce memorialisation feature to keep the departed users' accounts on the platform. Thus, survivors' options to interact with the deceased and maintain their digital memories grow in time.

The main case study limitation is its questionable generalisation of the results. Hence, the presented research only scratches the surface of much more

complex underlying processes and ideas. Indeed, it is essential to shed light on the current posthumous policies in the broader context of actors. Nevertheless, this research can be potentially expanded to other platforms in other parts of the world.

This topic becomes more important with the increase in social media usage worldwide and the rising number of deceased users on social media platforms. Notably, user data are still the core element for all of these platforms and their business models.

We are not able to fully predict the future of posthumous data management, however, we should keep in mind that the power balance over the data is currently being tilted to the side of the platforms. This fact has been observed by many scholars and is also evident in the presented cases. For instance, West (2019) proposes the term *data capitalism* to describe how platforms are, via the commoditisation of data, achieving the “*asymmetric redistribution of power that is weighted toward the actors who have access and the capability to make sense of information.*” However, dying is still a part of users' human life neglected in the current Western culture, and that is probably also why it has been out of sight for social media.

Death on the internet remains a rather marginalised topic with open possibilities for exploration. Future research is needed, for instance, regarding the platforms' interfaces, the relationship between *digital self* and the tendency to keep social media accounts after users' death, the ethics and transparency of data preservation, and the macro-level of posthumous data collection. Concerning that, the topics of mass posthumous data acquisition and their potential employment for profit should be in the centre of our interest, with regards to ethics. Finally, albeit there are various approaches to death in different parts of the world, we should initiate discussions about possible international or local

legal solutions to protect social media users' privacy. In all cases, interdisciplinary research is needed.

This chapter marks the end of this thesis, nevertheless, every ending is always a new beginning. In this case, many additional questions arise concerning the future of the data afterlife. Are social media truly bringing death back to our lives, or will they come to the point when they hide it again? Will digital assets, or *digital identities*, of our friends, relatives, or ancestors become a reason not to leave the platform in the future? To what extent can a new HCI approach change the way of mourning and presence of the deceased on social media platforms? To what extent are our data reflecting ourselves? Who owns them after users' death? Are data and our digital memories immortal, or are we heading to a new period of massive selection and deletion? Or, what will be the cost for newly emerging digital immortality, and how will we decide who deserves it?

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8. List of Acronyms

SNS	Social networking service
API	Application Programming Interface
HCI	Human-computer interaction
OECD	Organisation for Economic Co-operation and Development

9. List of Appendices

Appendix A	Facebook: Analysed Policies
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Appendix A

Facebook: Analysed Policies

Terms of Service												
Date of change	2004	2005	2005	2006	2006	2006	2007	2007	2008	2008	2009	2009
Termination <small>(on 19.4.2018 changed to "Account suspension or termination")</small>	-	-	3.10.	27.2.	23.10.	13.12.	24.5.	15.11.	7.6.	23.9.	1.5.	28.8.
		Does not mention	When we are notified that a user has died, we will generally, but are not obligated to, keep the user's account active under a special memorialized status for a period of time determined by us to allow other users to post and view comments.	When we are notified that a user has died, we will generally, but are not obligated to, keep the user's account active under a special memorialized status for a period of time determined by us to allow other users to post and view comments.	When we are notified that a user has died, we will generally, but are not obligated to, keep the user's account active under a special memorialized status for a period of time determined by us to allow other users to post and view comments.	When we are notified that a user has died, we will generally, but are not obligated to, keep the user's account active under a special memorialized status for a period of time determined by us to allow other users to post and view comments.	Does not mention	Does not mention				
Others	-	Does not mention	Does not mention	Does not mention	Does not mention	Does not mention	Does not mention					
Privacy policy												
Date of change	2004	2005	-	-	2006	-	-	2007	-	2008	-	-
Section	-	28.6.	-	-	23.10.	-	-	12.6.	-	26.11.	-	-
Main text												
Other	-	Does not mention	-	-	Does not mention	-	-	Does not mention	-	Does not mention	-	-

Appendix B

Facebook: Analysed Help Centre Questions

Policy questions Facebook 2004 - 2020										A							
#	Question	Q1	Q2	Q3	Q4	2004 - 2008	2009 - 2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
1	Can I choose someone who isn't my Facebook friend as my legacy contact? 158512661706709	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	-	-	-	Recommended questions added.	No change	-	-	-	No change	
2	What will happen to my Facebook account if I pass away? 103897939701143	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-	-	Implement security features to protect the account.	-	Sets and names key features of memorialisation.	Explains what is memorialised account. Account deletion information added. Provides information for family and friends about the deletion of the account. Recommended questions added.	No change	The question misses information about what happens to the groups if a deceased person was an admin.	No change	Added additional information on the legacy contacts. Changed wording for deletion of the account.	No change	
3	Choose a Legacy Contact - does not exist before 2020 (no data) 991335594313139	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-	-	-	-	-	-	-	-	-	-	Not retrievable before 2020	
4	How do I add, change or remove my legacy contact on FB? 1070665206293088	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-	-	-	-	-	The legacy contact can be selected by users over 18.	No change	-	No change	No change	No change	
5	My friend passed away and their account is no longer on Facebook. What happened? 1536234996615308	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-	-	-	-	-	No change	No change	-	-	-	No change	
6	Legacy Contacts - ment d'obituaire zprintk 2412370292913527	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-	-	-	-	-	-	-	-	-	-	Not retrievable before 2020	
7	If someone let you know they chose you as their legacy contact on Facebook but I don't want to be? 1597354833817144	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-	-	-	-	-	Legacy contact does not have to accept this position but is not obliged to do anything after memorialisation of the account.	No change	-	-	-	No change	
8	How do I request the removal of a deceased family member Facebook account? 1518259735093203	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-	-	-	-	-	Names what must contain the request to remove deceased family member account. Deletion can be requested by family members.	Better wording of the text with more compassion to survivors. Mentions need to provide document for proving authority and to provide a document proving death of user. Informs that the information provided must match the information on the account of the deceased.	No change	No change	-	No change	
9	Managing a Deceased Person's Account 275013292838654	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-	-	-	-	-	Names the options to manage memorialised accounts.	-	-	No change	-	No change	
10	I'm a legacy contact. How do I manage a memorialized account on Facebook? 828408313868251	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-	-	-	-	-	Provides information about the policy of memorialisation option and reporting of the account. Immediate family members may request the removal of the account.	No change	-	-	Added information about the option to remove the account.	No change	
11	How do I report a deceased person or an account on Facebook that needs to be memorialized? 150486848354038	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-	-	Contains information about the policy of memorialisation option and reporting of the account. Immediate family members may request the removal of the account.	-	Provides content about why Facebook memorialise accounts. Informs about the prohibition to log in to the account.	Rewording of the part about memorialisation. Provides link to another article about the memorialisation with more info.	No change	-	-	-	Beginning of the current hierarchy of questions.	No change

