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Demographics and Temporal Patterns of Communication

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Vienna, 2017

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Abstract

The present thesis examines communication on online memorials in the German speaking area. The theoretical background is placed interdisciplinary in the fields of Sociology, Psychology and Communication Science.

The question aims to extract the attributes that lead to the creation of a memorial profile. Who are online memorials created for in the German speaking area? What content can be found on these profiles and how are patterns of communication over time?

To this purpose 500 profiles on a German memorial website were examined. In particular sociodemographics, as well as the content on these profiles were in the center of investigation. In addition to that the number of posted messages in the form of remembrance candles, as well as their date stamps were collected with the data.

Data was collected through content analysis and analysed by a regression analysis. Results indicate significant findings concerning the factors that influence communication activity on profiles in the German speaking area.

In addition to that patterns of communication in the form of postings over the minimal time span of one year were examined. Examination regarded dates of individual importance, such as birthday, day of death, as well as the general calendar year.

Keywords

Online Memorials, Transcorporeal Communication, Continuing Bonds

Zusammenfassung

Die vorliegende Arbeit untersucht Kommunikation auf online Gedenkseiten im deutschsprachigen Raum. Die theoretische Ansiedelung ist hierbei interdisziplinär in den Feldern der Soziologie, Psychologie und Kommunikationswissenschaft.

Die Fragestellung bezieht sich auf die Herausarbeitung der Attribute, die zur Erstellung einer Gedenkseite führen. Für wen werden Gedenkseiten im deutschsprachigen Raum erstellt? Welche Inhalte sind auf diesen Profilen zu finden und wie Verhält sich die Kommunikation auf diesen Seiten über die Zeit hinweg?

Zu diesem Zweck wurden in dieser Arbeit 500 Profile eines deutschsprachigen Gedenkseitenanbieters untersucht. Insbesondere standen dabei die soziodemographischen Daten der Verstorbenen, sowie die Profilinhalte im Zentrum der Untersuchung. Ausserdem wurde neben der Anzahl der geposteten Nachrichten in Form von Gedenkkerzen, ausserdem dessen zeitlicher Verlauf erhoben.

Die mittels Inhaltsanalyse gewonnenen Daten wurden dann anschließend anhand einer Regressionsanalyse ausgewertet. Diese zeigte verschiedene signifikante Ergebnisse bezüglich der Faktoren, welche das Postingverhalten auf diesen Seiten im deutschsprachigen Raum beeinflussen.

Des weiteren wurde das Postingsverhalten der Profilbesucher über einen Zeitraum von minimal einem Jahr auf ihre zeitlichen Muster hin untersucht. Ins besondere wurden hier individuell relevante Daten, wie Geburtstag und Sterbetag, in den Fokus der Untersuchung gestellt. Zusätzlich wurde ausserdem das Postingverhalten in Bezug auf das allgemeine Kalenderjahr betrachtet.

Schlagwörter

Online Gedenkseiten, Transcorporeal Communication, Continuing Bonds

**When I die, I'm gonna
provide free wifi for everyone
near my grave so that people
will visit me more often**

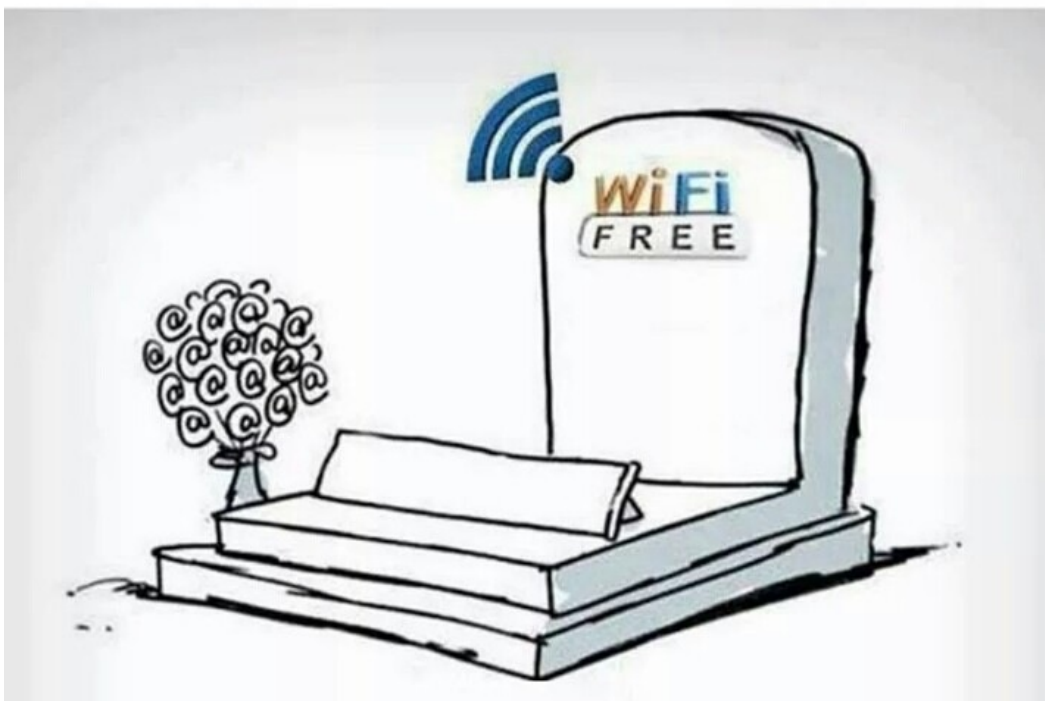


Figure1: Source: me.me

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1. Introduction

“The Net is a metaphysical space that mimics our metaphysical experience of the dead as being neither here nor there but somehow everywhere yet nowhere in particular” (Gibson, 2006: 72).

The advance of technology of the previous years has had an enormous impact on how people communicate. Especially social network sites "have rapidly evolved into extensions of our human bodies, opening up new possibilities for us to be with another in the digital world" (Kasket, 2012: 62). But it's not only daily communication that has changed and shifted and thus now channeled online. An example is grieving. "The online communities people are participating in are now starting to grieve in ways that mimic our offline practices" (Egnoto et al., 2014: 284). But offline practices in that context, such as grieving rituals of mourning, are not only mimicked but have also "evolved with changes of discursive surfaces and communication media, and because of the fracture of community as a geographically situated experience" (Carroll & Landry, 2010: 341).

When the user of a social media platform dies, his or her profile (if no interference ? to take it down by another person) will still be present. This circumstance leaves us with a "incongruous space where the dead person was still in the presence of the living and seemingly communicating from the grave" (Church, 2013: 184). This matter has been in the focus of research and approached from various disciplines, such as for example psychology. But "little to no scholarly work on online bereavement exists in the various disciplines of communication, including mass communication" (Carroll & Landry, 2010: 344). Thus this study is concerned with communication and online memorialization on web memorials in the German speaking area.

Previous research on memorializing the death online is primarily focused on so called "unintentional memorials" (e.g. DeGroot, 2009; Klaassens & Bijlsma, 2014; Castro & González, 2012; Carroll & Landry, 2010; Getty, Cobb, Gabeler, Nelson, Weng & Hancock, 2011) in the context of ad hoc memorials on the deceased's social network profile on sites like Facebook and Myspace. In addition to that the majority of these examinations focuses on the western cultural context, specifically North America. Only a few studies have focused on examining online memorials in the form of web cemeteries or memorial websites.

There are singular cases of studies concerning online memorials in others parts of the world like the Netherlands (Klaassens & Bijlsma, 2014) and Mexico (Castro & González, 2012).

The theories to support this work are derived from Sociology, Psychology and Communication Science.

The sociological background will provide a macro context and framework to place societal change and technological advancement and its influences on grief. Societies have grown increasingly fragmented, while technology nowadays pervades various aspects of our everyday life. This goes to the extent that major life events are now communicated and experienced through social networks (e.g. Brubaker, Kivan-Swaine, Taber& Hayes, 2012; Egnoto, Sirianni, Ortega& Stefanone, 2014; Walter, 2015a).

The various handlings of grief and grieving have been a broad subject of examination in the field of psychology. I employ continuing bonds theory to explain the grieving behavior that can be observed on online memorials (Klass, Silverman& Nickman,1996). In particular that is a continuous relationship instead of disengagement. This also comprises continuous communication towards the deceased. In the context of web memorials this communication, though very publicly enacted, can be very intimate.

To account for the paradox that is bereaved people aiming communication at deceased people, transcorporeal communication is employed. This model of communication is concerned with communication that is aimed at deceased people and thus offers no potential for direct receiver feedback (DeGroot, 2009, 2016).

On the basis of this interdisciplinary background we are provided with a context to place and explain this phenomenon of grieving online in the German speaking area. In particular the purpose of this work is to find out who these profiles are created for and what content these profiles are provided with. In addition to that, patterns of communication over a minimal time span of one year will be analyzed.

1.2 Ethical Considerations

The research at hand examines online memorials in the German speaking area. The memorials of examination are from the website gedenkseiten.de and thus open for everyone to see. Following Klaassens& Bijlsma (2014):

“The method of unobtrusive research does not require the researcher(s) to elicit information directly from the research subjects. Because the data is accessible to everyone who uses the Internet and because the accounts are placed in the public domain by the mourners themselves, we did not feel constrained in using the data without the consent of those who created the memorials. Nevertheless,

because of the highly personal nature of the communication, we made sure that the anonymity of the deceased persons and the authors was preserved" (Klaassens& Bijlsma, 2014: 286).

Same applies to the research at hand. Anonymity of the deceased, as well as the mourners was considered highest priority. This is in line with other research in the are (e.g. Carmack & Degroot, 2014).

1.3 Structure

Subsequent to this introduction I will elaborate upon the background of grief and grieving. In particular I will portray how mourning the loss of a loved one has changed over time. In doing so I will especially focus on the interplay of the influencing factors that are change in society and advances in technology.

Afterwards I briefly touch upon the role of culture and the social frame of communication before focusing on the process and various phases of grieving. At this point different models of grief will be introduced. From there I will continue to review and describe rather traditional rituals in connection to loss, before transitioning the focus on how people grieve in the internet age and memorialize the dead online. Implications in the form of opportunity and obstacles brought on by this change will be discussed.

Communication on memorial profiles is one of the foci of this work. In order to be able to describe the communication process taking place in these mediated spaces, an appropriate model of communication will be introduced in the form of transcorporeal communication (TcC). Two means by what it is used and effects stemming from that are then described. These are continuing bonds and online community building.

Following the elaboration of the theoretical background and description of the frame of communication, different types of online memorials will be described. These types will comprise individual memorial profiles embedded on a memorial webpage, self- contained memorial webpages connected to each other and memorials in the context of social network sites.

Then the state of the art of previous research done in this area; in particular with a focus on the descriptive characteristics of the deceased, honored in Web memorials and descriptive characteristics of Web memorials themselves as well as temporal patterns of posting.

Following to that research questions and hypothesis will be stated and embedded in the existing literature and the operationalization relevant for this work will be introduced. Finally data will be presented and interpreted; before concluding with a discussion concerning possible future directions of research.

2. Grief

“Throughout history, demographic, social and technological changes have altered mourners’ social relationships with both the living and the dead, and hence their experiences of grief” (Walter, 2015a: 10). The following chapter will provide an overview concerning grief. In particular it will constitute an introduction on how grief, grieving and memorializing has evolved in respect to (1) social and (2) technological changes.

In his paper on online memorial culture Walter (2015a), like in his talk on contemporary community grieving (Walter, 2013) delivers a historical overview of how grieving has changed. He identifies four periods that are described through the social context during that time span. They are the following: (1) family/ community mourning (pre- industrial), (2) private mourning (20th century), (3) public mourning (late 20century/ early 21st century), (4) online (pervasive, user- generated) mourning (web 2.0).

The first period, family/ community mourning (pre- industrial), is distinguished by the following predominant conditions: “people in agricultural pre-industrial societies lived in small, stable rural communities of often no more than one or two hundred people” (Walter, 2015a: 11). With families co-resident in a small household, so was grief, also a shared experience. This lack of (personal) space also constituted a potential for conflict. Beyond the affected household, other members of the community personally knew the deceased, which makes them co-mourners. The second period Walter identifies, private mourning (20th century), is distinguished by changing conditions concerning technological advance and geographical mobility. On the contrary to the prior co-residency people are not necessarily living in the same spatial proximity anymore but are geographically disperse. Thus the community in which the bereft lives neither necessarily knew the deceased, nor are they necessarily aware of the loss of the bereft. Thus “grief becomes a private experience; the more dispersed the chief mourners and the more fragmented their social networks, the more private grief becomes” (Walter, 2015a: 12). Likewise Wouters (2002) states that “in the 1960s and 1970s, mourning came to be increasingly privatized and individualized; it became less of a formalized social obligation” (Wouters, 2002: 1). Other ways of coping with loss, such as counseling/ therapy and mutual help groups (MHG) became popular. So instead of sharing their grief with other co-chief mourners, people turned to strangers (Walter, 2015a). By the late 20th century/ early 21st century grief was again dealt with more openly. Especially deaths that occurred under tragic circumstances and/ or the death of people well known were followed by “large-scale-mourning. [...] Offline, this may entail spontaneous shrines and/ or large numbers of flowers laid at the place of death or or the deceased’s home, and the signing of condolence books; online, there are numerous platforms by means of which tributes and condolences can be offered and displayed” (Walter, 2015a: 13).

The fourth period, as identified by Walter, is online (pervasive, user-generated) mourning (Web 2.0). Social network sites enable people to share their memories and bring together

people of diverse backgrounds that otherwise would not have been in contact with each other. Instead a community is formed. Note that this circumstance increases the potential for conflict. Because of the advance of mobile technology, sequestration of the death declines. To 'visit' a memorial one no longer has to travel to a certain place but merely use a mobile device or any computer. As technology and its affordability is evolving, so are norms for grieving. Another innovation, brought on by role of mediated communication in today's society is grieving for someone only ever interacted with in an online computer mediated context. Finally, digital inheritance implies that one digital item can be inherited by a number of people instead of one material item being handed down to one person (Walter, 2015a; Walter 2015b).

Death, once perceived and treated as a taboo, not visible but privatized, now shifts online and thus into the public and becomes visible (Hanusch, 2010). This brings with itself consequences, such as that messages to and 'conversations with' deceased are public. Though the level of publicity differs according to format, other people are able to observe. Other people that may include people that know each other but also complete strangers. But it's not only strangers passively observing, but also engaging in the conversation (Walter et al., 2012). "Online, mourning those you never met has become common practice, and such messages of condolence and support are often [...] appreciated by the intimately bereaved. Thus, online memorials provide sites where both the bereft and their well-wishers can express their feelings" (Walter et al., 2012: 288).

On the basis of this Walter (2015a) suggests that through the shared space of the internet, where visits and comments to memorials are visible to a various amount of people, that grief is increasingly less a private affair. Instead it's changing to being a rather online mediated and shared experience. He thus proposes that "through the mid-2000s social media's user generated content, together with its mobile technology- enabled pervasiveness, has been as significant as urbanisation and industrialisation in changing mourners' social relationships, not at least in partially reverting to pre-industrial modes of mourning" (Walter, 2015a: 10). Along these lines Carroll and Landry (2010) note that what one can observe in this mediated space of memorial websites "is nothing revolutionary but rather a new and in some ways logical platform for people to memorialize and grieve" (Carroll& Landry, 2010: 341).

The section above described the evolution of grief, grieving and memorialization on the basis of social influences and with that economic advance. Factors of particular importance are industrialization and urbanization. The following section will now take technological advance into consideration. Communication technologies in particular are of immane importance, as "they strongly influence how the living relate to each other so it would be surprising if they did not also influence [...] how the living collectively remember their

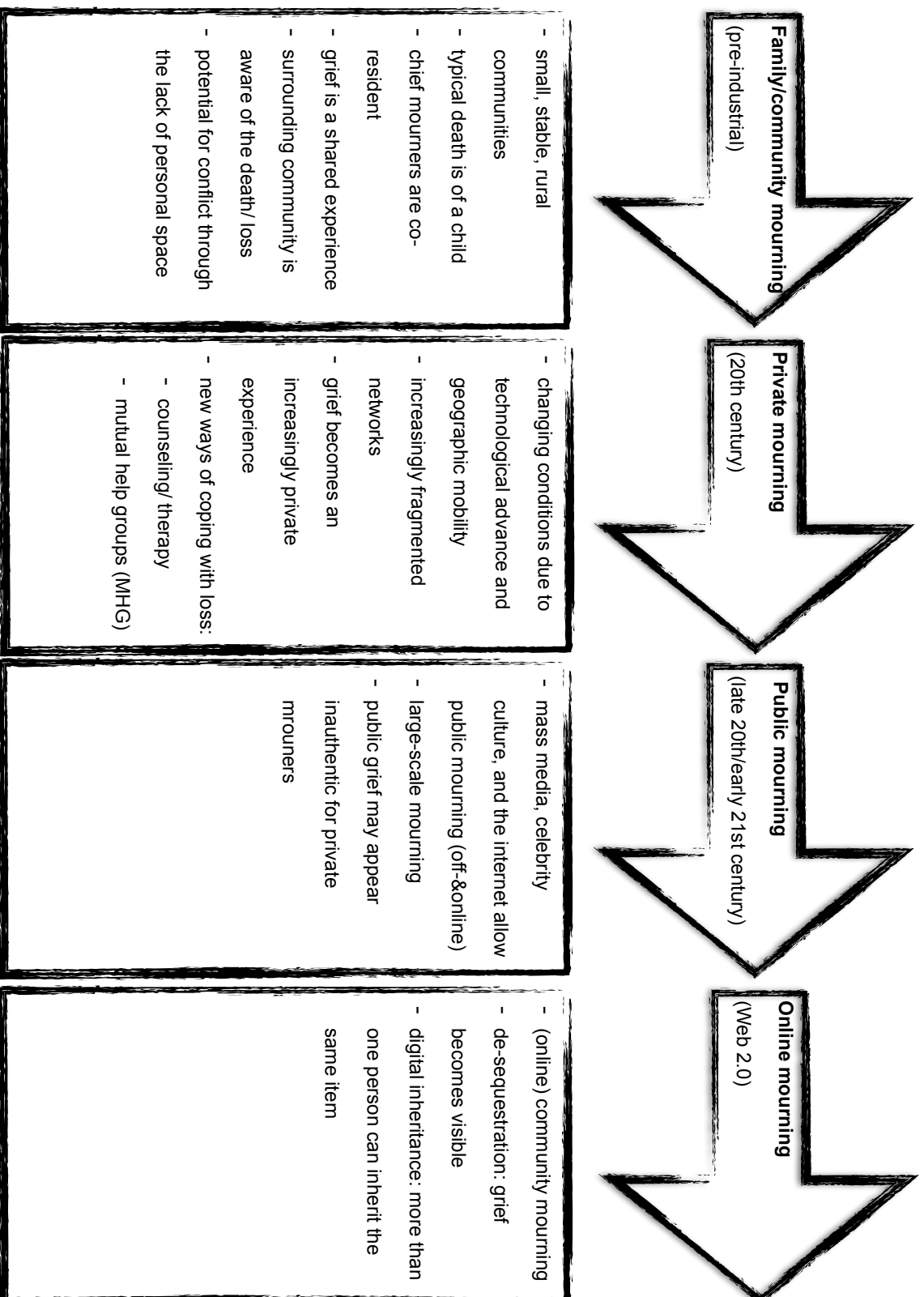


Figure 2: Societal Change and technological Advance concerning Grief (Walter, 2013)

dead” (Walter, 2015b: 216).

Walter in his paper (2015b) describes technological advance at the example of “generic communication media, not specific to death” (Walter, 2015b: 217). In particular he takes into account: speech, stone, sculpture, writing, printing, telegraph and telephone, photography and phonography, the mass media and the Internet. By critically analyzing each medium to its advance, the increase of affordability and thus influence becomes clear. The following will briefly point out the predominant attributes of each communication media and its according effect on the matter. Speech and oral communication are restricted in the number of recipients. There is a dependency on these recipients in order for the content not to disappear and be forgotten as time passes on. While word can travel, and with that expand geographical range of the information it’s carrying, this process is to be expected to be associated with an increase in deviation and inaccuracy concerning the content of what is communicated (Walter, 2015b).

“The first new medium with potential to generate ancestry beyond the family was stone; [...] stone makes graves visible to anyone, whether or not family” (Walter, 2015b: 218-219). The number of people its accessible to is dependent on the geographic placement since it is associated with a fixed location. Sculptures also (re)produce a visible presence and in addition to that add a three dimensionality to memorial (Walter, 2015b).

Ancient writing, the coverage of people informed about the passing of a person further increases. “Writing has enabled the dead to ‘live on’ through numerous social formations” (Walter, 2015b: 220). Examples for such social formation consist of religion, history and music (Walter, 2015b). Another limitation of (hand)writing is overcome by the possibility of printing. “Though writing creates the possibility of stories by and about the dead being told beyond the close circle of the extended family handwritten manuscripts put ideological power in the hands of tiny elite. The possibilities become much extended first with printing, and second with mass literacy” (Walter, 2015b: 221). A rather prevailing example concerning grieving and memorialization are newspaper obituaries.

Telegraphy and telephony comprises bilateral communications. “This may be why the telegraph and the traditional telephone turned out to be unique among communications media in playing almost no role in enhancing the dead’s social presence” (Walter, 2015b: 223).

Photography on the other hand produces further visible and enduring presence. In addition to that, considering cases like those of stillborns and early deaths of children photographs might represent one of the few visual mementos that remain (Walter, 2015b).

Through these means of technological advance, it “enable[s] ordinary people to be immortalized” (Walter, 2015b: 226).

The final communication medium discussed in matters of death and mourning by Walter (2015b) is the internet. As already described above, affordability of communication

technology of the 21st century has had great influence on the deaths social presence in society. "More social network technology also affords the dead themselves the possibility of becoming more vibrantly present among their network of family and friends" (Walter, 2015b: 226). This also results in pooling of different groups of mourners. Thus different groups of friends, friends from different backgrounds but also members of the family are linked through for example social network sites. Without the internet these groups might not have been aware or known of each other. For some the death of a mutual friend might be the only linkage, to someone they would for reasons of dissimilar opinions and attitudes otherwise not be in contact with. This circumstance thus, again introduces the potential for an increase in conflict (Walter, 2015b).

A high range and distribution of information is reached with very few limitations and minimal effort. In terms of remembrance and memorialization "smart phone technology means I no longer have to go to a special place- my PC terminal- to find my dead; they are anywhere my phone is, which is everywhere" (Walter, 2015b: 227).

Traditional rituals intersect with the advance of technology. An example for that are QR codes engraved onto or placed on a plate next to a tombstone. This way additional information concerning the deceased can be retrieved when visiting the grave. This example demonstrates how traditional and computer- mediated forms of memorializing complement each other and are implemented concurrently (Walter, 2015b).

Through the increase in affordability of communication-medium, communication-technologies are simultaneously increasingly cumulative. "Thus digital technologies build on literacy, telephony, photography and phonography to enable users to integrate the deceased's music, pictures, speech and writings into a rich, and socially available, ongoing presence" (Walter, 2015b: 228).

Further aspects of mourning online, such as advantages and obstacles, will be elaborated upon in chapter 2.4 "Grieving in the Internet Age- Memorializing the Dead Online".

In this chapter, an overview of grief in respect to social and technological change and development was given. On the basis of this, the following chapter will focus on culture and its frame for memorialization practices. In particular manners and rituals of grieving and memorializing in urban Asia and Mexico will be described.

2.1 Culture and the Social Frame of Communication

The previous chapter focused on two main influences in the evolving of grief over time: social and technological change and advance. This chapter will now focus on showing differences the approach to dealing with grief depending on cultural background. Following to that various customs and rituals as they are practiced in different cultural settings will be

depicted. In particular I will focus on the following cultural backgrounds: Western, Mexican and urban Asian.

Following a general description of these settings, technological advance and its influence within these cultures concerning grief and grieving will be focused upon.

The purpose of this section is to outline various differences, as well as similarities, and provide an insight into how people in different cultural settings behave when mourning the loss of a person in an online context.

This work understands the basic definition of culture to be "a way of doing things and a set of norms about how things ought to be done" (Walter, 2010: 5).

"Any society's understanding of death, space and technology are cut through, coloured, structured, discursively framed and inflected by social and cultural norms- what has been described as the 'cultural lens'" (Maddrell, 2012: 46)

Thus the cultural frame in which a society is set provides its members with ways in which to deal with grief. The immense importance of considering the "cultural narratives in which conversations with both the living and the dead are set" (Klass, 2006: 852) is further supported by Klass. As will be explicated in the subsequent chapter 2.2 "The Grieving Process" there are two predominant notions concerning grief. While the traditional approach to the process of grief advocates the relinquishing of the bonds, the newer model suggests to adapt the relationship rather than a clear cut (e.g. Freud, 1917; Klass, Silverman & Nickman, 1996). But it's not solely a question of traditional versus newer model but one of culture.

In general it can be said that while it is often discouraged within Western societies to show one's emotions freely, the opportunity to grieve in an online context enables one to do exactly that (e.g. Klaassens & Bijlsma, 2014; Mellor & Shilling, 1993). "Communication with the deceased is greeted with suspicion" (deVries & Rutherford, 2004: 7) but increasingly common (Egnoto et al., 2014). Especially in online environments, such as social network sites, "addressing the dead is done in the knowledge that there is a living audience which, by accepting such direct address and even actively joining in, legitimates a practice about which hitherto some people may have felt somewhat embarrassed" (Walter, 2015b: 227).

In contrary to Western societies, death in Mexican society is not hidden. Rather they employ "several rituals to celebrate and honour the lives of the deceased" (Castro & Gonzalez & Leon 2010: 2). On the 2nd of November they annually celebrate the Day of the Dead. "The origins of the modern tradition can be traced back to the indigenous observances of rituals dedicated to the dead" (Castro & Gonzalez & Leon 2010: 2).

Other cultural settings, such as some Native American tribes (the Hopi) advocate to neglect the deceased as soon as possible. This is due to the fact that they "believe that contact with the death brings pollution, and they are afraid of death" (Stroebe, Gergen & Stroebe, 1996: 35).

The exact opposite is the case for the Japanese context. There "the maintenance of ties with the deceased is accepted and sustained by the religious rituals of Japan" (Stroebe, Gergen & Stroebe, 1996: 35).

Empirical research on the comparison of the handling of grief in Muslim societies in Bali and Egypt found that while in Egypt societies it is supported to express their grief results indicated the opposite for Muslim societies in Bali. Here individuals are expected to not show grief as it is considered as putting an emotional burden on others (Wikan, 1988).

Unlike in Western culture, in others like Asian and African "the deceased are remembered and included in the daily activities of the ongoing lives of the survivors" (Carroll & Landry, 2010: 343). This conclusion is further supported by Tong (2004), stating that the understanding of death "to the Chinese, [it] is inevitable but not final. It is merely a point of transition and does not signify the end of a person's participation in the lives and activities of his family, nor of they with him" (Tong, 2004: 4).

Research on grief and grieving in urban Asia also repeatedly refers to the Qingming Festival, a national holiday in the Asian culture, which is also referred to as Tomb Sweeping Day (Kong, 2012; Chang & Sofka, 2006).

Concerning cross- similarities between Chinese and North American culture in the matter of online memorialization, previous research (e.g. Chang & Sofka, 2006) compared the use of online resources when trying to cope with loss. In the Western context, the first advent of online memorials is dated at approximately 1995. On the contrary to that comparable sites took six more year to emerge in urban Asia. For both cultural contexts the benefits can be subsumed as offering "the opportunities for people with computer access to cope with loss in a convenient, private and often economical way" (Chang & Sofka, 2006: 7). To the Chinese "pragmatic considerations of cost and safety and, at best, civic considerations of environmental protection" (Kong, 2012: 428) are used to promote online memorialization.

Online memorials of these two cultural context are not entirely identical, but differ for example in matters of affordability. Online memorials in the Eastern context of urban Asia are commonly not free but have to be purchased. Various packages are offered that differ in terms of affordability of the profile and operating time. According to what plan is chosen, that brings with itself the possibility of an expiration date of the memorial (Kong, 2012; Chang & Sofka, 2006). Online memorials in the Western context are commonly free of cost, though there are also options of purchasing an upgrade that provides more options in terms of design. In addition to that most of the sites don't indicate a limitation of the time but the memorial will stay online (e.g. Roberts, 2004a).

"Users can use their computer mouse to drag fresh flowers, matches, incense, candles and tea and wine cups to simulate the real act of offering flowers, lighting incense and candles, and offering tea and wine. The sites also feature photos of the

deceased, prayers offered by their mourners and stories and reminiscences about past lives, which can be captured in multimedia format. For the specific site they are engaged with, they may also choose their own backgrounds and tombstone images. Indeed, a virtual geography is created at some of the sites" (Kong, 2012: 427).

In both cultural contexts online memorial websites feature a subdivision of placement of the memorial. People can choose a certain area on the website, where the memorial is placed. This grouping can for example be according to cause of death, religion, etc.

See chapter 2.5 "Memorials on the Web" for an extensive description on the affordability of the medium of online memorials, including an discussion of advantages and obstacles.

On the contrary to the depiction of circumstances and thereby change of grief and grieving by Walter (2015a, 2015b), Kong (2012) in her work describes another driving force in the promotion of online memorialization concerning Urban Asia. In particular she describes how the circumstance of lack of land and thus space for cemeteries has had governments promote alternative forms of memorializing. In an attempt to "show how death and its rituals have shifted from conditions of spatial competition to spatial compression and then to spatial transcendence" (Kong, 2012: 416), she delineates the change to cremation, sea burial, woodland and scatter and finally online memorialization. I will subsequently briefly touch upon the different incitements that conditioned these shifts in memorialization practices in urban Asia.

In general it can be said that the predominant reasons to encourage people to choose cremation was the "'pollution' and 'uncleanliness' associated with deathscapes coupled with the lack of space in modern Asian cities" (Kong, 2012: 417). Thus people sought to find different ways of disposing the ashes. "Consequently, the new methods of ash dispersal and burial seek to move beyond spatial compression to spatial transcendence, as they attempt to diminish the significance of a specific site of physical burial or memorialization" (Kong, 2012: 418)

"The recommendation was built on arguments about participating in environmentally friendly methods of memorialisation [...] Ministry of Civil Affairs began to encourage virtual tomb sweepings and offerings, and virtual memorial halls began to grow. The initiative 'Save the trees through tomb sweeping on-line' aimed to help sustain the tradition of tomb sweeping, but in a manner adapted to the modern world. The motivations were essentially pragmatic" (Kong, 2012: 428).

In addition to environmental concerns due to "massive traffic congestion" (Kong, 2012: 428) when traveling to visit the grave site on the according holiday (Qingming Festival), the government also argued on the basis of environmental concerns due to sacrificial offerings during funeral ritual proceedings. Also, "burning of paper money and the setting off of

firecrackers as part of the rituals also create fire hazards [...] On-line practices are therefore encouraged as more environmentally friendly practices" (Kong, 2012: 428).

2.2 The Grieving Process

The previous chapter described grief and grieving in different cultural settings. In addition to a Western standpoint, I focused on Mexico and Urban Asia. By that the importance and influences of a cultural frame on grieving were emphasized. In the following I will now focus on explicating a model of the process of grieving.

Following the idea of the importance of the cultural and societal setting I will first approach the process of grieving on a macro level. That is how it is embedded and anchored in society. Subsequent the focus will be put on a model of the process of grieving of the individual itself (microlevel). Here societal customs are not used as an explicit framework of the process.

In general it can be said that the process of grieving is concerned with the readjustment of the bereaved individual to the circumstance of having lost someone. In addition to that the social network plays an important part in dealing with this process. It frames the transformation of the social role of the bereaved individual (Egnoto et al., 2014).

To describe the macro concept of grief as a process as it is anchored in society I will delineate the model of grief as proposed by Romanoff and Terenzio (1998). They focus on the process an individual goes through in consideration to rituals and societal structures. Stating that rituals "are one- time events that fail to acknowledge grieving as a process that occurs over time" (Romanoff & Terenzio, 1998: 699). Thus the aspect of transformation in grieving is a central argument in their proposed model. The implements to carry out this transformation occurs through rituals.

The model below (Figure 3) illustrates this process as follows. The overall frame is constituted by two aspects: the circumstances of the death itself and the cultural/ social norms of the community. The circumstances of the death itself portend to differences in how the death is perceived. The circumstances of the death might have "violated the assumptions of the social system" (Romanoff & Terenzio, 1998: 705). The underlying customs of society and by that the "availability of social structures and supports that acknowledge and sustain the bereaved's status, both before and after death, and the legitimacy of his or her relationship to the deceased" (Romanoff & Terenzio, 1998: 704) constitute the second part of the overall framework. The transition occurs from the pre death status to the post death status. That is the social role of the bereaved as he or she transitions to a changed social role where the deceased is no longer physically co present. They identify three processes that are: transformation (intrapsychic domain), transition (psychosocial domain) and continuity (communal context). While they are separate

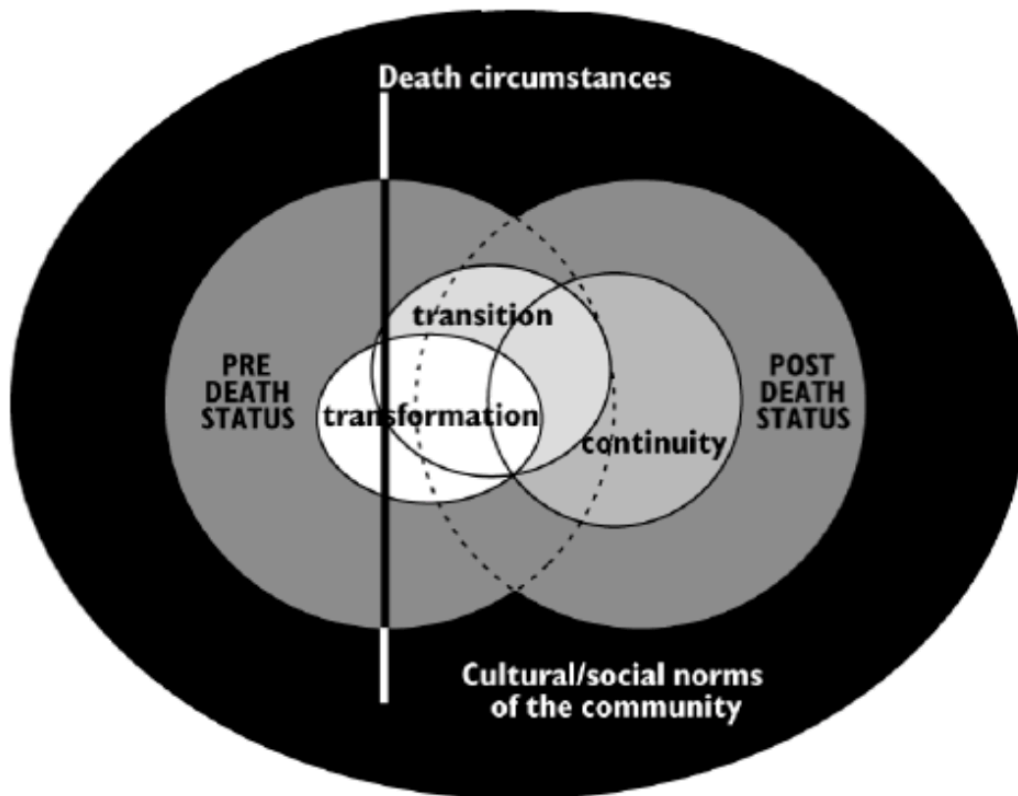


Figure 3: The Process of Grieving (Romanoff & Terenzio, 1998)

processes, taking place in different settings, they overlap to a certain extent at different points of the process (Romanoff & Terenzio, 1998).

While there are various approaches to describe the process of grief and grieving, scientists have yet to propose a universal model. The difficulties associated with that can be attributed to the inherent individual nature of the process of grieving. Existing approaches describe the process of grieving in terms of different stages (e.g. Kübler- Ross, 1969), other approaches formulate tasks (e.g. Worden, 2008), phases (e.g. Bowlby, 1980; Parkes, 2001) or processes (e.g. Rando, 1986). All of them depict the process of grief as linear.

“At a metalevel, writers have proposed a series of conceptual models that attempt to explicate the major factors, processes or stages of grief. On an applied level, writers have described a number of grieving tasks and behaviors” (Falconer, Sachsenweger, Gibson & Norman, 2011: 2).

The approach suitable for this work can best be described by posing the question of what is the goal of the grieving process? Concerning the model of the process of grief on a macro level, as depicted above, grief can successfully be resolved through "transition rituals of the culture [that] occur in concert with the individuals' private or public acts of transformation (Romanoff & Terenzio, 1998: 701). Among the varying models of grief and the process of

grieving, there are two main streams to be identified: a traditional and a new model of grieving. These two notions can be distinguished by how the end of the process is defined. While the traditional model identifies a clear cut at the end of the process of grieving (e.g. Freud, 1917; Kübler-Ross, 1969), the newer model rather suggests an ongoing integration of the deceased into the everyday lives of the bereaved (e.g. Silverman & Klass, 1996; Worden, 2008).