Explanatory notes: [Q1: What circumstances trigger development in the posthumous data policies of these social media platforms? | Q2: To what extent do the social media platforms inform the user about the terms of data preservation after the user's death? | Q3: How does the users' control over their data post-mortem change over time? | Q4: To what extent can survivors interact with the data of a deceased user over time? | Cells in table with "-" symbol means that for the corresponding time period there are no data available. | Grey number under question in "Title" column is a reference number of Facebook Help ID - all questions are retrievable using a link: <https://www.facebook.com/help/question/ID>

Policy questions Facebook 2004 - 2020

B

#	Question	Q1	Q2	Q3	Q4	2004 - 2008	2009 - 2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
12	Request to Memorialize or Remove an Account only (2 mentions (both in 2020)) 1111566045564400	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-	-	-	-	-	-	-	-	-	-	Not retrievable before 2020
13	Special request for a medically incapacitated or deceased person's account 228813257197480	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-	-	-	-	Relationship to the person asked.	No change	No change	No change	No change	No change	Better wording. Stating that they are not able to respond to reports about issues
14	How do I request content from the Facebook account of a deceased person? 123355624495297	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-	-	-	-	-	Requests considered in special cases Need of court order Need to be requested by authorized representative There is no guarantee for obtaining content, the account will be memorialized as a result. Adding contact is not possible.	No change	No change	-	-	No change
15	My friend's Facebook profile is already memorialized. Can I add a legacy contact to it? 764712386927215	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-	-	-	-	-	I ask information about the procedure.	No change	-	-	-	No change
16	How do I ask a question about a deceased person's account on Facebook? 265593773451448	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-	-	-	-	-	Facebook will process requests from verified family members or executors There is a need for verification. There is a form for asking for special requests or removal from other users.	No change	No change	-	No change	No change
17	What should I do if a person who has passed away is showing in People You May Know, ads or birthday reminders on Facebook? 186213028200223	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-	-	-	-	-	No change	No change	-	-	-	Added information about memorialization - before requesting, the family should be contacted by the platform
18	Can I add or remove a piece of content from a memorialized account? 62532257502955	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-	-	-	-	-	Nothing can be removed except from the options granted to the legacy contact. Removed only if it does not fit to the Facebook Community Standards	No change	-	-	-	No change
19	Why can't I log into a memorialized account? 1466792070075	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-	-	-	-	-	Contains a contact in case of memorialization of the account of living user. The access can be granted back, if the name matches.	No change	-	-	-	No change
20	How do I add a pinned post to a memorialized profile on Facebook? 31146695222275	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-	-	-	-	-	Using different wording - point out to the possible mistake on the Facebook side. Reminds the users about prohibited log in to another persons accounts Only possible if someone is a legacy contact.	No change	-	-	-	No change
21	Can I add a memorialized account on Facebook when I change my relationship status to Widowed? - not traceable 1466792070075	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-	-	-	-	-	-	-	-	-	-	Not retrievable before 2020

Explanatory notes: Q1: What circumstances trigger development in the posthumous data policies of these social media platforms? [Q2: To what extent do the social media platforms inform the user about the terms of data preservation after the user's death? [Q3: How does the users' control over their data post-mortem change over time? [Q4: To what extent can survivors interact with the data of a deceased user over time? [cells in table with "-" symbol means, that for the corresponding time period there are no data available. [Grey number under question in "Title" column is a reference number of Facebook Help ID - all questions are retrievable using a link: <https://www.facebook.com/help/QuestionID>

Appendix C

Twitter: Analysed Policies

Facebook News Articles			
Year	Medium	Reference	Notes
2019	Wired	Matsakis, L. (2019). Facebook Rolls Out More Features for Dead People [Online]. Retrieved November 14, 2020, from https://www.wired.com/story/facebook-rolls-out-more-features-dead-people/	<ul style="list-style-type: none"> • phase 4 • Facebook introduces tributes
2019	Tech Crunch	Shu, C. (2019). Facebook is introducing a new tributes section for memorialized accounts [Online]. Retrieved December 02, 2020, from https://techcrunch.com/2019/03/04/facebook-is-introducing-a-new-tributes-section-for-memorialized-accounts/?guccounter=1	<ul style="list-style-type: none"> • phase 4 • Introduction of the tributes section
2018	BBC	Facebook ruling: German court grants parents rights to dead daughter's account [Online]. (2018). Retrieved December 11, 2020, from https://www.bbc.com/news/world-europe-44804599	<ul style="list-style-type: none"> • phase 3 • German courts allowed parents were granted the rights to their daughters
2018	Mashable	Luz, A., & Henning, S. (2018). Facebook still needs to work on what to do when users die [Online]. Retrieved October 23, 2020, from https://mashable.com/article/facebook-memorials-can-be-improved/?europe=true	<ul style="list-style-type: none"> • phase 3 • contests the memorialisation
2017	ABC	Smiley, S. (2017). Preparing for digital death: What do you know about the fate of your online accounts? [Online]. Retrieved November 14, 2020, from https://www.abc.net.au/news/2017-10-04/preparing-for-your-digital-death/9013420	<ul style="list-style-type: none"> • phase 3 • informs that it is difficult to understand terms and condition related to the digital legacy • informs about LinkedIn - it will terminate the account immediately
2017	Time	Sanburn, J. (2017). 10 Years After Virginia Tech, It's Easier Than Ever to Buy a Gun [Online]. Retrieved December 10, 2020, from https://time.com/4741270/virginia-tech-10-year-anniversary-guns/	<ul style="list-style-type: none"> • phase 3 • discusses the gun laws regarding the aftermath of Virginia Tech shootings