A predominant representative of the traditional notion is Sigmund Freud (1917), according to whom it is considered pathological to continue a relationship with the deceased (Kasket, 2012). Instead the "purpose of grief is to sever the bonds with the deceased" (Silverman & Klass, 1996: 3) so that one can come to "a stable state in which he or she can move forward with life and leave the deceased behind" (Carroll & Landry, 2010: 343). Thus the central aspect of this model is the breaking of the bonds and the act of relinquishing of the relationship.

In the following I will now briefly touch upon hitherto existing conceptualizations of an individual's grieving process. This will be exemplified by the five stages of grieving by Elisabeth Kübler-Ross (1969). It underlies the idea by Freud stating that it is "important to invest one's energies fully into other things, other relationships" (Kasket, 2012: 63) and thus relinquishing of the relationship with the deceased. The model of the five stages of grief encompasses the following: (1) denial, (2) anger, (3) bargaining, (4) depression and finally (5) acceptance (Kübler-Ross, 1969). "This model can be seen as a loose pathway through the emotional process of coming to terms with accepting death" (Brubaker & Hayes, 2011: 124).

A newer model, as proposed "identifies one of the purposes of grief as constructing a biography of the deceased that can be integrated into the ongoing lives of his or her survivors" (Carroll & Landry, 2010: 343). Ways of building a biography include newer streams of media and communication technology, such as social network platforms via which knowledge about the deceased is shared (Carroll & Landry, 2010). On the basis of a communication model, this is conceptualized by Egnoto et al. (2014) and will be focused upon in Chapter 2.4.1 "Transcorporeal Communication".

The model of the four tasks of mourning by Worden (1991, 2001) also depicts a linear model of grief. The four tasks are: (1) accept the reality of the loss, (2) Work through the pain, (3) readjust to the environment, (4) reinvest in life and form a continued bond with the deceased (Falconer et al., 2011). Thus instead of relinquishing the relationship it is adapted to fit the new situation.

2.3 Rituals in Connection to Loss

In the previous chapter I elaborated on different models of grief. The traditional model of breaking bonds was set in contrast to the new model of continuing bonds. The following will now augment these models with practices of grieving rituals. "Rituals give language and form to the paradox, and are prescriptive in terms of how to deal with it and live with it" (Silverman & Nickman, 1996: 349). Romanoff and Terenzio describe the purpose of bereavement rituals "to facilitate relinquishing of relationships and transition to a new social role" (Romanoff & Terenzio, 1998: 697). As already described in Chapter 2.1 "Culture and the Social Frame of Communication" these rituals are strongly influenced by the culture the society is set in. Though different in form they generally "facilitate the preservation of social order and provide ways to comprehend the complex and contradictory aspects of human existence within a given societal context" (Romanoff & Terenzio, 1998: 698).

Traditional rituals within the Western cultural framework with a long standing tradition encompass the posting of an obituary and a funeral. Like in the case of these two examples, traditional grieving rituals are taking place close to the event of death and are often singular events. This has been the target of criticism arguing that they thus "that fail to acknowledge grieving as a process that occurs over time" (Romanoff & Terenzio, 1998: 699).

The purpose of obituaries is to inform the broad public about the passing and provide "a discursive surface on which to remember the accomplishments and note the survivors of the deceased" (Carroll & Landry, 2010: 341-342). Publishing an obituary in a local newspaper people in that range of coverage of the newspaper learned about the news. With the advance in communication technology, such as the invent of the radio, an obituary could now be "read or announced to a geographically disparate audience" (Carroll & Landry, 2010: 342). In general these technological advances, "yielded an increase in geographic reach of the obituary and in the depth of information that could be offered. Online social networks represent a step forward on both of these continuums, in expanding the potential reach of obituary-like information" (Carroll & Landry, 2010: 342). Nowadays with social networking sites the news of the death of a person can potentially be cast all over the world with a single posting online (Oltjenbruns & James, 2006).

"Obituaries chronicling the life of the deceased tend to be restricted for those who have been deemed, by the newspaper, as newsworthy in some way. "Ordinary" persons who have died are identified by time-sensitive death notices that typically consist of little more than a list of survivors, funeral or memorial service time and place, and information about contributions" (deVries & Rutherford, 2004: 7).

Traditional rituals were very fixed and rigid in the way that they were carried out and thus perceived "as still social obligations, rather empty of feeling and meaning" (Wouters, 2002: 5-6). This is not the case anymore. For example "funeral ceremonies have ceased to be

rather fixed and uniform events from which children are barred. Only a few of those attending a funeral still wear black clothes; dress has become much less formal, music and speeches much more personal” (Wouters, 2002: 1).

“Transition rituals, such as funerals, are intended to mediate the passage to a new status but will not necessarily alter existing social structures or interpersonal constructs. In most American funeral and bereavement rituals, the deceased are committed to the hereafter, and the bereaved are supported in their assumption of their new statuses.” (Romanoff & Terenzio, 1998: 701)

The advance of technology has impacted how people mourn and changed grieving rituals. Through advances in (communication) technology the internet streaming services now provide options for people to be virtually present and contribute to the ceremony virtually funerals through streaming services. While this constitutes an alternative to persons that are simply not able to attend physically (for whatever reason) it is also an alternative to those that chose to stay away physically (Walter et al., 2012). “Thus, this facility can either enhance or detract from the funeral” (Walter et al., 2012: 281).

The advance of technology has added “a significant addition to these rituals, as the internet has supported new behaviors and expressions of grief online. These have ranged from a more widespread public expression of loss to the establishment of ‘permanent’ online memorials” (Falconer et al. 2011: 2).

“Rituals are a way of coping with loss and bereavement and to have familiar codes of conduct at the time of crisis and grief. However, a phrase such as “I’m sorry for your loss” can feel too trivial, which is why poems, links to Youtube videos and heart symbols express more care and sympathy” (Haverinen, 2014: 37).

Findings by Carroll and Landry indicate that “though public displays of mourning are not in vogue culturally in the West, the ways that youth are using social networks to grieve and memorialize could be changing the norms for what is socially or culturally acceptable” (Carroll & Landry, 2010: 342).

2.4 Grieving in the Internet Age- Memorializing the Dead Online

In the previous chapter, 2.3 “Rituals in Connection to Loss”, I described customs people make use of when a person dies. Doing so, I in particular focus on rituals such as obituaries and funerals. Technology nowadays pervades various aspects of our everyday life. This goes to the extent that major life events are now communicated and experienced through social networks (e.g. Brubaker, Kivan-Swaine, Taber & Hayes, 2012). The death of a person and the mourning of a loss is one of the many things that are now also experienced in a social media context. “As relationships take on both online and offline dimensions and internet access becomes universal in large parts of the world it is unsurprising that individuals are increasingly (also) using the internet to facilitate their mourning

process” (Falconer et al., 2011: 7). “The online communities people are participating in are now starting to grieve in ways that mimic our offline practices” (Egnoto et al., 2014: 284).

“This phenomenon reflects changing attitudes toward dying and mourning in contemporary Western societies” (Klaassens & Bijlsma, 2014: 283) and further supports the development of grief and grieving as elaborated upon in chapter 2. “Grief” on the basis of Walter (2015a, 2015b).

“So what does it mean, then, to mourn and honor online? Does a virtual candle bear the same importance as lighting an physical candle? Are these digital practices now replacing “old rituals”, such as visiting the cemetery or even hugging someone who is bereaving” (Haverinen, 2014: 36)?

As part of the developmental process of digitalization, news(papers) shifted online. Obituaries, as a part of the printed (news)paper, thus also moved online. This change in accessibility and format is also introducing changes to the content (Hume & Bressers, 2010). It allows for this once ‘traditional’ ritual to become increasingly varied and informal and thus more individualized and personal (Wouters, 2002: 2).

According to Haverinen (2014) traditional rituals, such as a visit to the cemetery, lightening candles and funerals are still significant and have not lost their importance. She concludes that “mourning online means returning to a more social way of bereaving together” (Haverinen 2014: 39). As presented in chapter 2. “Grief” this is in line with findings by Walter (2015a, 2015b). Traditional rituals and ‘new’ rituals do not replace each other, but much rather add new aspects and facets. Additional research indicates that “funeral homes and cemeteries augment traditional ceremonies with virtual condolence books and PowerPoint slide decks of photos of the deceased” (Massimi et al. 2011: 987).

As we will see later, geographical distance is an important factor when it comes to online memorials. “Given the geographic mobility of the North American population, the bereft are often separated by expansive distances that are frequently expensive to navigate making the visiting of remains difficult” (deVries & Rutherford, 2004: 7). While traditional (physical) memorials and places to mourn constitute a physical place and location, virtual memorials constitute a discursively built place. The important difference lies in that instead of standing as a physical place it is constituted through language. Thus “it is built more on language than built actually as a physical place. Memorials online are more conceptualized in language, the way we speak about them, than actually built or created” (Haverinen, 2014: 38).

Traditional rituals do not always leave the bereft with a physical memorial and place to grieve. Other rituals such as “cremation and the scattering of ashes may mean that there is no physical place to grief” (deVries & Rutherford, 2004: 7).

Carroll and Landry in their quest to identify and conceptually map new mourning rituals as they are made possible by social network sites carried out an online survey, consisting of 100 undergraduate students. Three fourths of which were female and on average 21 years of age. They all self identified as users of the social network platform Facebook (Carroll & Landry, 2010). "In mapping these rites and rituals, this exploratory research attempts to provide the beginnings of a conceptual framework for categorizing the emerging social practices mediated by these online networks by and through which spaces of commemoration and narratives of memorial are created" (Carroll & Landry, 2010: 342).

The changing role, development and influence of technology brings change to daily communication. In particular "social networking site usage is becoming progressively more pervasive in our society, and is especially crucial for maintaining relationships among younger persons" (Egnoto et al., 2014: 284). In addition to the change of frequency and availability of synchronous, as well as asynchronous communication, people are also given an additional platform to present themselves in a certain way. Online self presentation does not stop when it comes to grief but much rather becomes a growing part that we experience and live online and technologically mediated. Egnoto et al. (2014) found that "one behavior that is growing in online presentations of self is grieving after the death of an individual in our social network" (Egnoto et al., 2014: 283)

When examining 'traditional' rituals in the light of current technological development and the integration of these technologies into our every day life it shows that among other characteristics they can be especially distinguished by their restriction in time and place. These restrictions cease to exist at a time of internet technology. "People can connect with each other despite their geographical or time distances" (Haverinen, 2014: 35). Various researchers have suggested additional rituals for the bereaved (e.g. Worden, 2008; Rando 1988). As further explicated in chapter 2.3 "Rituals in Connection to Loss", traditional social practices take place close to the date of death. Presumably at this point of time there has been very little time for the bereaved to process his or her loss. A state of shock is to be assumed. Thus the value and effectiveness of traditional rituals in terms of helping the bereaved might be limited (Worden, 1991; Roberts & Vidal, 2000). "Unlike traditional post-death rituals, web memorials can be created by anyone at any time, providing a place for the disenfranchised to display their grief and for honoring the dead long after traditional post-death rituals have ended" (Roberts, 2012: 31). Research for example suggests writing to be a "positive post-death ritual" (Roberts & Vidal, 2000: 522) in that it is not bound to any point of time after the person has passed. Rather it offers the possibility to the bereaved to deal with the situation when they are ready to do so. "Recently, a new forum for writing to and about the dead has emerged on the World Wide Web" (Roberts & Vidal, 2000: 522).

The increasing influence of technological advance on grieving has previously been the focus of research concluding that "if the social interactions of dying or grieving people change, then the experience of dying or grieving may well change" (Walter et al., 2012: 276). Further they state that

"evidence so far indicates that the internet has significant implications for many current concepts in death studies; in turn these concepts illuminate what is going on online. These concepts are: the sequestration (or hiding) of death and dying; disenfranchisement of grief, private grief, social death, illness, and grief narratives; continuing bonds with the dead; and the presence of the dead in society" (Walter et al., 2012: 276).

In the above I emphasized on the consequences technological advance has had on time and place. In the following I will name and briefly discuss more advantages and obstacles of grieving online.

Additional advantages of grieving online comprise the following aspects. Web memorials may constitute a place for the disenfranchised to display their grief. Disenfranchisement is constituted by people who have no "socially recognized" ties with the deceased (e.g. Doka, 1989; Walter, 2015a). According to previous research high school youth and college students "are often excluded or marginalized by traditional memorial rites and rituals offline" (Carroll & Landry, 2010: 344). In addition to that research indicated that "concomitant with this increasing likelihood of disenfranchisement is the expanded search on the part of the bereft for an inclusive, accessible place to grieve" (deVries & Rutherford, 2004: 7). Online memorials represent such a place in that they are easily accessible and by everyone. Not every new status that is the result of the change introduced by death has been given a label by society. Certain statuses have not yet been recognized in that way. One example is the loss of a child. While losing a marital partner makes the other one a widow or widower, there is no label that has been established for a parents loss (Haverinen, 2014).

Additional circumstances predestined in a Western society for disenfranchisement of grievers to occur are "pet grief, grief following AIDS and grief for a celebrity" (Walter, 2015a: 19). In an online environment mourners do not succumb to strict customs but are given "the unique opportunity to express experiences and emotions in ways unfettered by the social conventions that govern grief in more traditional settings" (Blando et al., 2004: 29). This is further supported by Walter (2015a) stating that "online such grief can be both expressed and acknowledged, especially in online environments that allow anonymous posts. It is certainly true that a number of specialist online memorial sites are for griefs that are disenfranchised in face-to-face interaction (Walter, 2015a: 19).

Another positive aspect concerns the matter of sharing online. When applied to the matter of heritage in the sense of heritage "digital technology [...] radically expands the range and

number of inheritors. Only one person can inherit an item of physical property [...] But many people can inherit the same digital item” (Walter, 2015a: 14-15).

Research also indicated that grieving a loved one in the online (especially social media) context provided them with a stronger "feeling of connectedness than did visiting the grave or physical memorial” (Kasket, 2012: 68). In addition to that technology has been noted to facilitate mourning and “ease suffering, or to disturb our sensitivities through its strangeness and irreverence” (Massimi et al., 2011: 987).

While there are various benefits associated with grieving online, there are also hazards. They comprise of the following aspects: decontextualization of the memorial, fragility of the data, media literacy, social pressure, trolling and lurking.

Decontextualization of the memorials results due to the fact of the memorial being digital. “Though the profiles created in life by the deceased [SNS] are extremely personal, as digital memorials they lack the geographic and cultural specificity that gives the material memorials their character” (Church, 2013: 187).

Further problems that may arise concern the fragility of the online material:

“problems of access and technological proficiency for participants and users; the cold impersonality of the screen compared to the experience of telling and listening face to face; the dangers of wide distribution of words and images provided at a moment of vulnerability and later regretted; [...] risks of receiving deliberately false testimony or of eliciting hostile and hurtful responses to authentic testimony” (Arthur, 2009: 69).

In addition to that online data in this form is fragile as it might suddenly be taken down or 'disappear'. While anonymity did have advantages for for example disenfranchised grievers, it concomitantly constitutes an unassured basis. “In the virtual world, communities can form and disform, leaving few traces. Because participants can be anonymous or assume false identities, there is the danger of skeptical or malicious responses that could do serious damage” (Arthur, 2009: 69). Church (2013) noted that the temporality of digital memorials is less permanent than with offline places of remembrance (e.g. gravesite). “Though it may seem impossible to erase one’s online presence, the Internet is perpetually shifting and obscuring old pages and sites. When one site is upgraded, the old site ostensibly disappears” (Church, 2013: 187).

Up to this date there is still an academic void as to the identities of people using platforms of grieving online. Mourning online does require a certain, though very basic, knowledge of technology. Individuals have to be able to go online and use a computer to be able to be a part of the online environment. Though those skills are very common throughout society, they are not common skills among senior citizens. This implies “a significant exclusion, since the deaths of spouse, siblings and peers typically cause the elderly to suffer more frequent bereavements than younger people” (Walter, 2015a: 14).

Another con of grieving online is that of social pressure. Especially in the context of SNS users expressed to feel "social pressure on Facebook to "like" a memorial page" (Walter, 2015a: 16). Thus the decision to display mourning in that context might rather be the result of social expectation and enhanced online self presentation (hyperpersonal communication) but not that of personal attachment. People explicitly raised concerns regarding feeling monitored and peer pressure in terms of how it would make others think of them as a consequence if they would not follow these social expectations (Walter, 2015a). These descriptions by users "show not only that Facebook users are together co- creating new norms for mourning and memorialising, but also that individual users can struggle with these norms and/or find them inappropriate" (Walter, 2015a: 17).

Trolling, instances in which "online instigators post abusive comments and images onto pages created for and dedicated to the deceased" (Phillips, 2011: 1) have also been found to be an issue with grieving online. Here the previously mentioned aspect of anonymity has a negative influence. In addition to that memorial profiles are generally on a public domain and thus open to see for everyone. This circumstance also invites people for lurking (Walter, 2015a).

Chapter 2.5 "Memorials on the Web" will further discuss positive and negative aspects that are associated with mourning online. While the aspects discussed in this chapter were primarily introduced by the change in technology in general, the later with focus pros and cons that are introduced by the particular (plat)form of online memorialization.

2.4.1 Transcorporeal Communication

In this chapter I will now introduce a model of communication that encompasses the situation that the receiver is deceased. In particular "TcC includes the communication aimed at, not with the deceased" (DeGroot, 2012: 199). Thus there is "absolutely no opportunity for observed receiver feedback yet a distinct intended receiver exists" (DeGroot, 2016: 4). The model was first hypothesized by DeGroot in 2009 and further advanced in 2016.

"Trans indicates that the communication occurs in a different state or beyond a certain state, and corporeal indicates a relationship to a physical material body. As deceased people no longer maintain a physical presence, messages to the deceased are directed at someone who is in a different state of being physically present" (DeGroot, 2016: 2).

The model first hypothesized by DeGroot in 2009 consisted of the following components: sender, message, channel, content, inner representation and feedback. After reexamining the proposed model in a study in 2016 the model was enhanced and the following

components were added to it: trigger and metaphysical. Figure 4 shows this revised model of TcC.

A trigger causes the sender to send a message to the receiver. In difference to a 'normal'/ traditional model of communication the receiver is represented by the inner representation of the deceased. Thus "the sender [...] orients him or herself to the deceased and considers his or her message as he or she believes the deceased would construe it, essentially providing feedback to him or herself based on what he or she believes the receiver (the deceased) would have said" (DeGroot, 2016: 19).

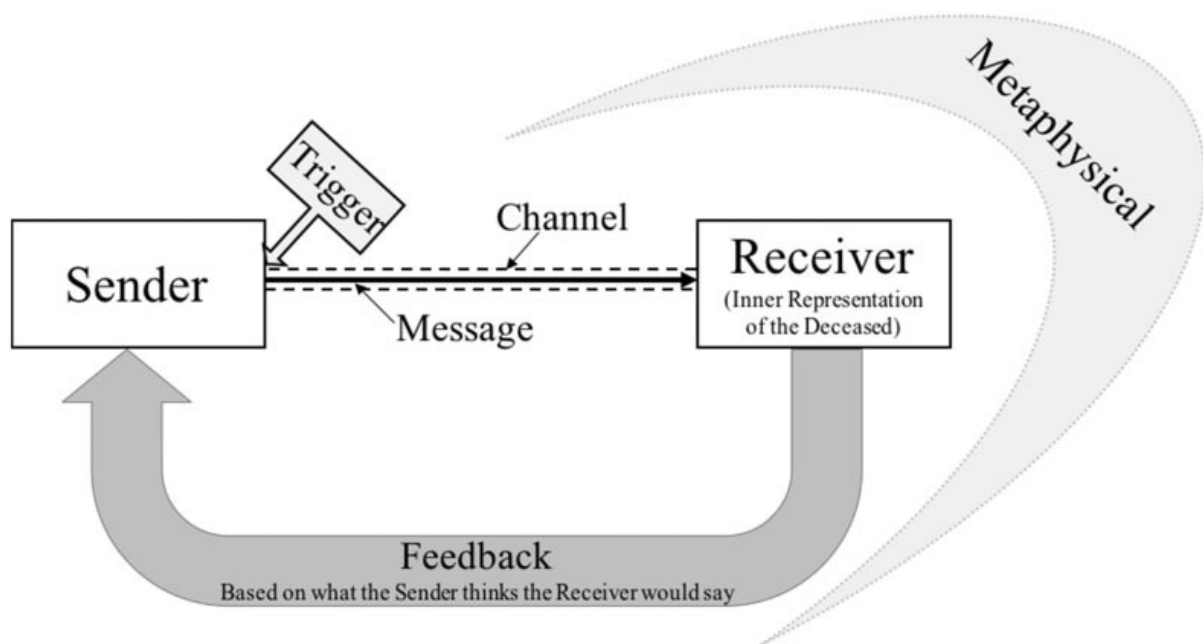


Figure 4: Transcorporeal Communication (DeGroot, 2016)

In the following I will further explicate components of the revised model.

The role of the sender does not differ in its definition when compared to 'traditional' models of communication. It applies to "any person who maintains a connection with the deceased by communicating to him or her" (DeGroot, 2016: 8-9). Socio- demographics did not have an effect on the participating individuals (DeGroot, 2016).

While for communication to be considered a conversation it usually needs at least two participants (sender, receiver) people still considered the communication a conversation. When describing such communication bereaved people "indicated the normalness of this type of communication [they nevertheless used descriptives such as] one-sided, less transactive, or an illusion" (DeGroot, 2016: 9). Participants stated that "nothing had changed in their communication and relationship other than the absence of a physical presence" (DeGroot, 2016: 9).

The three general channels chosen for this type of communication were named as follows: "spoken aloud, written or typed, or internal" (DeGroot, 2016: 9). Results indicate that the decision concerning what channel to choose depends on how important the sender considered the topic of the message to be (DeGroot, 2016).

This study will also examine temporal patterns of communication over a minimum of one year after a memorial profile was opened. Results by previous research indicated that communication changed over time. This was true in regard to "frequency, channel, and content" (DeGroot, 2016: 12) which evolved as more time passed since the event of death. In addition to that people indicated a decrease in frequency and intimacy. The general intensity of maintaining bonds with the deceased depended on how the relationship was before the event of death (DeGroot 2016).

Prior research indicates that the feedback the sender receives is based on what reaction they imagine the intended receiver would have given them. In other words "the participants would give themselves feedback based in what they think the deceased would do or say" (DeGroot, 2016: 14).

DeGroot in her work identifies various channels of communication for TcC. The message can be articulated aloud through speech, just thought (internal), written or typed (DeGroot, 2016). Considering the case at hand: the message is typed. But another aspect that is not explicitly regarded in the model presented above is the audience of that communication. Since the message directed at the deceased is published in an online context other people can read it. Thus this allows for the opportunity of feedback. Though not by the deceased, along the lines of online self presentation, there is an awareness for that audience. Egnoto et al. (2014) consider the model proposed by DeGroot (2009) in an online context. Doing so they "posit a refinement to TcC for use with digital mourning" (Egnoto et al., 2014: 285).

Egnoto et al. (2014) in their work refer to the communication as described by DeGroot (2009; 2016) as "intrapersonal" (Egnoto et al., 2014: 287) and build their argument on the conditioned boundedness. This can be criticized as communication spoken out loud, as explicitly named by DeGroot (2016), is not intrapersonal. It carries the potential for feedback. Though not by the intended receiver but by another individual. DeGroot (2009, 2016) however does not further emphasize on the consequence of the frame of communication.

Their line of argumentation builds on hyperpersonal communication and social identity theory. Hyperpersonal communication is concerned with computer mediated communication and how this frame of communication is used to build one's online self presentation resulting in a socially prettified presentation along the lines of social expectations. Thus resulting in a

more positive perception by the audience. This is due to the fact that because the communication is asynchronous people can think about how to portray themselves, while in a synchronous communication situation they have to react instantly (Egnoto et al. 2014). In addition to that they build on self identity theory then is concerned with how people adapt their own identity depending on ones social group. Thus if a behaviour, like grieving online, is approved and practiced by the group, people will likely also engage in this behaviour.

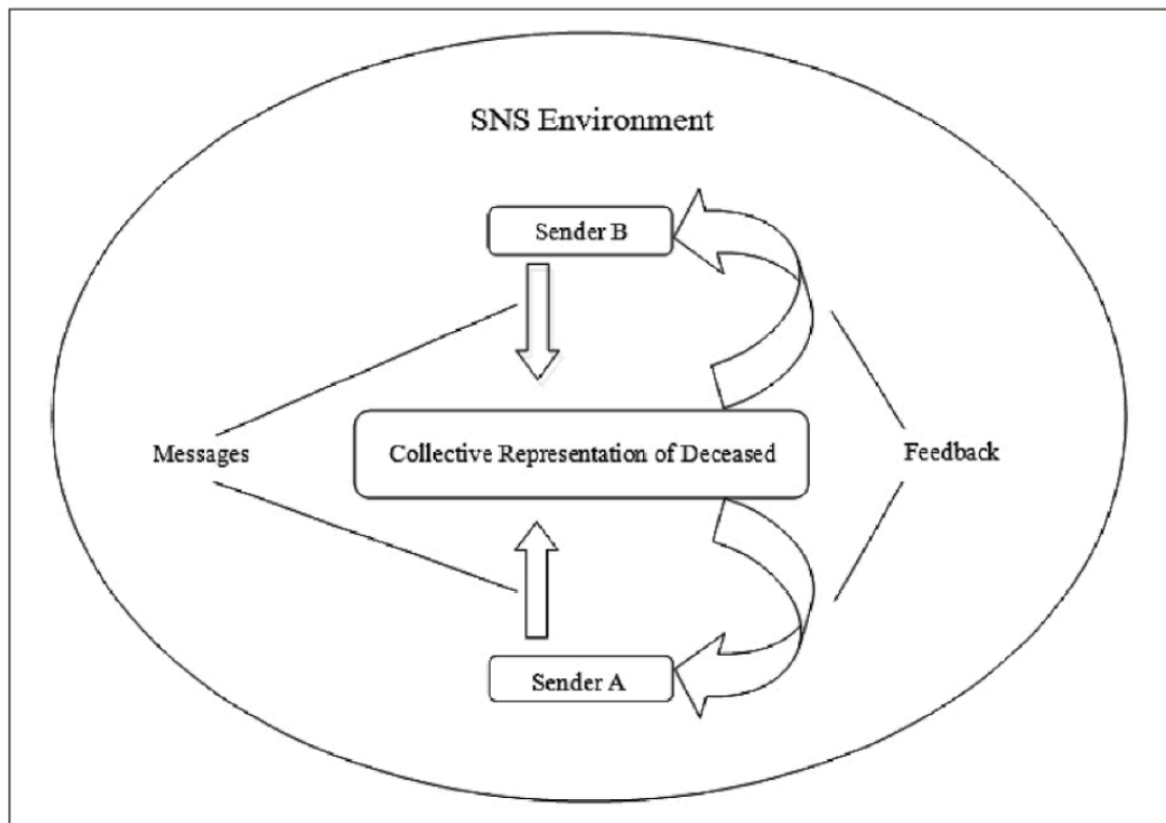


Figure 5: TcC in the Context of Online Environment Egnoto et al. (2014)

On this theoretical basis Egnoto et al. (2014) provided a model of TcC that placed the communication in an online environment.

"Expanding TcC to accommodate collective grief behaviors whereby multiple individuals contribute, reinforce, and put forth responses to the relational maintenance occurring with the bereaved across a whole network of individuals is a logical addition" (Egnoto et al., 2014: 299).

Through that multi input model, mourning individuals can use the space to grieve, while at the same time exchange information with others of that social group Egnoto et al. (2014).

2.5 Memorials on the Web

In general "web-based memorializing [can be considered] as an emerging set of social practices mediated by computer networks, through which digital objects, structures, and spaces of commemoration are produced" (Foot, Warnick& Schneider, 2005: 72).

There are event oriented memorials. An example of that are war memorials. These sites are predominantly institutionally supported (Arthur, 2009). On contrary to that the majority of memorials online is concerned with singular, private individuals rather than groups of people or events. Technology concerning bereavement is very rich and up to this date has integrated a digital version for most of traditional offline rituals. "In virtual worlds it is possible to create virtual tombs and other memorial shrines, and even arrange a funeral" (Haverinen, 2014: 37).

"Creating an online memorial website is similar to scrapbooking or arranging a photo album with little stories and anecdotes added with pictures. It is a way for the bereaved to arrange their memories in order and also to decide what type of memories are most important to be remembered and shared with others. [...] photographs in this case are most important material, since they are the visual symbols and proof of the past, reanimating the deceased" (Haverinen, 2014: 38).

Memorial websites contain more information than a gravesite on a cemetery. "Within most virtual memorials, people leave messages for the deceased, akin to physical letters left at the public shrine" (DeGroot, 2012: 197). Within personal memorial websites we differentiate between ad-hoc memorials, so called unintended memorials and memorials, that where exactly set up for that reason. Ad-hoc memorials comprise memorials where initially not intended as a memorial. An example of that a social media profile. Thus the profile was also set up by the then deceased. When this user (unexpectedly) dies it has been observed that other users of that social network turn the deceased profile into a place remembrance. Intended memorials on the contrary are set up by a third party but the deceased after the individual has died (e.g. Roberts & Vidal, 2000; Roberts, 2012; Brubaker & Hayes, 2011).

The first online memorials were posted in 1995. These were "like obituaries or gravestones inscriptions, [...] primarily text based, although some cemeteries allow for pictures and sound as well" (Roberts & Vidal, 2000: 522).

As online memorial types are becoming more diverse Roberts differentiates the following three between three types of web memorials: web cemeteries, webring and social network sites (Roberts, 2012). I further explicate these three forms in the subsequent subchapters.

One commonality consists of the fact that they are "either free or inexpensive to create" (Roberts, 2012: 56).

In addition to the advantages named in 2.4 "Grieving in the Internet Age- Memorializing the Dead Online", "a webpage does not wear out; it does not change in time. A web page does not gather dust and spider webs, it does not require conservation practices and it does not have to stand against climate and nature" (Haverinen, 2014: 36).

Concerning the aspect von continuing bonds, Church found that the circumstance of the online community being able witness "bereaved engage in communication with the deceased instead with other and yet strengthen the communal experience, as their personal communications are visible to the entire community" (Church, 2013: 188). In addition to this content, such as for example pictures and anecdotes, of these memorials symbolizes "both individuals and there community. They reflect many aspects of the culture they represent but are also connected to a specific time and history" (Haverinen, 2014: 35).

2.5.1 Web Cemetery Memorials

Web cemetery memorials are digital representation of cemeteries. Their "sole purpose is to house individual memorials to the dead; because of their similarities to physical cemeteries, I [Roberts] call them web cemeteries" (Roberts, 2012: 56).

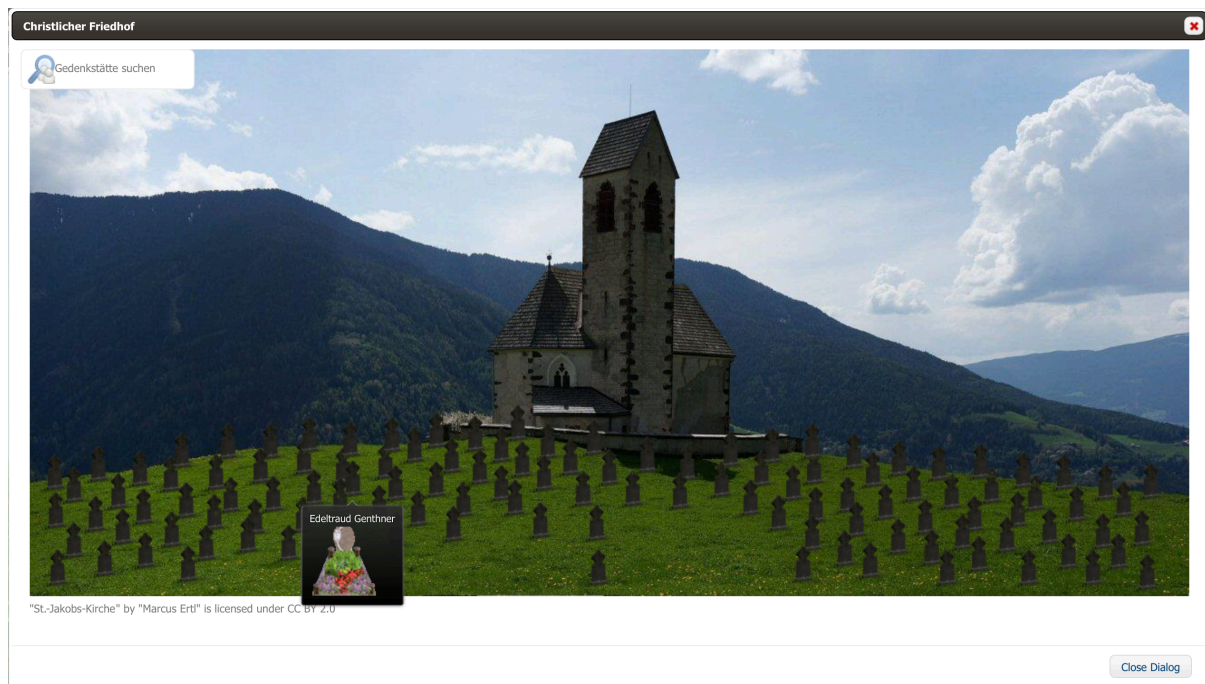


Figure 6: Online Cemetery (strassederbesten.de)

Web cemeteries are commonly hosted on a public domain and thus open for everyone with an internet access to see. While early forms of web cemeteries where based on an email form, authors today are usually presented with a template to fill out and additional tools individually design the space. In addition to that web cemeteries are provided with a

guestbook, which gives visitors the opportunity to write a message but also read those of other visitors (Roberts, 2012).

An example for an German format of such is strassederbesten.de. Here people are given the choice of 18 different grave sites to choose from. Options include a cemetery for celebrities ("Friedhof für Prominente"), a mountain cemetery ("Bergfriedhof") and Cemetery for the unforgotten ("die Unvergessenen"), to only name a few. The screenshot (figure 6) above captures the christian cemetery option. Clicking on one of the headstones, one is forwarded to a individualized, digital gravesite.

2.5.2 Webring Memorials

Individual Web memorials are distinguished by the users freedom to build and shape them to their own liking. On the contrary to Web cemetery memorials they do not provide a standard template to dictate the design (Roberts, 2004b).

Pages such as MyDeathSpace.com bundle the information in deceased social network users in that they collect the links links to the social network profile of the deceased and also add further information such as cause of death obituaries etc. concerning each deceased. In terms of collecting and linking various Web memorials pages, there are some (e.g. <http://rouwverwerking-inmemorian.startpagina.nl>) where creators of Web memorials are given the opportunity to place the link to their free- standing memorial site (Klaassens, Bijlsma, 2014).

2.5.3 Social Network Sites

When comparing social network sites to profiles on memorial sites

"in terms of continuity: (a) the mourning takes place in the same 'place' or 'space' as formerly, rather than in a new 'place' such as a virtual memorial site, and (b) interactions continues with the same co-constructed representation of self created during that person's life rather than with a new, eulogized representation of the person created by someone else in a virtual cemetery" (Kasket, 2012).

Problems with social network sites, such as Facebook are constituted through integrated features like "reconnect". So the social network would suggest people one did not have connected with via the platform for some time (Catro& Gonzales, 2010).

Social network sites "allow users to write messages to, share memories about, and otherwise memorialize the dead" (Brubaker& Hayes, 2011: 123). As explicated in chapter 2.4 "Grieving in the Internet Age- Memorializing the Dead Online" pros and cons were pointed out and discussed in great detail. Like with mourning in an online environment in general, aspect of geographical distance and spatial proximity is also obsolete when it comes to

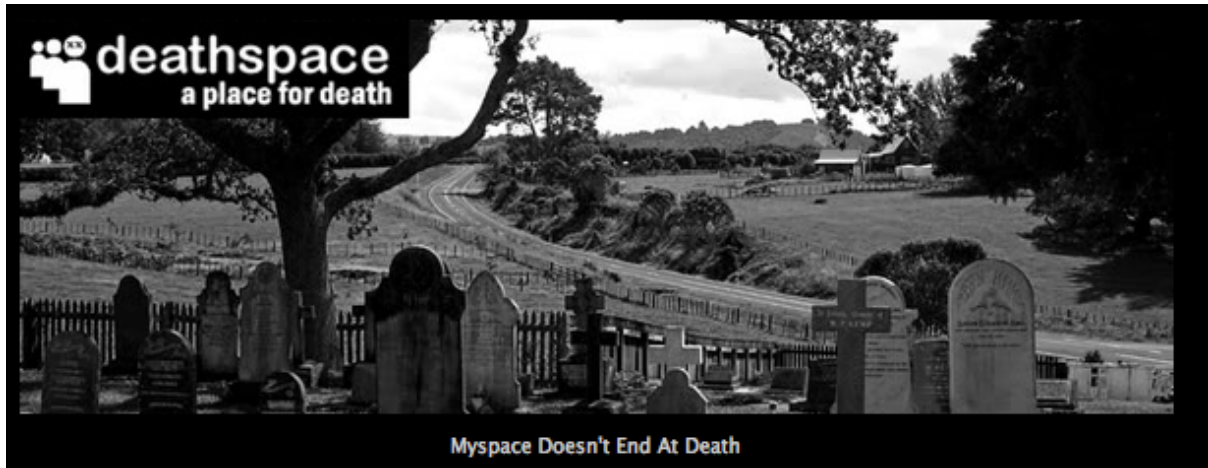


Figure 7: Social Network Sites Broach to the Aspect of Death Online (Carroll& Landry, 2010)

grieving in social networks. “Depending on their privacy settings, however, many SNS pages are open not to any surfing member of the public, but to a definable online community” (Walter et al., 2012: 288).