2017	Reuters	Sheahan, M. (2017). Parents have no right to dead child's Facebook account, German court says [Online]. Retrieved December 01, 2020, from https://www.reuters.com/article/us-germany-facebook-privacy-idUSKBN18R1PI	<ul style="list-style-type: none"> • phase 3 • Parents in Germany are not allowed to access
2016	BBC	Ambrosino, B. (2016). Facebook is a growing and unstoppable digital graveyard [Online]. Retrieved September 12, 2020, from https://www.bbc.com/future/article/20160313-the-unstoppable-rise-of-the-facebook-dead	<ul style="list-style-type: none"> • phase 3 • informs about legacy contacts
2016	The Times of Israel	Facebook mistakenly declares 2 million users 'dead'. (2016, Nov 12). The Times of Israel Retrieved from https://www-proquest-com.ep.fjernadgang.kb.dk/newspapers/facebook-mistakenly-declares-2-million-users-dead/docview/1838523516/se-2?accountid=13607	<ul style="list-style-type: none"> • phase 3 • Facebook accidentally memorialised 2 million accounts, along with Mark Zuckerberg's profile
2015	Time	Linshi, J. (2015). Here's What Happens to Your Facebook Account After You Die [Online]. Retrieved November 29, 2020, from https://time.com/3706807/facebook-death-legacy/	<ul style="list-style-type: none"> • phase 3 • reports about legacy contacts and the posthumous policy of Facebook
2015	USA Today	Leger, D. L. (2015). New Facebook policy allows social media immortality [Online]. Retrieved December 03, 2020, from https://eu.usatoday.com/story/tech/2015/02/12/facebook-policy-change-allows-one-final-post-after-death/23184757/	<ul style="list-style-type: none"> • phase 3 • informs about legacy contacts, with reference to immortality • Fewer than a dozen states have laws governing authority over digital assets, according to the National Conference of Commissioners on Uniform State Laws. • informs about a poll that most of the adults are concerned about what happens to their digital presence after they die

2015	The Washington Post	<p>Tsukayama, H. (2015). Facebook will now let you manage what happens to your account after you die [Online]. Retrieved December 03, 2020, from https://www.washingtonpost.com/news/tech-switch/wp/2015/02/12/facebook-will-now-let-you-manage-what-happens-to-your-account-after-you-die/</p>	<ul style="list-style-type: none"> • phase 3 • the article introduces legacy contacts • mentioning memorialization • Vanessa Callison-Burch, a Facebook product manager. "There were a lot of asks about features we could add," she said. "People wanted the ability to respond to new friend requests, and do more with the account going forward." • Facebook now offers 3 options: 1) do nothing - the account can be memorialized by other users; 2) ask for deletion; 3) designate a legacy contact to manage the account • the legacy contact must be a Facebook user, he/she will be able to: accept friend requests; pin posts to the top of the profile page; change the late person's profile picture or cover photo • these types of notifications will be suppressed • Facebook users can specify whether they would like the legacy contact to access a downloadable archive of Facebook information after death- messages are not included • the legacy contact might be notified or not - depends on the user (it works the same when changing it) • people who designate the legacy contact will be reminded each year about their decision • the author points out the necessity to keep in mind country specificities regarding death
2015	The Verge	<p>Kastrenakes, J. (2015). Facebook now lets you choose who controls your account after you die [Online]. Retrieved November 13, 2020, from https://www.theverge.com/2015/2/12/8025117/facebook-account-after-death</p>	<ul style="list-style-type: none"> • phase 3 • informs about legacy contacts
2014	The Guardian	<p>Ask, J. (2014). What happens to your Facebook account when you die? [Online]. Retrieved December 03, 2020, from https://www.theguardian.com/technology/askjack/2014/oct/30/what-happens-to-your-facebook-account-when-you-or-a-loved-one-dies</p>	<ul style="list-style-type: none"> • phase 2 • article discusses the options to memorialise their account or delete it • the author emphasizes that there is a lack of communication between Facebook and its users • the author mentions that Facebook does not want to take the risk of memorialization still active accounts • the article points out the long waiting until memorialisation, which might get worse with growing number of older users • it mentions the risks when account remains active - it can be hacked and used for spam etc. • when the account is to be deleted, there is a lengthy way to get the content: "The application to obtain account content is a lengthy process and will require you to obtain a court order." • if the account is memorialized, Facebook will: allow noone to log in; nobody can add, change or delete content from the account (also containing friends); automated activities are stopped; the memorialised account does not appear in public spaces and search; • the article says that it is prohibited to log in to other person's account • it names the third-party services for managing digital legacy