While the creator and user of the social network profile is no longer co-present in the offline context “the identity of the living creator shifts from mortal to postmortal, the cosmic realities that govern temporal space change. However, the digital identity maintains itself, still fluid and present to the community” (Church, 2013: 187).

As noted by previous research, “also noteworthy is the development of sites devoted to memorializing deceased MySpace users, sites that include Yourdeathspace.com and MyDeathSpace.com” (Carroll& Landry, 2010: 343).

3. Empirical Evidence

The following paragraph will first focus on the demographic characteristics of the deceased honored in Web memorials. Subsequent to this, demographics of the Web memorials will be in the center of examination. Finally, temporal patterns of posting behavior will be examined in relation to four different dates hypothesized to be of importance.

Except work done by Roberts and Vidal (2000) as well as Klaassens and Bijlsma (2014), the majority of research done in this field focuses on mourning in the context of social network sites. In particular, research has strongly focused on the content of messages posted to deceased people's social network appearance (e.g. Carroll & Landry, 2010; Brubaker & Landry, 2011). While work done by Roberts and Vidal (2000) focuses on North America, Klaassens and Bijlsma (2014) place their focus on Individual Web Memorials in the Netherlands.

3.1 Demographic Characteristics of the Deceased

Roberts and Vidal (2000) examined the characteristics of the deceased that were honored in Web memorials. In addition to that, they carried out an analysis of the content and format of Web memorials. Characteristics comprised variables such as age, gender, occupation and cause of death (e.g. Roberts & Vidal, 2000; Klaassens & Bijlsma, 2014).

Concerning age, they noted that “tributes were dedicated to the deceased of all ages (range=.003-97 years, n= 264), the average person memorialized was fairly young (M=47.0; SD=24.0)” (Roberts & Vidal, 2000: 525). When omitting memorials dedicated to babies (4.2%) and youngsters (under the age of 18) the mean changed from 47.0 (SD=24.0) to 51.9 (SD=20.5). In accordance to this, deVries and Rutherford (2004) found age on memorials of their examination to range from birth to 99 years of age (M=48.5). Blando et al. (2004) determined an age range of 16 months to 67 years with an average of 35 years. It is noteworthy however that their study solely focused on memorials dedicated to deceased of AIDS which serves to explain the relative young age.

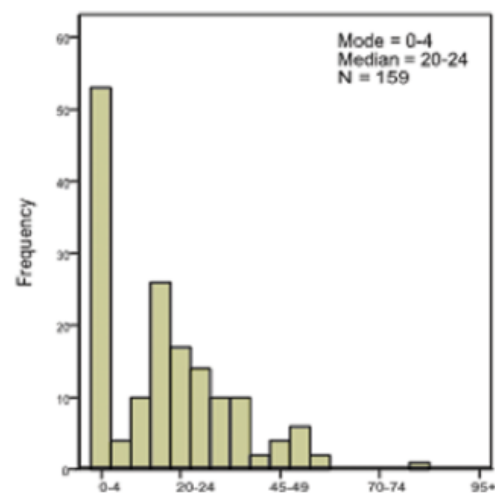


Table 1: Distribution of Age (Klaassens & Bijlsma, 2014)

Klaassens and Bijlsma (2014) compared the age distribution of those for whom an online memorial was created and those who died during the same period of time. “Age distribution

of those honored by a Web memorial is positively skewed [...], whereas the age distribution of the deceased Dutch population is negatively skewed“ (Klaassens & Bijlsma, 2014: 287). Possible reasons for the relative young age of the deceased found in the aforementioned studies (Roberts & Vidal, 2000, Klaassens & Bijlsma, 2014) are named to be a result of “perceived tragedy of early deaths” (Roberts & Vidal, 2000: 525) and/or in accordance with the age of computer users (Roberts & Vidal, 2000). Another possible reason is that parents grieving the loss of a child are considered disenfranchised grievers (e.g. Haverinen, 2014; see also chapter 2.4 Grieving in the Internet Age- Memorializing the Dead Online).

Concerning gender, research indicates the majority of Web memorials to be created to predominantly honor males (e.g. Blando et al., 2004; Roberts & Vidal, 2000; Klaassens & Bijlsma, 2014; deVries & Rutherford, 2004). In a study by Robert and Vidal (2000) gender distributed as follows: 62.0% of the memorials online were dedicated to deceased males, while 38.0% belonged to females. These findings are once again supported by additional research (deVries & Rutherford, 2004) where gender was distributed as follows: 57% (males) to 43% (females). Klaassens & Bijlsma (2014) noted a distribution of 52% (males) and 48% (females). When this is considered in relation to the overall number of deaths occurring during the same time span, the probability for women to be honored in an online Web memorial is more likely.

As can be inferred from the table 2, Roberts and Vidal (2000) found information concerning the cause of death indicated on 34.4% (95) of the profiles of examination (n=276). Compared to other research, this can be considered a rather high percentage. deVries and Rutherford (2004) found cause of death included in 14.8% of their sample, while Blando et al. (2004) found cause of death explicitly stated in only 7% of their sample.

Cause of Death	%	Age		
		<i>M</i>	<i>SD</i>	<i>N</i>
cancer	29.5	48.7	17.0	27
accident	23.2	23.2	13.0	21
AIDS	10.5	35.4	4.6	10
suicide	10.5	28.2	10.2	10
homicide	4.2	29.0	19.7	4
heart disease	2.1	79.5	9.2	2
other	20.0	43.0	26.5	19
Total Listed (<i>N</i> = 95)	100	38.0	20.6	93
No Cause Listed		51.9	24.3	171

Note: Ninety-five memorials listed cause of death, but only ninety-three listed both cause and age.

Table 2: Cause of Death (Roberts & Vidal, 2000)

Roberts & Vidal (2000) found that “the single most listed cause of death was cancer [29.5%], 37.9 percent of listed causes were clearly sudden (due to murder, suicide, or accidents) and others (including heart attacks and strokes) may have been” (Roberts & Vidal, 2000: 527).

According to their examination on the content of messages posted, they came to the conclusion that cause of death did have an effect on online memorialization. On the contrary to that research on Web memorials in the Netherlands indicates an overrepresentation of “causes that occur at a very young age such as conditions originating in the perinatal period and congenital anomalies“ (Klaassens & Bijlsma, 2014: 287). This is in accordance with the relatively low age average of their sample (20 years, *SD*= 19.8) and represents the cause of death for children under the age for four. These causes were followed by traffic accidents, cancer, and murder (Klaassens & Bijlsma, 2014). „Although diseases of the circulatory system are the most common type of death in the Netherlands, these are underrepresented in Web memorials“ (Klaassens & Bijlsma, 2014: 287).

3.2 Characteristics of Web Memorials

On contrary to unintentional memorials within SNSs such as Myspace and Facebook, Web memorials are not already in existence at the point of death of the person but have to be created by a third party after the person died (e.g. Roberts & Vidal, 2000; Brubaker & Hayes, 2011). Thus it is also possible to create memorials on the Web for people that have not died recently but a longer time ago. As can be inferred from table 3 the majority of the profiles were posted not in the first year (28.2%)

but in within the time span of 1-5 years (45.8%) post death. The oldest profile they were able to identify was dedicated to someone that had died in 1946. Overall 7.3% of the memorials were posted more than 20 years after the

Time Since Death	% of Memorials
Within 1 year	28.2
> 1–5 years	45.8
> 5–10 years	10.3
> 10–15 years	7.3
> 15–20 years	1.1
> 20 years	7.3

Note: *n* = 273.

Table 3: Time since Death (Roberts& Vidal, 2000)

death of a beloved had occurred. While anniversaries were mentioned on some memorial profiles, catalysts for opening a Web memorial varied (Roberts& Vidal, 2000). On the contrary to that research on Web memorials in the Netherlands indicates that the majority of them was „constructed within the first year after the death (55.6%)“ (Klaassens & Bijlsma 2004: 290). 12% of the memorials of investigation were set up 6-11 year after the death, while the study by Roberts and Vidal (2000) indicates 7.3% of the memorials were constructed more than 20 years after the death of a person.

Demographic information of the deceased such as age and gender did not have an influence on the elapsed time since dead and the posting of the memorial profile (Roberts& Vidal, 2000).

Only 8.3% of the memorials examined included pictures. The majority of these pictured the deceased alone. Differences according to gender and the likelihood of the inclusion of a photograph could not be found (Roberts & Vidal, 2000).

Opportunities to memorialize someone in an English speaking context, especially North America, are much broader than in other parts of the world. This is partially due to the fact that the practice of memorializing someone online started much earlier in North America. The first online memorials accounted for are dated in 1995 (Roberts, 2004a). As a consequence, previous research on this matter was able to compare different kinds of Web memorials with each other. Studies conclude that “although there are few constraints on format or content, each cemetery apparently has been creating its own tradition or climate” (Roberts & Vidal, 2000: 540). Same formats showed differences in the way they were adapted by the users. Some Web memorials were chosen to pay tribute to older individuals and did so by including photographs and primarily listing accomplishments. Empirical data on another Web memorials indicated higher numbers of memorials created within the first year after the death (Roberts & Vidal, 2000).

Concerning pictorial content on Web memorials and/or social network profiles of deceased people, “the digital gravescape is devoid of aesthetics conventionally associated with memorials” (Church, 2013: 187). In the case examined by Church (2013) a single Facebook profile of a deceased person was in the focus of examination. On their various posts of “grieving friends included visual imagery of the afterlife as endless mountains of snow and other such motifs of pristine nature” (p. 187). In addition to that “there was no physical casket or headstone to reinforce the reality of her death; only her vibrant pictures” (Church, 2013: 187). “Candid photographs- and even more so home movies and videos- have a remarkable capacity to capture a moment in time so that, uncannily, subsequent generations can witness the dead as though alive” (Walter, 2015b: 224).

3.3 Temporal Patterns of Posting

Applying a mixed methods approach, Brubaker and Hayes (2011) examined 205,068 comments which were posted to 1369 MySpace profiles belonging to deceased users that had been dead for at least three years. In particular they were concerned with “issues of authorship and audience, the temporal patterns present in commenting behavior and content, and the practices of continued social networking with the dead” (Brubaker & Hayes, 2011: 123).

Their study is unique in their focus on temporal patterns of posting behavior in relation to the day of death, birthdays and the calendar year (Brubaker & Hayes, 2011). They “observed spikes in the number of comments relative to the death of an individual, anniversary of that death, birthdays, and popular holidays” (Brubaker & Hayes, 2011: 127).

As can be inferred from figure 8 they discerned that there is a stark increase of posts on the profiles of deceased people immediately after the death. This then gradually declines within the first 10 days. In their content analysis they come to the conclusion that the content of comments also changes over time (Brubaker & Hayes, 2011). They draw the conclusion that “the MySpace interface continues to perform the deceased’s identity; [...] comments responding to the owner’s death [...] are immediately preceded by more casual messages that reference lived interactions and events” (Brubaker & Hayes, 2011: 127).

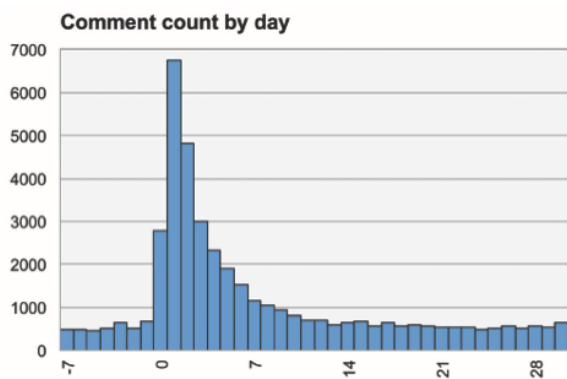


Figure 1. Aggregated count of comments by day across the sample between 7 days prior to and 30 days following death. The frequency of comments spikes following the death of a user and then quickly declines.

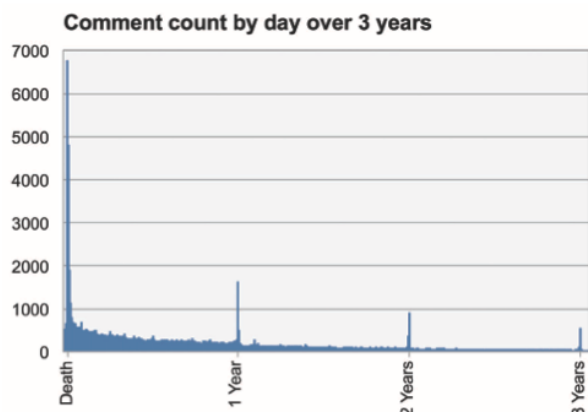


Figure 2. Aggregate count of comments by day over 3 years. Following the death of a user, the volume of posts continues to spike on yearly intervals as users memorialize the anniversaries of their dead friends.

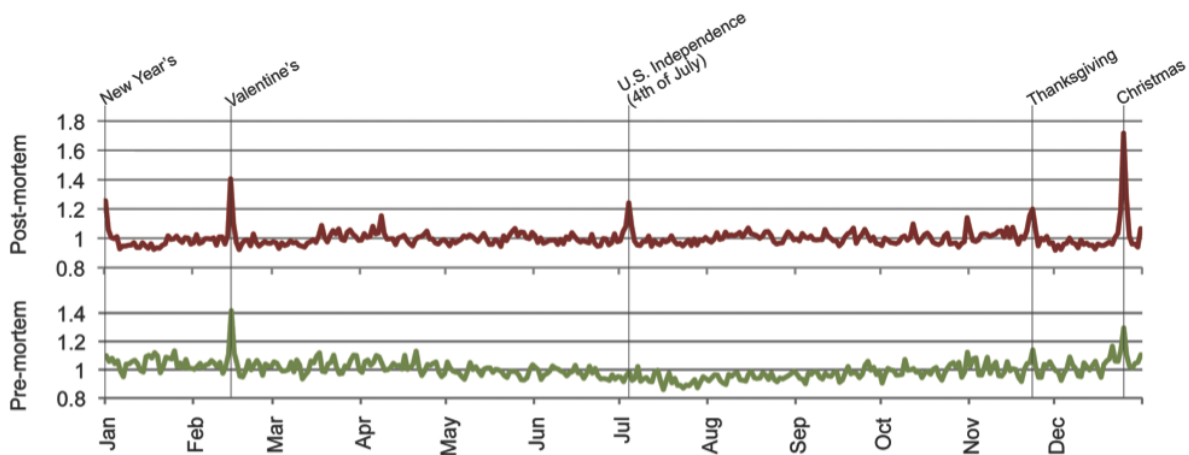


Figure 8: Temporal Patterns of Communication (Brubaker & Hayes, 2011)

As can be expected by the various models of grief, while some users turn to a deceased profile for a final goodbye; others use it for an integration of the deceased in their ongoing daily lives. This is mirrored in the frequency of posting behavior, which tends to decline over time. However, when examining the quantity of posts in relation to anniversaries of death,

as well as the deceased users birthdays and holidays, the number of messages spike up. When examined over time, these spikes do however also decline in quantity of posts. This has previously been explained by the grieving process in general. As time progresses, the bereaved invest less time in interacting with the profile of the deceased. Another explanation offered is that of general changes of usage within and surrounding social media. MySpace profiles of examination in this particular study exclusively included those of people that have been dead for at least three years. It has to be assumed, that during this time there have been shifts in popularity and usage of social media in general but also in particular concerning MySpace as an active social network (Brubaker & Hayes, 2011).

“When considered together, the temporal trends observed here indicate that some of the patterns of a Western notion of progression through grief impact the use of MySpace. [...] demonstrate how MySpace may enable prolonged connections to the deceased, particularly in relation to life events that might prompt a survivor to reconnect [...] and circumstances in which automated system features continue to connect survivors to the deceased” (Brubaker & Hayes, 2011: 129).

Castro and Gonzales (2012) examined Facebook postings prior to and after death. Their analysis revealed that the number of postings to a profile after the event of death is almost twice as high. But when eliminating categories that comprise messages referring to the death of the person, the amount of messages posted to the profile stays statistically the same as before the death of the person.

4. Research Questions and Hypothesis

On the basis of previous empirical research as it is portrayed above, we are provided with a wealth of information concerning Web memorials and grieving online in the cultural context of North America. Though Church (2013) suggests that the cultural context becomes obsolete when grieving online, empirical research by Klaassens and Bijlsma (2014) indicated varying results when examining Web memorials in the Netherlands. Thus, in order to gain more insight into the descriptives and temporal patterns of communication on Web memorials in the German speaking area, the following research questions and hypothesis were formed.

RQ1: *Which kind of profiles can be found on Web memorials in the German speaking area?*

Demographic characteristics of the deceased factor in when deciding on whether a Web memorial is created to honor the deceased person (e.g. Roberts & Vidal, 2000; deVries & Rutherford, 2004). In their quest to gain a better understanding of who is commemorated in the context of an online memorial, previous empirical work (Klaassens & Bijlsma, 2014) has examined individual Web memorials in the Netherlands. Concerning demographics of the deceased they examined the profiles for gender (**H.1**), age (**H.2a** & **H.2b**) and cause of death (**H.3**).

On this basis the following hypothesis can be formed about the kind of profiles that can be found on Web memorials in the German speaking area:

H.1: More profiles are created commemorating male deceased than female.

Various previous empirical studies indicated memorials to be predominantly established for younger males (e.g. Blando et al., 2004; Roberts & Vidal, 2000; deVries & Rutherford, 2004).

H.2a: Memorial profiles are established for deceased of all ages.

H.2b: Deceased memorialized in Web memorials are on average rather young.

As portrayed more explicitly in 3.1 “Demographic Characteristics” previous empirical research by Roberts and Vidal (2000) indicates that while online memorials are established for “deceased of all ages (range= .003-97)” (Roberts & Vidal, 2000: 525) the average of people honored in the framework of a Web memorial tends to be rather young ($M = 47.0$).

H.3: Profiles predominantly belong to deceased that died of a unexpected and sudden cause of death.

This hypothesis is based on previous research (Roberts & Vidal, 2000) which indicated the most reported cause of death on web memorials to be of sudden and unexpected nature.

RQ2: *What are influencing factors contributing to activity on Web memorials in the German speaking area?*

H.4a: Pictures of the deceased during his/her lifetime will contribute positively to activity on the Web memorial.

H.4b: Pictures that focus around the matter of death will contribute negatively to activity on the Web memorial.

The discursive surface of investigation is very similar in appearance to that of common SNSs such as Facebook and Myspace. Church (2013) describes it as an “incongruous space where the dead person was still in the presence of the living and seemingly communicating from the grave” (Church, 2013: 184). While this might be due to the fact that the bereaved used to communicate to the deceased via this SNS, it might also be a result of the profile content, such as pictures from the deceased’ lifetime. “The digital medium offers an illusion of a two- way communication [...] the digital space created by Clarissa [the deceased] maintained the same aesthetic appearance after her death as it did during her life” (Church, 2013: 187).

RQ3: *What are characteristics of temporal patterns of user behavior that can be found on Web memorials in the German speaking area?*

H.5: The frequency of messages posted on Web memorial profiles will peak on the deceased’ birthday.

H.6: The frequency of messages posted on Web memorial profiles will peak on the anniversary of death of the deceased.

H.7: The frequency of messages posted on Web memorial profiles will peak on important dates of the calendar year.

As portrayed in greater detail in section 3.3 “Temporal Patterns of Posting” previous empirical research by Brubaker and Hayes (2011) examined the temporal patterns of posting on Myspace profiles of deceased that had been dead for at least three years. They found a greater frequency of comments on dates relative to the anniversary of death, the deceased’s birthday and popular holidays. An overall tendency indicated a gradual decline of posts within 10 days of the death of the deceased (Brubaker & Hayes, 2011).

5. Measurements and Method of Analysis

Like previous studies that focused on an empirical investigation of demographic characteristics of deceased people commemorated in Web memorials (e.g. Roberts & Vidal, 2000; Roberts, 2004b; deVries & Rutherford 2004; Klaassens & Bijlsma, 2014), descriptive statistics were applied to the collected data.

A reliability test was carried out. In doing so, 50 cases were coded by three different coders. Demographic information was copy pasted from the profile. Because of the template this information was always found at the same place and had not to be searched for in any particular way. In addition to that, due to the nature of the data no work of interpreting was necessary. As a result reliability for these variables was given 100%.

5.1 Operationalization of Descriptives of the Profiles

RQ1: Which kind of profiles can be found on Web memorials in the German speaking area?

Profiles were examined for demographic characteristics of the deceased. Variables for coding the content of profiles was based on previous research on Web memorials (e.g. Roberts & Vidal, 2000; Klaassens & Bijlsma, 2014). Demographic variables comprised age, gender, and cause of death. Age was not always explicitly indicated and thus had to be calculated using the date of birth and date of death as indicated.

Gender of the deceased was inferred from the template of the obituary on the profile, as the text referred to the deceased by him or her.

Cause of death was coded only if identified as such on the website. Categories were formed and adapted on the basis of previous empirical work by Roberts and Vidal (2000). It was adjusted in that AIDS was left out as a singular value. It is now subsumed in the parameter value "Other Sickness". Due to the large number of profiles that are dedicated to stillborns, the present code book was extended to this variable. The following causes of death were included in coding: accident, suicide, homicide, heart disease, cancer, other sickness, stillborn.

In addition to that descriptives of the profiles were also examined. Coding variables consisted of the date of account opening, account clicks since then and the inclusion of pictures. Concerning the inclusion of pictures the total number of pictures as indicated in the dedicated section of the profile, as well as the kind of pictures were accounted for.

Previous analysis (Roberts & Vidal, 2000) of the content of online memorials only considered whether pictures in general were included or not. "Photos uploaded [...] create a virtual representation of the deceased" (DeGroot, 2009: 71). This in turn will affect how visitors to the memorial page will envision the deceased. "Affecting one's internal vision of

the deceased can consequently affect communication that occurs between the living and the deceased“ (DeGroot, 2009: 71).

Due to this lack of empirical research concerning the various kind of pictures in the context of online memorials, variables were determined through a preliminary randomized sighting of 50 cases (profiles). This resulted in the following categories: (V13a) artistic, (V13b) after death, (V13c) symbolic, (V13d) private/ family pictures, (V13e) news coverage, (V13f) obituary/ death notice, (V13g) place of death/ accident, (V13h) deceased/ dead body. In the following these categories will be explained in more detail.

(V13a) Artistic

Pictures are considered artistic, if they contain obvious altering. Artistic pictures often also contain and/ or are based on private/ family pictures.

(V13b) After Death

This variable subsumes pictures taken after the person who the Web memorial is dedicated to died. It may contain images of a commemoration ceremony funeral, urn, casket, graveside, etc.

(V13c) Symbolic

Images containing symbols associated with death and mourning. In particular these images may contain flowers, angels, rainbows, etc.

(V13d) Private/ Family

Images picturing the deceased in the context of friends and family.

(V13e) News Coverage

Pictures taken of for example newspaper article surrounding the death. This can especially be found in the case of a homicide or accidents.

(V13f) Obituary/ Death Notice

Pictures of traditional death notices extracted from other mediums of communication e.g. newspapers.

(V13g) Place of Death/ Accident

Images picturing the place where the person the memorial is dedicated to died (e.g. crash site of an accident).

(V13h) Deceased/ Dead Body

Images that explicitly show the deceased. Pictures that show certain body parts, such as holding the deceased hand, also apply to this category.

In addition to pictorial content, the number of messages in the form of remembrance candles was also coded for.

5.2 Operationalization of Activity on Web Memorials

RQ2: What are influencing factors contributing to activity on Web memorials in the German speaking area?

As it is true for other formats of the same kind, the memorial Webpage of interest (gedenkseiten.de) only allows the creator of the memorial profile to add general content. Visitors are given the option to post messages in the form of remembrance candles. Visitors to the page do not have the option of further add pictures or videos of the deceased. Thus activity will be measured by the number of posts in form of remembrance candles that can be found per case.

Ongoing communication with the dead can be considered a phenomenon subsumed under the continuing bonds (see 2.2 "The Grieving Process"). "The continuing bond experienced by mourners can be inferred from modes of address, frequency and persistence of posting messages, and frequency of participants' reported visits to the profiles" (Kasket, 2012: 66). Date stamps of each message posted was gathered in coding, like was the clicks each case had received.

5.3 Measuring Temporal Patterns of Posting

RQ3: What are characteristics of temporal patterns of user behavior that can be found on Web memorials in the German speaking area?

Due to the nature of the data examined, every single case underlies an individual day of birth, day of death and date of account opening. As a result temporal patterns of posting behavior, have to be examined in relation to dates hypothesized to be important. On the basis of previous research on temporal patterns of posting these dates of reference were chosen to be (1) account opening, (2) birthday, (3) anniversary of death and the (4) calendar year (Brubaker & Hayes, 2011).

The date of relevance of each case (1-3) was then standardized and examined in terms of months elapsed in relation to the date of relevance. Concerning the fourth case, calendar year, the date of reference was set on April 8th 2015, which constituted the last day of coding.

In addition to the complete data set of n=500, each analysis of posting patterns was likewise carried out for the dichotomized data set.

For each of the four visualizations four variables were necessary to determine. First, the forth going time in months standardized to the chosen date of relevance. Second, the frequency of messages that were posted in each of the according months had to be determined. Third, the number of active profiles during each of the according forth going months that were determined in the first step had also be recorded. In a fourth step the mean of the number of messages in each month (2) over the number of active profiles (3) was calculated.

(1) Account opening

The date of account opening for each individual case was gathered in coding, like was the date stamp of each message that was posted on the according profile. The difference in time was standardized to months. Forth going months was calculated in reference to the date of opening of the memorial. The frequency of number of messages that were posted in each of the according months was determined by calculating the difference of time elapsed between the date of account opening and the date of posting of the messages. The number of active profiles per forth going month was determined by calculating the difference in time between the date of account opening and the last day of coding (08.04.2015).

(2&3) Birthday and Anniversary of Death

The date of birth and date of death for each individual case was gathered in coding, like was the date stamp of each message that was posted on the according profile. On contrary to SNSs profiles were not created by the deceased him or herself but by a third person (Roberts, 2000). As a result the time elapsed between death and opening of the online memorial differed in each individual case. Thus the first date (birthday and anniversary of death) after the opening of the Web memorial was determined as a point of reference. Due to that the difference between the two points in time could reach a maximum negative value of -11 months.

First, the forth going time in months standardized to (2) the first birthday of the deceased/ (3) the first anniversary of death after the opening of the memorial profile. In a next step the frequency of messages that were posted in each of the according forth going months had to be determined. This was done by calculating the difference in time (standardized to months) of (2) the first birthday of the deceased/ (3) the first anniversary of death after the opening of the memorial profile and the message posted. Third, the number of active profiles during each of the according forth going months that were determined in the first step had also be recorded. This was done by calculating the difference of the first day In a fourth step the

mean of the number of messages in each month over the number of active profiles was calculated.

(4) Calendar Year

Concerning calendar year the date of reference was set to the last day of coding (08.04.2015). This date was chosen due to the fact that all profiles of examination were in existence at this point of time. To determine the number of profiles that were active in each of the forthcoming months the difference of account opening and the 08.04.2015 was calculated (t standardized to months).

5.4 Sample

The sample consists of 500 Web memorial profiles from "gedenkseiten.de". Profiles were chosen through randomization from a total number of 10861 Web memorial profiles.

Profiles in honor of celebrities were omitted. In addition to that profiles dedicated to *general* tragedies and groups of victims were omitted (e.g. passengers of flight MH370, Titanic). These conditions of exclusion are in accordance with previous research on Web memorials (deVries & Rutherford, 2004). Also, profiles where authenticity was doubted, were omitted from the sample.

In order to be able to observe a variation of posting over time, profiles had to be in existence for the minimum of one year on February 16th 2015. Coding then took place from February 17th 2015 to April 8th 2015. Profiles were coded online.

5.4.1 gedenkseiten.de

The focus within this work is put on "gedenkseiten.de"; a German format of Web memorials. An account can only be opened by creating a memorial profile.

As of May 3rd 2015, the website contained 15.210 profiles with 813.604 remembrance candles. The description of the homepage is portrayed from the perspective of that any visitor to the page gains without having to log in or create an account. The creation of a user account is only possible through the creation of a memorial profile.

When entering the homepage one is offered the option to register to create a profile or log in if one has already done so. Below tabs navigate through the page to jump to (1) Main Page, (2) Memorial Profiles, (3) Remembrance Candles, (4) Magazine, (5) Help (Startseite, Gedenkseiten, Trauerkerzen, Magazin, Hilfe). Another button on the very right side suggests to recommend the Webpage on Facebook and indicates that it currently has 37.210 likes (as of May 3rd 2015). This section stays static and is always visible when navigating through the Website. Below the tabs the visitor is once again invited to sign up and create a profile. Within this field it is also stated, that doing so is 100% free of cost and easy to create. In

addition to that it is emphasized that this embodies an opportunity to share with friends and family. Below there are two boxes, of which the left one lists profiles of six premium profiles. Each listing contains the following information: profile picture of the deceased, date of birth, date of death, who the profile was created by (name), and when the profile was created (date and time). Followed by that is a link to visit the profile. For the time of coding the first five of the listed profiles stayed static, while the sixth changed. The placement and exposure of the profiles listed in that field might trigger a higher visitation and possibly posting of additional messages. As a result none are part of the sample for examination. The right box contains a list of the newest remembrance candles on the homepage as they were posted on memorial profiles. Each listing in that category depicts the individual candle (as everyone has the option to choose a different color and shape). In addition to that, it states the name of the deceased person the candle was dedicated to, as well as the date of birth and death. Below is a box with the headline “Today we commemorate...”. It contains a listing of six more profiles of persons that are having their anniversary at the day of visitation of the homepage. On the bottom of the page are three paragraphs written about memorial Websites on the Web. They describe the features and benefits in terms of grieving and shortly touch upon a historical contextualization of online memorials.

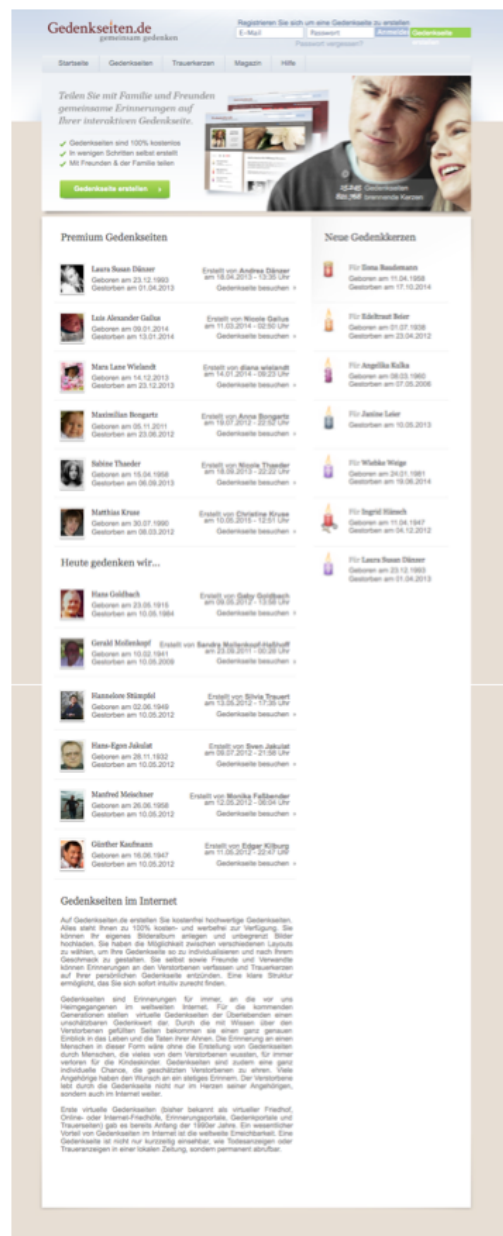


Figure 9: Startpage gedenkseiten.de

When choosing the second tab on the top “Memorial Profiles” it navigates to a listing of the most visited profiles. On the left side further navigation options within the chosen tab consist of (1) Today, (2) All Memorial Profiles, (3) Most Visited, (4) Deceased Children, (5) Premium, (6) Roll of Honor, (7) Own Memorial Profile (Heute, Alle Gedenkseiten, Meist Besucht, Sternenkinder, Premium, Gedenktafel, Eigene Gedenkseite).

When choosing the third tab on the top “Remembrance Candles” it navigates to a listing of the most visited remembrance candles. On the left side further navigation options within the chosen tab consist of (1) All Remembrance Candles, (2) Most Visited, (3) Light a Candle (Alle Trauerkerzen, Meist besucht, Kerze anzünden).

The fourth tab on the top “Magazine” navigates the visitor to collection of various articles with a thematic range from general information concerning tips on how to behave in case of the death of some to the most famous cemeteries and the oddest causes of death etc.

The help button on the top right navigates the visitor to a general listing of frequently asked questions.



Figure 10: Popup Advertisement

While online memorials are usually free of advertisements (Roberts, 2006) pop up advertisements do occur when visiting the Webpage of investigation. In these advertisements visitors are encouraged to purchase a burial insurance (see add number).

5.4.2 Memorial Profiles

When visiting a memorial profile the visitor is navigated to the starting page of the profile, which is handled under the first tab of navigation on the top right side (1) “Obituary” (Nachruf). Additional navigation tabs include (2) Remembrance Candles, (3) Pictures, (4) Videos, (5) Condolence Book (Gedenkkerzen, Bilder, Videos, Kondolenzbuch). Underneath these tabs a box is placed containing a profile picture, name, date and place of birth and death (space A). A individual cover picture can be placed in the box right next to it (space B). Templates to choose from are also offered by the Website.

A box (space A) placed under the general information about the deceased, which is here defined as space C contains virtual gifts visitors can leave.

Space D consists of the option to start background music. It is followed by a listing of the latest three messages in form of the remembrance candles posted to the profile. It is

followed underneath by space E, which contains information about the when the profile was opened and how many account clicks the profile has received since then and who (name) created it. Date and place of birth, date and place of death, as well as zodiac sign are listed. Underneath this information the visitor to the profile is encouraged to start creating a memorial profile.



Figure 11: Memorial Profile on gedenkseiten.de

Sections A-E stay static throughout the entire visit to the profile (framed in red). Space F then contains the obituary, where the creator of the profile has the option to write about the deceased. Underneath pictures are previewed, that can be viewed in more detail when visiting the picture section (3).

The navigating to (2) “Remembrance Candles” (Gedenkkerzen) visitors are presented with the total number of remembrance candles that have yet been posted to the profile (space G). They are further encouraged to light a candle of their own. This is followed by a listing of these messages. They consist of a picture of the candle chosen, a headline to the message, information about who (name) posted it and when (date DD.MM.YYY and time MM:HH). The messages are ordered chronologically starting with the last candle posted to the profile. Depending on how many candles were posted to the profile, one can browse to

more messages by browsing the next page. One listing can contain a maximum of 70 messages.

Lighting a candle (see template G.1) and by that leaving a message is possible to every visitor. One has the option to choose from 15 different styles and 21 different colors. In a next step one is requested to add a title, followed by the message. Messages can to only composed of letters; no pictures can be uploaded. Finally a name of the author is to be inserted. An email address can be stated, though it is clearly remarked as optional. The process concludes with entering a security code to prevent computer automated spam.

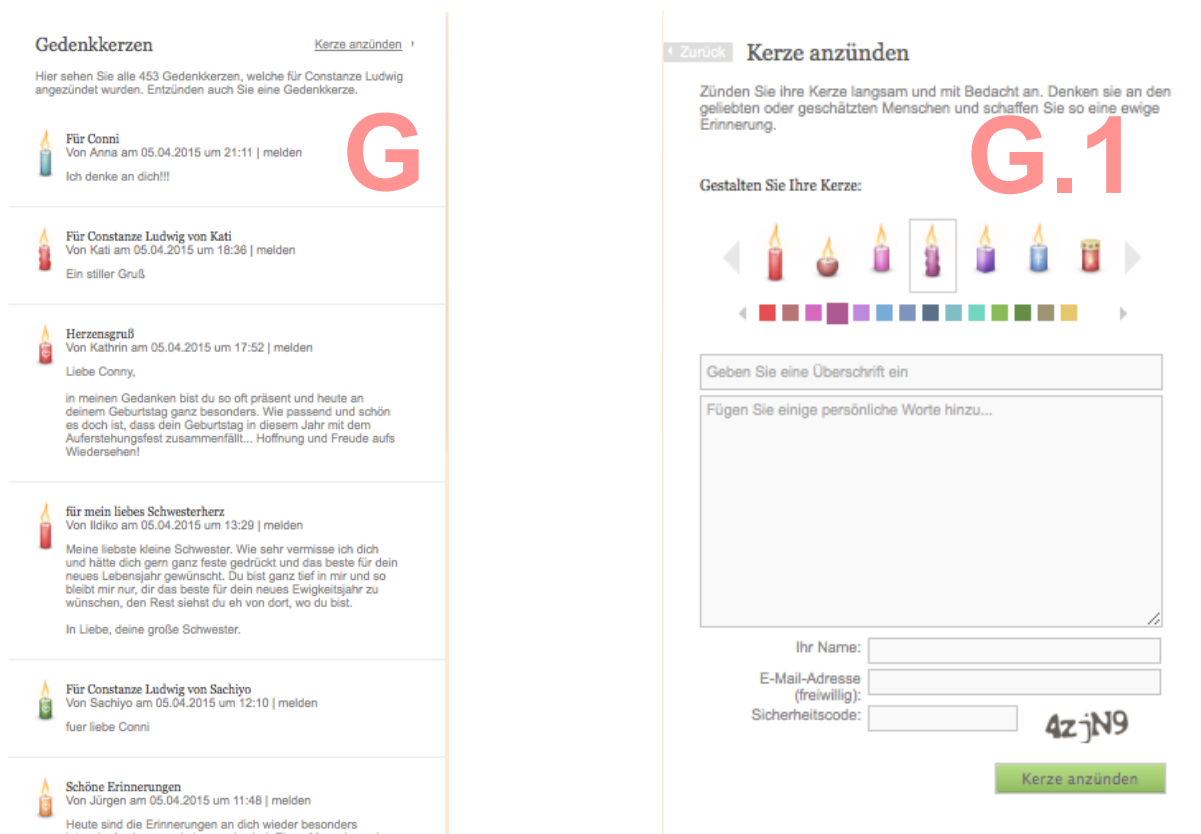


Figure 12: Message Interface on gedenkseiten.de

The third tab on the main navigation then brings the visitor to a listing of the (3) pictures and (4) videos which were optionally uploaded by the profile creator. The fifth tab navigates to the condolence book. Here visitors also have the option to leave an entry. The template is of the same looks as when lighting a candle but requires less information (title, message, name, security code).