2013	The Wall Street Journal	Fowler, G. A. (2013). Life and Death Online: Who Controls a Digital Legacy? [Online]. Retrieved December 03, 2020, from https://www.wsj.com/articles/SB10001424127887324677204578188220364231346	<ul style="list-style-type: none"> • phase 2 • discusses the issue of ownership of the digital data after user's death
2013	The Huffington Post	Facebook Dead' Prank: New Memorialization Page Can Lock Living Friend's Account [Online]. (2013). Retrieved December 03, 2020, from https://www.huffpost.com/entry/facebook-dead-prank-death-memorialization-page-lock-account_n_2424976?guce_referrer=aHR0cHM6Ly9lbi53aWtpcGVkaWEub3JnLw&guce_referrer_sig=AQAAADR1X4ro1JsJA4UTn1xLQttfEtlf8QUmhq97ZKOGMpp_76VRc9tZJBoTbIHN_86N3NTJasGuj6iBZgVv453ebzfl9UMRkos4u2iqdf10DKhnt1qZ2t7_nO2mlTHdOnqMR5LU4MLzc-ngMhP_Q8rK-z0hjiCgKMbbxagIS2C_1oF-&gucounter=2	<ul style="list-style-type: none"> • phase 2 • referring to the practice of "Facebook Dead" prank - memorialization of accounts of people still alive
2013	The Buzzfeed	Notopoulos, K. (2013). How Almost Anyone Can Take You Off Facebook (And Lock You Out) [Online]. Retrieved December 17, 2020, from https://www.buzzfeednews.com/article/katienotopoulos/how-to-murder-your-friends-on-facebook-in-2-easy-s	<ul style="list-style-type: none"> • phase 2 • BuzzFeed article comments on how easy it is to memorialized an account of somebody else and how hard it is to retrieve it
2012	The Wall Street Journal	Eder, S. (2012, Feb 10). Deaths pose test for facebook; as grieving parents struggle to control kids' accounts, lawmakers take notice. Wall Street Journal (Online) Retrieved from https://www-proquest-com.ep.fjernadgang.kb.dk/newspapers/deaths-pose-test-facebook-as-grieving-parents/docview/920885600/se-2?accountid=13607	<ul style="list-style-type: none"> • phase 2 • reports about the case of German parents demanding their daughter's password after she committed suicide

2012	The Daily Mail Online	<p>Smith, A. (2012). Facebook banned me from my dead daughter's page... to protect her privacy: Mother's anguish after teenager dies of brain tumour [Online]. Retrieved December 04, 2020, from https://www.dailymail.co.uk/news/article-2110019/Facebook-banned-dead-daughters-page-Mothers-anguish-locked-brain-tumour-teenagers-site-web-giant.html</p>	<ul style="list-style-type: none"> • phase 2 • Facebook prevented mother to log in into an account of her deceased daughter • They told the mother that it could endanger her daughter's privacy • due to her daughter's brain tumor, she used to help her with reading messages • she was also removing spam messages on her account after she died • since the page was memorialised, a Facebook group emerged with people protesting and asking to have the page reinstated • A Facebook spokesman said: 'When an account is memorialised then certain profile sections and features are hidden from view to protect the privacy of the deceased. 'For example, recent statuses are removed, groups the person has joined are hidden, and the person's privacy settings are changed to "Only Friends" so that only his/her Friends can see the Profile. 'Facebook's policy is not to provide login information for an account to anyone but the account owner to protect their privacy. 'This means that when we receive a report that a user is deceased we memorialize the account, which restricts profile and search privacy to friends only, but leaves the profile up so that friends and family can leave posts in remembrance. 'However, we do honor requests from close family members to deactivate the account, which removes the profile and associated information from the site.'
2010	The New York Times	<p>Wortham, J. (2020). As Facebook Users Die, Ghosts Reach Out [Online]. Retrieved December 03, 2020, from https://www.nytimes.com/2010/07/18/technology/18death.html</p>	<ul style="list-style-type: none"> • phase 2 • the author is mentioning the friend recommendation feature • "It's a very sensitive topic," said Meredith Chin, a company spokeswoman, "and, of course, seeing deceased friends pop up can be painful." Given the site's size, "and people passing away every day, we're never going to be perfect at catching it," she added. • at the beginning, the social media site was mainly for younger generation, but now 65+ are massively adopting it • some people said that they want to remember the deceased • in the article, the author claims that in early stages, Facebook used to delete the accounts of deceased users • the article refers to the Virginia Tech shooting in 2007 when members begged the company to allow them to commemorate the victims • now the pages can be memorialized, e.g. covert into tribute pages and no longer appear in search results, but friends can still interact with the page • it stresses the need for automatic recognition of which user is deceased • family member or a friend needs to report that fact by a form and providing a proof of death • the author points out that many profiles remains unreported • as said in the article, Facebook is trying to find ways to detect these users by repeatedly posted keywords, such as "Rest in peace" or "I miss you" but there is still a chance for a mistake • the author mentions an example with the problem with proof of death • the example: Mr. Thulbourn's friend found an obituary mentioning the same name and submitted it to Facebook, the platform then locked the account. Mr Thulbourn wasn't able to get the account back, since there was no straight way of doing so, thus, he decided to create a webpage that he is not dead and posted it on Twitter. Then it got recognised by Facebook and he got his account back. • the other problem occurs when a child dies, the account is memorialised and parents cannot become friends with it or find it in the search
2009	Mashable	<p>Schroeder, S. (2009). Facebook: All Your Stuff is Ours, Even if You Quit [Online]. Retrieved November 13, 2020, from https://mashable.com/2009/02/16/facebook-tos-privacy/?europe=true</p>	<ul style="list-style-type: none"> • phase 2 • the article reports about suspicious Facebook privacy policy and their power over users data • expert says that it is because the user information ends up outside of Facebook's direct control due to many servers

2009	The Telegraph	Moore, M. (2009). Facebook introduces 'memorial' pages to prevent alerts about dead members [Online]. Retrieved December 10, 2020, from https://www.telegraph.co.uk/technology/facebook/6445152/Facebook-introduces-memorial-pages-to-prevent-alerts-about-dead-members.html	<ul style="list-style-type: none"> • phase 2 • Facebook introduces a feature allowing users profiles to be memorialised after death • after complaints that users were being urged to get in touch with dead friends • bereaved relatives and friends can contact Facebook so the profiles convert into commemorative pages, with any sensitive information removed • the memorialised account will be only visible for friends of the deceased • head of security - "we try to protect the deceased's privacy by removing sensitive information such as contact information and status updates" • memorializing an account prevents anyone from logging into it, while still enables interactions with friends • reaction on the new feature, when the users could get reconnected with old friends that were suggested to them
2009	The Guardian	Moore, M. (2009). Facebook introduces 'memorial' pages to prevent alerts about dead members [Online]. Retrieved December 03, 2020, from https://www.telegraph.co.uk/technology/facebook/6445152/Facebook-introduces-memorial-pages-to-prevent-alerts-about-dead-members.html	<ul style="list-style-type: none"> • phase 2 • Facebook introduces a feature allowing users profiles to be memorialised after death • family members can memorialise the account to remove sensitive information such as updates and contacts • triggered by users complaining about dead friends or relatives through "suggestions feature" • The idea for memorialising users profile pages came after Kelly's best friend, a fellow Facebook employee, died in a motorbike accident
2007	Reuters	Pelofsky, J. (2007). Facebook becomes bulletin board for Virginia Tech [Online]. Retrieved December 17, 2020, from https://www.reuters.com/article/us-usa-crime-shootings-facebook-idUSN1742895920070417	<ul style="list-style-type: none"> • phase 1 • discusses bereavement of Virginia Tech survivors on Facebook
2007	CBC News	Virginia shootings spark internet tributes, debate [Online]. (2007). Retrieved December 03, 2020, from https://www.cbc.ca/news/world/virginia-shootings-spark-internet-tributes-debate-1.635253	<ul style="list-style-type: none"> • phase 1 • information about Virginia Tech shootings and Facebook grief
2007	USA Today	Hortobagyi, M. (2007). Slain students' pages to stay on Facebook [Online]. Retrieved December 17, 2020, from https://usatoday30.usatoday.com/tech/webguide/internetlife/2007-05-08-facebook-vatech_N.htm	<ul style="list-style-type: none"> • phase 1 • Facebook officials who planned to remove the pages of students killed the last month at Virginia Tech said Tuesday they will change their policy to allow memorials

Appendix D

Facebook: Analysed Press Releases

Facebook News Releases		
Year	Reference	Notes
2009	Facebook Announces Privacy Improvements in Response to Recommendations by Canadian Privacy Commissioner [Online]. (2009). Retrieved December 10, 2020, from https://about.fb.com/news/2009/08/facebook-announces-privacy-improvements-in-response-to-recommendations-by-canadian-privacy-commissioner/	<ul style="list-style-type: none"> • Facebook wants to provide greater control over information shared with third-party applications, and revisions to the privacy policy. • Based on the report on Facebook's privacy policies and controls by the Office of the Privacy Commissioner of Canada. • Lead to a revision in the horizon of 12 months concerning the better description of different practices, but namely account memorialization for deceased users and the distinction between account deactivation and deletion. • Encouraging users to review the privacy settings. • Increasing the understanding and control a user has over the information accessed by third-party applications.
2014	Remembering Our Loved Ones [Online]. (2014). Retrieved December 10, 2020, from https://about.fb.com/news/2014/02/remembering-our-loved-ones/	<ul style="list-style-type: none"> • Facebook announces restriction of the visibility of the memorialized accounts to friends-only. It will maintain the visibility of a person's content as-is (to be consistent with the deceased person's expectations of privacy). • Introducing the ""Look Back"" video based on John Berlin's request to create this video for his son, who has passed away".
2015	Adding a Legacy Contact [Online]. (2015). Retrieved December 10, 2020, from https://about.fb.com/news/2015/02/adding-a-legacy-contact/	<ul style="list-style-type: none"> • Announcement of the legacy contact
2017	Hard Questions: What Should Happen to People's Online Identity When They Die? [Online]. (2017). Retrieved December 10, 2020, from https://about.fb.com/news/2017/08/what-should-happen-to-online-identity/	<ul style="list-style-type: none"> • Where the law permits, we try to respect the wishes of those who have passed away. Sometimes, however, we simply don't know what the person would have wanted." - states that memorialisation is the default option
2019	Making It Easier to Honor a Loved One on Facebook After They Pass Away [Online]. (2019). Retrieved December 10, 2020, from https://about.fb.com/news/2019/04/updates-to-memorialization/	<ul style="list-style-type: none"> • Introduction of New Tributes Section. • Separate section on the memorialised profiles where friends and family can share posts. • While preserving the original timeline of their loved ones. • Additional controls for legacy contacts.