6. Results

The following section will discuss the results as indicated by the empirical data. In a first step descriptives of the profiles and demographics will be described. Subsequent to this the results in terms of temporal patterns of posting behavior by the visitors of Web memorials will be described.

6.1 Demographics of the Sample

Age (in years) ranged from 0 to 98. An early control for the distribution of the overall sample showed a group of outliers for young deceased. As indicated by the skewness factor of $-0,353$ a normal distribution was however given.

To account for the statistical outlier, a dichotomization examination was carried out for all deceased under the age of 18. This is in line with previous research (Klaassens & Bijlsma, 2014). 64 out of the 500 profiles examined were dedicated to persons aged 18 or under. 28 (43,8%) of these were dedicated to females, whilst 35 (54,7%) were dedicated to males. In one (1,6%) of the profiles gender was not discernible.

Gender of the deceased honored in Web memorials was distributed as follows: 217 of the profiles belonged to females and 282 to males. In one profile gender was not discernible ($n=500$). Thus hypothesis **H.1** stating that the majority of the profiles are created for males proves also to be true for Web memorials in the German speaking area.

436 out of the 500 profiles examined belonged to people aged 19 or older. Maximum age indicated was 98. 189 (43,4%) of these belonged to females; 247 (56,7%) to male deceased. The mean was indicated at 49,47 years of age. When omitting the statistical outliers by only considering profiles dedicated for deceased aged 19 and older the mean is indicated at 55,99 years of age.

This is in accordance with the predictions made in **H.2a**, as well as **H.2b**. As portrayed above, profiles are created for people of all ages (0-98 years) while the average of people honored in Web memorials is indicated at a rather young age.

Cause of death was discernible in 141 (28,2%) of the cases. 22 (4,4%) of these cases accounted for cause of death to be due to an accident, 13 (2,6%) suicide, 3 (0,6%) heart disease, 3 (0,6%) cancer, 26 (5,2%) stillborn and 4 (0,8%) other. "Other" included cases were death attributed to causes such as a drug overdose and anorexia. 70 (14,0%) of the cases only indicated that the person died of a sickness of but did not further explicitly clarify cause of death.

Hypothesis **H.3** reads that the majority of the deceased that are honored in Web memorials died of a unexpected and sudden cause of death. On the basis of the collected data this cannot be proven true. "Other sickness" might constitute the case of an unexpected and sudden death but does not have to be.

6.2 Descriptives of the Profiles

The difference in time elapsed since the day of death and the creation of the profile was measured in months. When examining the overall sample (n=500) the mean was determined at 50,88. This indicates that on average approximately four years pass until a memorial profile is created.

Examining profiles dedicated to people aged 19 and above (n=436) the mean was calculated at 50,72. Profiles dedicated to people aged 18 and below (n=64) the mean was calculated at 52,00. Thus no differences can be inferred when differentiating between age groups.

Out of the 500 profiles of examination 215 (43%) had pictures added to them. When dichotomizing according to age groups of people under or 18 years of age or 19 years of age and above; out of the 64 profiles dedicated to deceased before reaching the age of 19, 28 (43.75%) profiles contained pictures, while 36 (56.25%) did not.

Concerning profiles (n=436) in honor of people aged 19 and above 187 (42.9%); 249 (57.1%) did not contain pictures.

Account clicks ranged from 174 minimum up to 144972 (n=500; M: 4474,75). When dichotomizing the data account clicks where higher for the younger age group (n=436; M: 3556,01) (n=64; M: 10733).

6.3 Activity on Web Memorials

Number of messages as the dependent variable ranged from 1 to 4911 messages and indicated a skewness of 17.304. After applying a boxplot, the case represented as the top whisker was decided to be neglected in the analysis. However the skewness factor was still indicated at 5,583.

In order to further reduce the skewness a log transformation ($\log(X_i)$) of the data was performed. "Taking the logarithm of a set of numbers squashes the right tail of the distribution. As such it's a good way to reduce positive skew" (Field, 2011: 155). As a result skewness reduced to ,5.

Multicollinearity of the independent variables was assumed in the early stages of analysis. To control for this the variance inflation factor (VIF) was determined. As described by Field

”the VIF indicates whether the predictor has a strong linear relationship with the other predictors” (Field, 2011: 24).

When examining the influencing factors contributing to activity on the profiles a regression analysis indicated significant results for the following variables: “age of the deceased”, “the time elapsed between the occurrence of the death and the account opening”, “symbolic pictures”, “family pictures” and “account clicks”.

Concerning the age of the deceased a significant influence is shown by the data ($\beta = -.216$, $p < .001$). This indicates that the older the deceased was, the less activity was to be found on the profiles.

In addition to that the longer the time elapsed between the occurrence of death and the opening of the Web memorial the fewer activity was indicated ($\beta = -.101$, $p < .01$). A highly significant result was indicated for symbolic pictures ($\beta = .071$, $p < .001$). According to the data they contribute to more activity on the memorial. Pictorial content in the form of family and private pictures also indicated a significant result ($\beta = .234$, $p < .05$) that indicates that more messages are posted when these contents are available.

Account clicks also indicated a highly significant result ($\beta = .392$, $p < .001$). It must not be forgotten though, that in order to post a messages on a Web memorial the visitor has to click on the profile prior to doing so.

Hypothesis **H.4a** which reads that pictures of the deceased during his/her lifetime will contribute positively to activity on the Web memorial can thus be validated by the data at hand.

Hypothesis **H.4b** which reads that pictures that focus around the matter of death will contribute negatively to activity on the Web memorial can not be validated by the data.

Table 4: Activity on Memorial Profiles

	1 β (Std. Error)	2 β (Std. Error)	3 β (Std. Error)	4 β (Std. Error)
Age	-,376*** (.002)	-,317*** (.002)	-,312*** (.002)	-,216*** (.002)
Gender	-,028 (.122)	-,015 (.104)	-,019 (.103)	-,001 (.093)
Time Elapsed Between Death and Account Opening	—	-,119*** (.000)	-,115*** (.000)	-,101** (.000)
Artistic	—	,095 (.197)	,055 (.199)	,058 (.180)
Post Death	—	,139*** (.175)	,087* (.180)	,042 (.165)
Symbolic	—	,073 (.182)	,068 (.179)	,071* (.162)

	1 β (Std. Error)	2 β (Std. Error)	3 β (Std. Error)	4 β (Std. Error)
Private/ Family Pictures	—	,296*** (.120)	,222*** (.130)	,234*** (.118)
Obituary	—	,072 (.286)	,040 (.288)	,007 (.263)
Place of Death	—	,003 (.664)	,007 (.654)	,025 (.595)
Deceased	—	,004 (.413)	-,004 (.407)	,033 (.372)
Number of Pictures	—	—	,203*** (.010)	,040 (.010)
Account Clicks	—	—	—	,392*** (.000)
F (df)				
R ² Adjusted	,135	,380	,399	,505

* $p < .05$, ** $p < .01$, *** $p < .001$

However, when examining the younger age group (0-18 years of age), analysis solely indicated significant results for the variables “family pictures” and “account clicks”.

Private and family pictures correlated positively and was highly significant in that it contributes to more messages on Web memorials ($\beta = .417$, $p < .001$).

Data indicates that age ($\beta = .077$, n.s.) did not have a significant influence to activity on Web memorials.

“Place of Death” did not occur in the age group of the deceased that ranked from 0-18 years of age.

Table 5: Activity on Memorial Profiles (0-18)

	1 β (Std. Error)	2 β (Std. Error)	3 β (Std. Error)	4 β (Std. Error)
Age	,056 (.027)	,110 (.017)	,113 (.017)	,077 (.014)
Gender	,051 (.379)	,010 (.247)	-,033 (.246)	,003 (.199)
Time Elapsed Between Death and Account Opening	—	-,104 (.000)	-,099 (.000)	-,066 (.000)
Artistic	—	-,011 (.423)	-,148 (.521)	,105 (.455)
Post Death	—	,314** (.386)	,252* (.402)	,091 (.340)
Symbolic	—	,135 (.418)	,166 (.420)	-,004 (.364)
Private/ Family Pictures	—	,580*** (.368)	,472*** (.412)	,417*** (.332)
Obituary	—	-,032 (1,032)	,006 (1,049)	,035 (.844)
Deceased	—	-,097 (.581)	-,110 (.573)	-,004 (.475)
Number of Pictures	—	—	,281 (.042)	-,007 (.036)

	1 β (Std. Error)	2 β (Std. Error)	3 β (Std. Error)	4 β (Std. Error)
Account Clicks	—	—	—	,486*** (,000)
F (df)				
R ² Adjusted	,006	,662	,017	,116

p* < .05, *p* < .01, ****p* < .001

6.4 Temporal Patterns

Temporal patterns of posting behavior were examined in relation to three different events: account opening, birthday and day of death. In addition to that the calendar year in general was also examined for patterns in the frequency of posts.

In the following results and visualizations concerning temporal patterns of posting on the basis of the collected data will be described.

6.4.1 Account opening

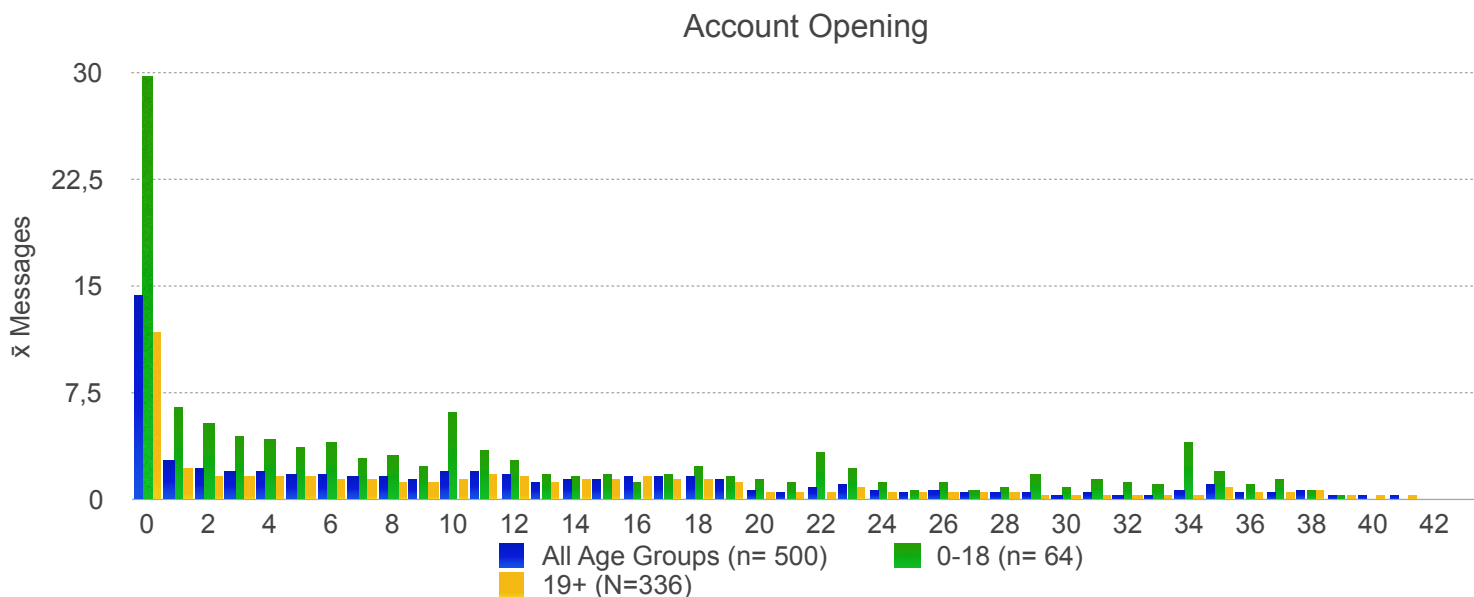


Figure 13: Activity in Relation to Account Opening

When examining the temporal patterns of posting for all profiles (n=500) values were extraordinary high ($\bar{x}=14.32$) for the first month after the opening of the profile but quickly slumped to $\bar{x}=2.86$ at which they stayed relatively constant until month 19 where they once again decrease.

The dichotomized data focusing on the younger age group (n=64) with a cut off at 18 years of age, showed a different result. Though postings also especially peaked in the first month ($\bar{x}=29.625$) of the opening of the profile, followed by a slump ($\bar{x}=6.59375$), they peaked again

just before the anniversaries of the account opening (month 10 $\bar{x}=6.203125$; 22 $\bar{x}=3.380952381$; 34 $\bar{x}=4$), not on the anniversaries themselves though.

On profiles commemorating deceased aged 19 and above, frequency of postings declined after the first month of the opening of the profile but stayed relatively constant for the following 18 months before again declining even further.

6.4.2 Birthday

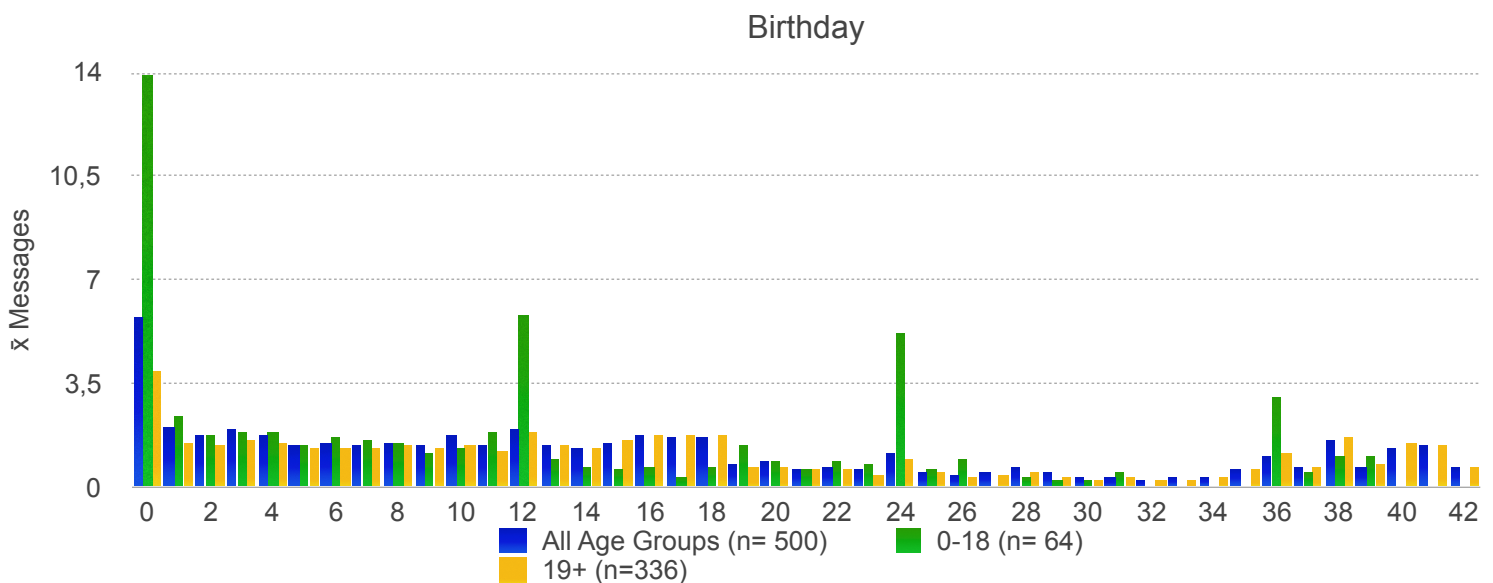


Figure 14: Activity in Relation to Birthday

When examining temporal patterns of posting in reference to the birthdays of the deceased, data for all profiles (n=500) indicated a decline of activity after the first birthday after account opening. Activity then stayed relatively constant for the following 17 months, before further declining. While activity stayed moderate for the second birthday after the opening of the account, there was a slight increase in activity at around the 3rd birthday after the opening of the account which stayed constant for the following five months.

Profiles dedicated to deceased up to 18 years of age, showed clear peaks on anniversaries: 1st birthday after account opening $\bar{x}=5.77$; 2nd birthday after account opening $\bar{x}=5.22$; 3rd birthday after account opening $\bar{x}= 3.0$.

Profiles dedicated to deceased aged 19 and above stayed relatively constant in the frequency of messages to the profile they present but slumped during the months 19 and 35. There is another slight increase starting with month 36 ($\bar{x}=1.11$) and month 38 ($\bar{x}=1.64$).

H.5 states that the frequency of messages posted on the profiles will peak on the deceased' birthday. On the basis of this empirical research this statement is true not for all age groups. Data indicates that the frequency of messages peaked on profiles dedicated to young

deceased (0-18 years of age). As for deceased of the age 19 and older, the frequency of messages posted to a memorial profile decreased after the first month and stayed relatively constant throughout the following 1.5 years before further declining.