Terms of Service													
Date of change	2013	2014	2015	2016	2016	2017	2018	2019	2020	2020	2020	B	
Section	-	8.9.	18.5.	27.6.	-	30.9.	25.5.	-	1.1.	18.6.	16.12.		
Terms of use	-	You may and your legal agreement with Twitter at any time for any reason by deactivating your accounts and discontinuing your use of the Services. You do not need to specifically inform Twitter when you stop using the Services. If you stop using the Services without deactivating your accounts, your accounts may be deactivated due to prolonged inactivity under our Inactive Account Policy.	You may and your legal agreement with Twitter at any time for any reason by deactivating your accounts and discontinuing your use of the Services. You do not need to specifically inform Twitter when you stop using the Services. If you stop using the Services without deactivating your accounts, your accounts may be deactivated due to prolonged inactivity under our Inactive Account Policy.	You may and your legal agreement with Twitter at any time for any reason by deactivating your accounts and discontinuing your use of the Services. You do not need to specifically inform Twitter when you stop using the Services. If you stop using the Services without deactivating your accounts, your accounts may be deactivated due to prolonged inactivity under our Inactive Account Policy.	-	(if) your account should be removed due to prolonged inactivity.	(if) your account should be removed due to prolonged inactivity.	(if) your account should be removed due to prolonged inactivity.	USA: (if) your account should be removed due to prolonged inactivity. EU: (iv) your account should be removed due to prolonged inactivity.	(v) your account should be removed due to prolonged inactivity.	-		
Privacy Policy													
Date of change	2013	2014	2015	2016	2016	2017	2018	2019	2020	2020	2020		
Section	21.10.	8.9.	18.5.	-	-	30.9.	18.6.	25.5.	1.1.	18.6.	29.8.		
Main text	-	Does not mention	Does not mention	-	-	Does not mention	Does not mention	-	Does not mention	Does not mention	Does not mention		
Help Center													
Accessible	2013	2014	2015	2016	2016	2017	2018	2019	2020	2020	2020		
Section	-	-	-	-	-	-	-	-	-	-	-		
How to Contact Twitter About a Deceased User? (In 2015 question changed to: How to contact Twitter about a deceased family member's account?)	-	Add: Reason of certain imagery of evad ones. Twitter will remove imagery of deceased individuals in certain circumstances. Immediate family members and other authorized individuals may request the removal of images or video of deceased individuals, from when critical injury occurs to the moments before or after death, by sending an email to privacy@twitter.com .	-	-	-	-	After you submit your request, we will email you with instructions for providing more details, including information about the deceased, a copy of your ID, and a copy of the deceased's death certificate. This is a necessary step to prevent false and/or unauthorized reports. Be assured that this information will remain confidential and will be deleted once we've reviewed it.	-	After you submit your request, we will email you with instructions for providing more details, including information about the deceased, a copy of your ID, and a copy of the deceased's death certificate. This is a necessary step to prevent false and/or unauthorized reports. Be assured that this information will remain confidential and will be deleted once we've reviewed it.	-	-	After you submit your request, we will email you with instructions for providing more details, including information about the deceased, a copy of your ID, and a copy of the deceased's death certificate. This is a necessary step to prevent false and/or unauthorized reports. Be assured that this information will remain confidential and will be removed once we've reviewed it.	
How to contact Twitter about media concerning a deceased family member? (In 2019 question changed to: Deceased individual's)	-	...After you submit your request, we will email you with instructions for providing more information, including information about the deceased, a copy of your ID, and copy of the deceased's death certificate.	In the event of the death of a Twitter user, we can work with a person authorized to act on the behalf of the estate or with a verified immediate family member of the deceased to have an account deactivated.	In the event of the death of a Twitter user, we can work with a person authorized to act on the behalf of the estate or with a verified immediate family member of the deceased to have an account deactivated.	-	...After you submit your request, we will email you with instructions for providing more information, including information about the deceased, a copy of your ID, and copy of the deceased's death certificate.	In the event of the death of a Twitter user, we can work with a person authorized to act on the behalf of the estate or with a verified immediate family member of the deceased to have an account deactivated.	-	In order to respect the wishes of loved ones, Twitter will remove imagery of deceased individuals in certain circumstances. Immediate family members and other authorized individuals may request the removal of images or video of deceased individuals...	Sharing images or videos of a deceased individual can cause serious distress to the deceased's family and can also negatively impact the well-being of others who view this content. Out of respect for the deceased and those impacted by their death, as well as to decrease the impact of unintended exposure to graphic media, we may ask you to remove images and videos that depict the death of an identifiable person.	-	Sharing images or videos of a deceased individual can cause serious distress to the deceased's family and can also negatively impact the well-being of others who view this content. Out of respect for the deceased and those impacted by their death, as well as to decrease the impact of unintended exposure to graphic media, we may ask you to remove images and videos that depict the death of an identifiable person.	

Appendix F

Twitter: Analysed News Articles

Twitter News Articles			
Year	Medium	Reference	Notes
2020	The Financial Times	SimonKuper. (2020, May 23). Finally, we are paying tribute to 'ordinary' lives [europe region]. Financial Times Retrieved from https://www.proquest-com.ep.fjernadgang.kb.dk/newspapers/finally-we-are-paying-tribute-ordinary-lives/docview/2415608333/se-2?accountid=13607	<ul style="list-style-type: none"> discusses the social media immortality in relation to the COVID-19 and beyond
2020	Forbes	Collins, B. (2020). A Year On, Twitter Still Doesn't Know How To Deal With Its Dead [Online]. Retrieved December 10, 2020, from https://www.forbes.com/sites/barrycollins/2020/11/15/a-year-on-twitter-still-doesnt-know-how-to-deal-with-its-dead/	<ul style="list-style-type: none"> reports that Twitter still has not resolved it's a posthumous policy in relation to the inactive account deletion policy
2020	CNN	Johnson, L. (2020). Twitter's most liked tweet of all time now belongs to Chadwick Boseman [Online]. Retrieved December 10, 2020, from https://edition.cnn.com/2020/08/29/us/most-liked-tweet-of-all-time-chadwick-boseman-trnd/index.html	<ul style="list-style-type: none"> mentions the most liked tweet in the history of Twitter - belonging to Chadwick Boseman
2020	Newsweek	Schonfeld, Z. (2015). Dead People Should Stop Tweeting [Online]. Retrieved December 10, 2020, from https://www.newsweek.com/handbook-recently-deceased-346184	<ul style="list-style-type: none"> discusses the posthumous tweets
2020	The Guardian	Gabbatt, A. (2020). Herman Cain 'tweets' two weeks after his death to attack Democrats [Online]. Retrieved December 10, 2020, from https://www.theguardian.com/us-news/2020/aug/13/herman-cain-twitter-democrats-joe-biden	<ul style="list-style-type: none"> reports about posthumous tweets by Herman Cain and his posthumous attack on the Democratic party
2020	The Guardian	Pulver, A. (2020). Final tweet from Chadwick Boseman's account is most liked ever on Twitter [Online]. Retrieved December 10, 2020, from https://www.theguardian.com/film/2020/aug/31/final-tweet-from-chadwick-boseman-account-most-liked-ever-on-twitter	<ul style="list-style-type: none"> reports about Chadwick Boseman's posthumous tweet becoming the most famous tweet in history

2019	The Verge	Welch, C. (2019). Twitter halts plan to remove inactive accounts until it can memorialize dead users [Online]. Retrieved December 10, 2020, from https://www.theverge.com/2019/11/27/20986084/twitter-inactive-accounts-username-memorialize-deceased-users-not-removing	<ul style="list-style-type: none"> • Twitter decided to halt to remove inactive accounts and tries to find ways for memorialisation
2019	MIT Technology Review	Jee, C. (2019). Twitter has to figure out what to do with dead people [Online]. In . Retrieved from https://www.technologyreview.com/2019/11/28/131812/twitter-has-to-finally-figure-out-what-to-do-with-dead-peoples-accounts/	<ul style="list-style-type: none"> • discuss Twitter policy about the deletion of inactive twitter accounts
2019	Tech Crunch	Darrell, E. (2019). Twitter to add a way to 'memorialize' accounts for deceased users before removing inactive ones [Online]. Retrieved December 10, 2020, from https://techcrunch.com/2019/11/27/twitter-to-add-a-way-to-memorialize-accounts-for-deceased-users-before-removing-inactive-ones	<ul style="list-style-type: none"> • announce Twitter's decision to memorialise accounts
2019	NPR	Zialcita, P. (2019). Following Backlash, Twitter Offers to 'Memorialize' Accounts Of The Deceased [Online]. Retrieved December 10, 2020, from https://www.npr.org/2019/11/27/783385093/following-backlash-twitter-offers-to-memorialize-accounts-of-the-deceased? t=1608161511791	<ul style="list-style-type: none"> • reports about Twitter's decision to memorialise accounts and the aftermath
2019	The Washington Post	Kelly, H. (2019). Twitter wanted to be the town square. Now it's also grappling with being a cemetery. [Online]. Retrieved December 10, 2020, from https://www.washingtonpost.com/technology/2019/12/06/twitter-wanted-be-town-square-now-its-also-grappling-with-being-cemetery/	<ul style="list-style-type: none"> • informs about the outrage over the inactive-account policy • asserts that Twitter struggle with inactive accounts • mentions the Twitter posthumous policies

2017	ib Times	Owoseje, T. (2017). 'Are you alive?' Shyla Stylez fans freak out as dead porn star's Twitter continues to post [Online]. Retrieved December 10, 2020, from https://www.ibtimes.co.uk/are-you-alive-shyla-stylez-fans-freak-out-dead-porn-stars-twitter-continues-post-1647131	<ul style="list-style-type: none"> • reports about the dead porn star who posthumously tweeted • mentioned Twitter's posthumous policies of deactivation • the tweets were automated horoscopes
2016	The Washington Post	Ohlheiser, A. (2016). A question we never thought we would have to ask after someone dies [Online]. Retrieved December 10, 2020, from https://www.washingtonpost.com/news/the-intersect/wp/2016/05/20/what-happens-when-a-deceased-persons-twitter-account-starts-posting-spam/	<ul style="list-style-type: none"> • tells a story of David Carr, deceased New York Times columnist, who's account was hacked • another story is about Roger Ebert, who left information on how to use his Twitter account after his death • discusses options of Twitter and other social media
2016	Irish Times	O'Sullivan, V. (2016, Oct 29). Digital life after death: When facebook sent out birthday notices to vic O'sullivan's sister's friends and family, it was a reminder that it was time to lay her digital footprint to rest. Irish Times Retrieved from https://www-proquest-com.ep.fjernadgang.kb.dk/newspapers/digital-life-after-death/docview/1833197546/section-2?accountid=13607	<ul style="list-style-type: none"> • informs about Twitter's policy of removing deceased users upon a request
2014	Daily Herald	Thomson, A. (2014, Aug 16). Twitter reviews policies after robin williams's daughter abused. Daily Herald Retrieved from https://www-proquest-com.ep.fjernadgang.kb.dk/newspapers/twitter-reviews-policies-after-robin-williams/docview/1554293216/section-2?accountid=13607	<ul style="list-style-type: none"> • discusses Twitter's actions in response to Robin Williams's death
2013	The Variety	Khatchaturian, M. (2013). The Memory of Cory Monteith Lives On (and On) via Social Media [Online]. Retrieved December 10, 2020, from https://variety.com/2013/digital/news/the-memory-of-cory-monteith-lives-on-and-on-on-social-media-1200569547/	<ul style="list-style-type: none"> • tells a story about Cory Monteith and the campaign to prevent his account from deletion

2013	The Independent	Usborne, S. (2013). Continue tweeting after death with LivesOn [Online]. In The Independent. Retrieved from https://www.independent.co.uk/life-style/gadgets-and-tech/news/continue-tweeting-after-death-liveson-8521641.html	<ul style="list-style-type: none"> • presents a posthumous service allowing to Tweet posthumously
2012	Wall Street Journal	Rooney, B. (2012, May 24). A way to post and tweet from beyond the grave. Wall Street Journal (Online) Retrieved from https://www-proquest-com.ep.fjernadgang.kb.dk/newspapers/way-post-tweet-beyond-grave/docview/1015434716/se-2?accountid=136074	<ul style="list-style-type: none"> • introduces a posthumous posting service • discussing posthumous services
2010	ArsTechnika	Death and social media: what happens to your life online? [Online]. (2010). Retrieved December 10, 2020, from https://arstechnica.com/tech-policy/2010/03/death-and-social-media-what-happens-to-your-life-online/	<ul style="list-style-type: none"> • informs about a Twitter policy of deleting accounts if they are reported

Appendix G

LinkedIn: Analysed Policies

User Agreement										A
Date of change Section	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
User Agreement	-	-	-	1.3.	-	14.11.	22.1.	-	11.6.2020	-
	-	-	-	Does not mention	-	Does not mention	Does not mention	-	Does not mention	-
Privacy policy										
Date of change Section	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Main text	-	-	-	14.7.	-	14.11.	22.1.	24.3.	16.6.	-
	-	-	-	Does not mention	-	Does not mention	Does not mention	Memorializing Accounts If we learn that a User is deceased, we may memorialize the User's account. In these cases we may restrict profile access, remove messaging functionality, and close an account if we receive a formal request from the User's next of kin or other proper legal request to do so.	Memorializing Accounts If we learn that a User is deceased, we may memorialize the User's account. In these cases we may restrict profile access, remove messaging functionality, and close an account if we receive a formal request from the User's next of kin or other proper legal request to do so.	-

User Agreement										B
Date of change	2013	2014	2014	2015	2016	2017	2018	2020	2020	
Section	12.9.	26.3.	23.10.	-	-	-	8.5.	11.8.	-	
User Agreement	Does not mention	Does not mention	Does not mention	-	-	-	Does not mention	Does not mention	-	
Privacy policy										
Date of change	2013	2014	2014	2015	2016	2017	2018	2020	2020	
Section	12.9.	26.3.	23.10.	-	-	7.6.	8.5.	6.1.	11.8.	
Main text	Does not mention	Does not mention	Does not mention	-	-	Does not mention	Does not mention	Does not mention	Does not mention	

Appendix H

LinkedIn: Analysed News Articles

LinkedIn News Articles			
Year	Medium	Reference	Notes
2020	Digital Information World	Microsoft's LinkedIn is Developing A New Feature That Would Allow Users To Memorialize Profiles Of Deceased Individuals [Online]. (2020). Retrieved December 10, 2020, from https://www.digitalinformationworld.com/2020/08/microsoft-s-linkedin-is-developing-a-new-feature-that-would-allow-the-users-memorialize-profiles-of-deceased-individuals.html	<ul style="list-style-type: none"> • informs about LinkedIn and its intentions to create a new feature to memorialise accounts • the feature should hold a tribute to user's professional legacy
2019	FL	Warwick-Ching, L. (2019). From facebook and iTunes to cryptocurrencies — what happens to your digital assets when you die? FT.Com, Retrieved from https://www-proquest-com.ep.fjernadgang.kb.dk/trade-journals/facebook-itunes-cryptocurrencies-what-happens/docview/2316923401/se-2?accountid=13607	<ul style="list-style-type: none"> • mentions that online assets, such as LinkedIn, Twitter, and Facebook include "social value"
2019	The Wall Street Journal	Summerville, A. (2019, Aug 20). There's life after death online; LinkedIn is latest exploring how to let relatives keep profiles of deceased family members alive. Wall Street Journal (Online) Retrieved from https://www-proquest-com.ep.fjernadgang.kb.dk/newspapers/theres-life-after-death-online-linkedin-is-latest/docview/2275987309/se-2?accountid=13607	<ul style="list-style-type: none"> • suggests that LinkedIn is the latest company to accommodate to dying users and survivors • the memorialise feature comes in response to extensive requests, said by LinkedIn spokesman • people found different options to deal with the deceased users on LinkedIn, such as posting it to the description or as the last job title • informs about the LinkedIn's sidebar "people also viewed": since LinkedIn offers to find similar profiles, this feature can link to other deceased user profiles
2014	Sunday Telegraph	Shin, L. (2014, May 25). PREPARING FOR DEATH IN A DIGITAL AGE. Sunday Telegraph Retrieved from https://www-proquest-com.ep.fjernadgang.kb.dk/newspapers/preparing-death-digital-age/docview/1528289974/se-2?accountid=13607	<ul style="list-style-type: none"> • discusses permanent deletion of accounts that might be part of the terms of use • mentions the US, where some of the states have laws in place to handle digital assets

2010	London Evening Standard	Trew, B. (2010, Oct 22). Ghosts in the machine: Even if someone dies, their internet avatar lives on. and for those left behind, this online a erlife can be both haunting and comforting. by bel trew. London Evening Standard Retrieved from https://www-proquest-com.ep.fjernadgang.kb.dk/newspapers/ghosts-machine/docview/759594376/se-2?accountid=13607	<ul style="list-style-type: none"> • informs about the fact that social media such as LinkedIn or Twitter does not know how many deceased accounts their network contains • refers to MyDeadSpace created for spotting dead users on MySpace • referring to the second death when deleting the account of deceased from the social network
2010	The Age	Cincotta, K. (2010, Jun 03). Ghosts in the machine: Feature story. The Age Retrieved from https://www-proquest-com.ep.fjernadgang.kb.dk/newspapers/ghosts-machine/docview/356801183/se-2?accountid=13607	<ul style="list-style-type: none"> • mentions the services keeping the digital legacy • discusses the sense of value in posthumous information • names options for password storages and the problem of having passwords mentioned in the will
2008	The Guardian	Lee, D. (2008, Aug 07). Technology: There's life after death if you're online: Social networking sites are having to devise policies to deal with the death of a user - and some are getting it more right than others. The Guardian Retrieved from https://www-proquest-com.ep.fjernadgang.kb.dk/newspapers/technology-theres-life-after-death-if-youre/docview/244279858/se-2?accountid=13607	<ul style="list-style-type: none"> • mentions a LinkedIn policy to deal with dead users - they will be deleted upon family's request • "We first of all offer our condolences and then proceed to close their account so their details are no longer visible to anyone," says Cristina Hoole of LinkedIn. "Our focus is on making this process very simple for the people left behind and therefore ensure this is dealt with immediately." • if applied by family member, the process of proving death is rather simple: the platforms look at the allegedly deceased user account activity and the interactions with them • it's not a written policy but a process that emerged over time • informs about memorialisation of the accounts - e.g., freezing them in time to not being spammed • informs about a service OpenID providing one single space for login details for various sites - if the service is notified, they can inform other services linked to their's