6.4.3 Anniversary of the Day of Death

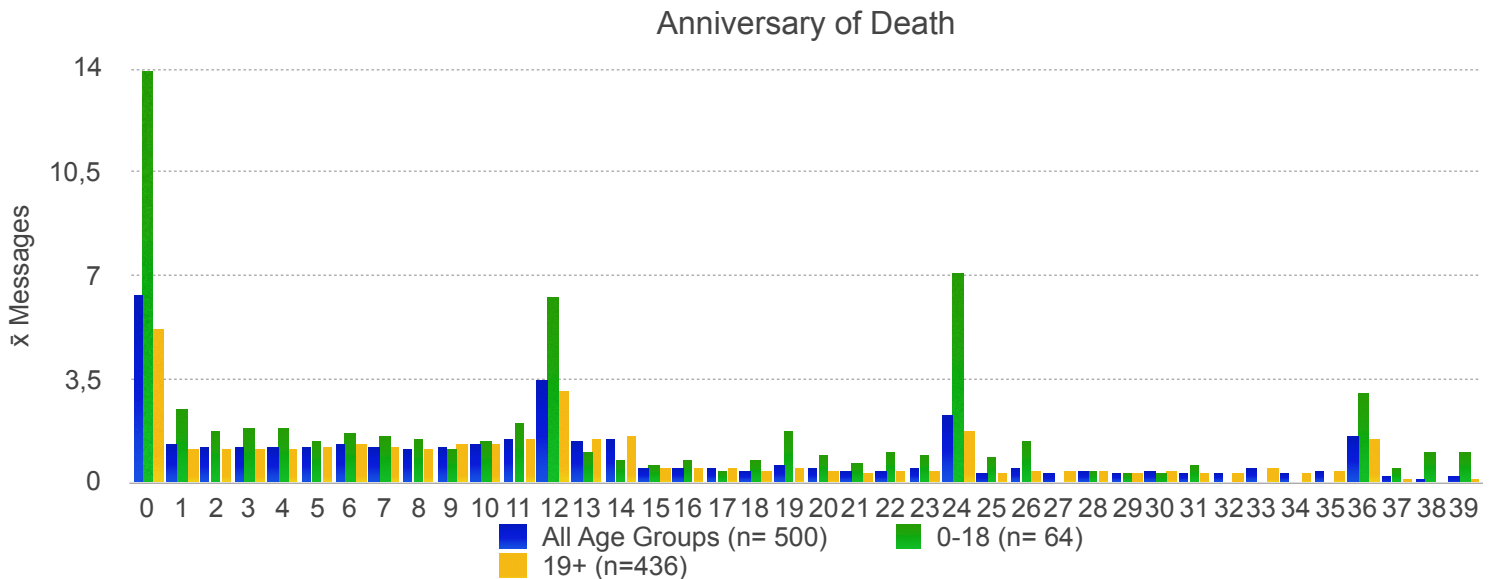


Figure 15: Activity in Relation to Anniversary of Death

Data of temporal patterns of posting in reference to the anniversary of death concerning all age groups showed peaks of posting on the anniversaries of death. Like indicated by data concerning the date of birth, data concerning the age groups of 0-18 indicated clear peaks on the anniversary of death. Data concerning deceased aged 19 and above also indicated a higher frequency of posts on the anniversary of death.

Inbetween the anniversaries posting behavior stayed constant for all profiles and decreased after the first year. Thus, as hypothesized the frequency of messages posted on the profiles will peak on the anniversary of death of the deceased (**H.6**).

6.4.4 Calendar Year

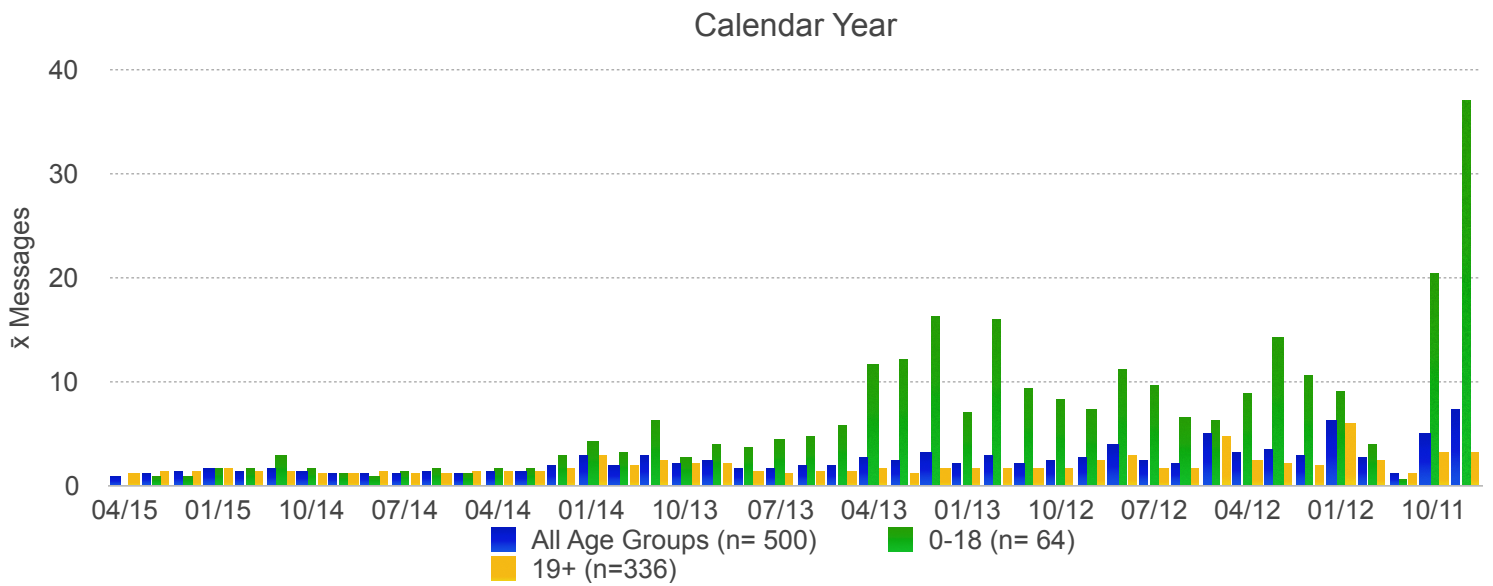


Figure 16: Activity in Relation to Calendar Year

Examining temporal patterns of posting in reference to the general calendar year for all profiles (n=500) did not indicate systematic patterns of posting on certain dates/ in certain months. It can be inferred from figure 16 that posting reference to the calendar year appears to be rather random with a gradual decline as time progresses. Though peaks appear at different degrees, the overall trend is true for all age groups.

Thus there is no indication of peaks that fit important holidays as hypothesized on the basis of Brubaker and Hayes (2011). Thus **H.7** cannot be validated by the collected data.

7. Discussion

Results concerning the distribution of age and gender are in line with previous empirical research in other cultural contexts (e.g. Roberts & Vidal, 2000). Likewise there were only few accounts to provide information as to the cause of death.

Results indicate ongoing postings on Web memorials. While on deceased under the age of 19 postings frequency systematically increases at or close to anniversaries. There is however always a constant level of postings to the profile throughout the year.

In case of gedenkseiten.de, the institution is also represented through their own social network profile as a company. In the case of gedenkseiten.de various memorial profiles are featured on their social network profile. As a consequence it can be assumed that these profiles receive more visits (= profile clicks) and also comments in the form of remembrance candles.

Though continuing bonds is indicated through the reoccurring and continuing posting behaviour shown in the data, the conclusion concerning the aspect of continuing bonds has to be considered limited. Though it can be inferred that there are posts over a certain period of time, there is no knowledge on to how often single individuals post periodically. The website of examination does not provide profiles to the user that post on the memorial page. Instead a name/ synonym for each post is chosen. Thus in theory it is thus possible that every single post is written by another person instead of indicating recurring visits to the profile. In the case of mourning in the context of a Social Network Sites this is traceable and documented because people use their personal profile to post.

Another aspect for future research is that of the topics of the postings. Especially how these topics change over time. If greater insight into the authorship of comments was to be gathered in the data, additional analysis could be carried out concerning the relationship and the kind of topics posted.

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Christlicher Friedhof online (<https://www.strassederbesten.de>) (23.10.2017, 19:08 Uhr)

gedenkseiten.de (17.03.2015, 15: 21 Uhr).

When I die I'm gonna provide free wifi for everyone near my grave so that people will visit more often (<https://me.me/i/19185934=>) (25.10.2017, 13:27 Uhr).

9. Appendix

Tables

Frequency Age

Frequency Age	
N	500
Mean	49,47
Range	98
Minimum	0
Maximum	98
Skewness	-,353



Frequency Gender

	Frequency	Percentage %
Female	217	43,4
Male	282	56,4
Missing	1	0,2
Total	500	100

Gender >18

	Frequency	Percentage %
Female	189	43,4
Male	247	56,7
Missing	0	0
Total	436	100

Gender <19

	Frequency	Percentage %
Female	28	43,8
Male	35	54,7
Missing	1	1,6
Total	64	100

Account Clicks

N	500
Mean	4474,75
Range	144798
Minimum	174
Maximum	144972

Account Clicks 0-18

N	64
Mean	10733,64

Range	98954
Minimum	666
Maximum	99620

Account Clicks 19+

N	436
Mean	3556,01
Range	144798
Minimum	174
Maximum	144972

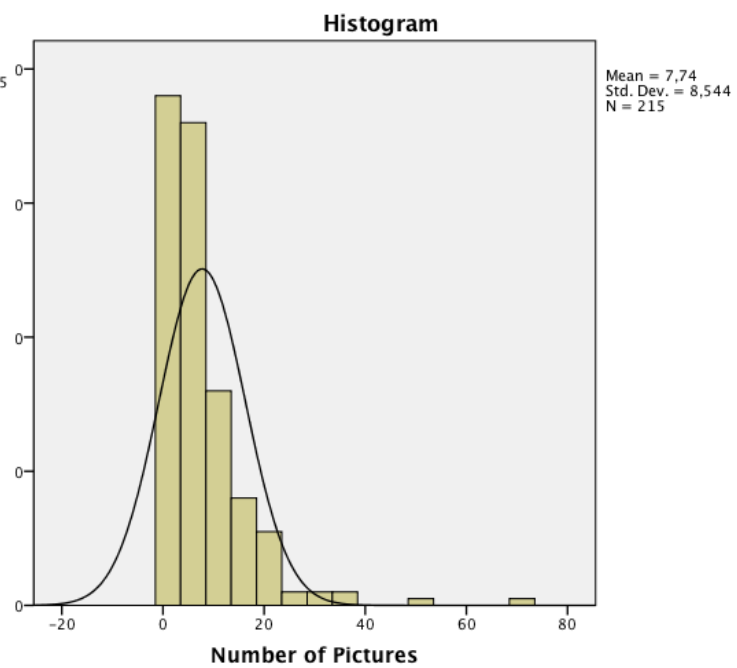
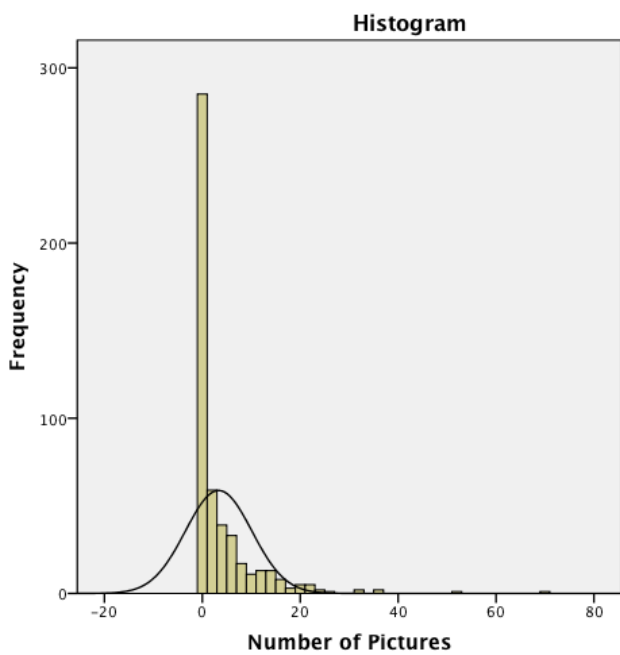
Time Elapsed Until Profile Opening

N	500
Mean	50,88
Std. Error of Mean	3,927
Std. Deviation	87,803
Variance	7709,364
Skweness	2,858
Std. Error of Skewness	,109
Kurtosis	10,361
Std. of Error of Kurtosis	,218
Range	689
Minimum	0
Maximum	689

Number of Pictures

N	500
Mean	3,33

Std. Error of Mean	,303
Std. Deviation	6,785
Variance	46,033
Skweness	4,090
Std. Error of Skewness	,109
Kurtosis	26,168
Std. of Error of Kurtosis	,218
Range	70
Minimum	0
Maximum	70



Number of Pictures >18

N	436
Mean	3,28
Std. Error of Mean	,331
Std. Deviation	6,914
Variance	47,799

Skweness	4,288
Std. Error of Skewness	,117
Kurtosis	27,773
Std. of Error of Kurtosis	,233
Range	70
Minimum	0
Maximum	70

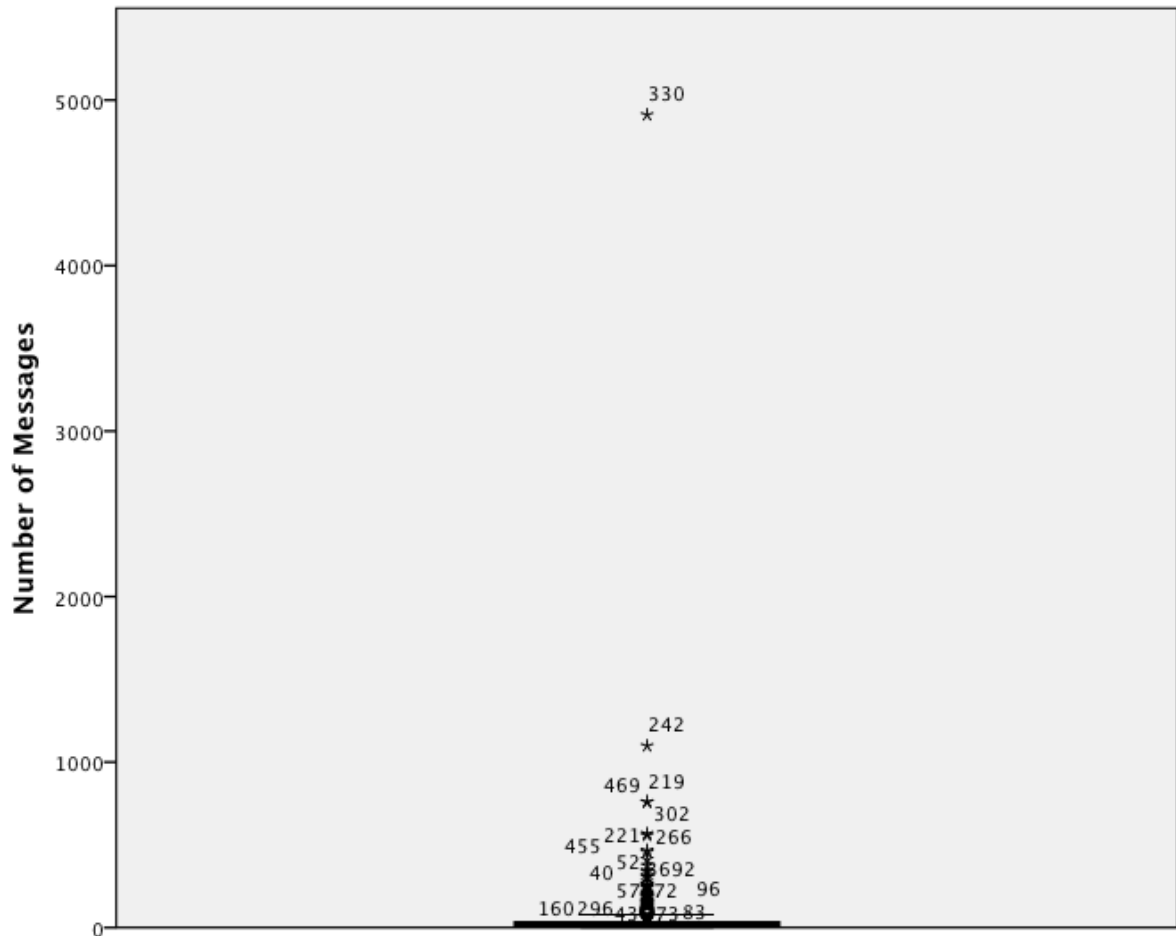
Number of Pictures <19

N	64
Mean	3,64
Std. Error of Mean	,734
Std. Deviation	5,870
Variance	34,456
Skweness	1,794
Std. Error of Skewness	,299
Kurtosis	2,573
Std. of Error of Kurtosis	,590
Range	22
Minimum	0
Maximum	22

Number of Messages

N	500
Std. Error of Mean	10,681
Std. Deviation	238,830

Variance	57039,656
Skweness	17,304
Std. Error of Skewness	,109
Kurtosis	345,502
Std. of Error of Kurtosis	,218
Range	4910
Minimum	1
Maximum	4911



LOG Number of Messages	Frequency
N	499
Std. Error of Mean	,06278
Std. Deviation	1,40245
Variance	1,967
Skweness	,457
Std. Error of Skewness	,109
Kurtosis	-,056
Std. of Error of Kurtosis	,218
Range	7,00
Minimum	,00
Maximum	7,00

Temporal Patterns

Account Opening

	\bar{x} Messages N=500	\bar{x} Messages N=64	\bar{x} Messages N=336
0	14,328	29,625	11,81880734
1	2,864	6,59375	2,282110092
2	2,222	5,4375	1,72706422
3	1,974	4,4375	1,596330275
4	1,968	4,203125	1,630733945
5	1,838	3,625	1,568807339
6	1,814	4,125	1,46559633
7	1,596	2,921875	1,401376147
8	1,588	3,203125	1,339449541
9	1,51	2,484375	1,357798165
10	2,108	6,203125	1,493119266
11	2,02	3,59375	1,75

	\bar{x} Messages N=500	\bar{x} Messages N=64	\bar{x} Messages N=336
12	1,786	2,8125	1,633027523
13	1,334	1,859375	1,254587156
14	1,43030303	1,698412698	1,391203704
15	1,487603306	1,93442623	1,423167849
16	1,56344086	1,327586207	1,597051597
17	1,585746102	1,905660377	1,542929293
18	1,597156398	2,346938776	1,498659517
19	1,379901961	1,666666667	1,341666667
20	0,703608247	1,52173913	0,590643275
21	0,617647059	1,217391304	0,521341463
22	0,885793872	3,380952381	0,555205047
23	1,063218391	2,205128205	0,919093851
24	0,643292683	1,351351351	0,553264605
25	0,485148515	0,636363636	0,466666667
26	0,693103448	1,333333333	0,619230769
27	0,492537313	0,666666667	0,473029046
28	0,567346939	0,869565217	0,536036036
29	0,480519481	1,8	0,355450237
30	0,394230769	1	0,336842105
31	0,478723404	1,444444444	0,376470588
32	0,405882353	1,294117647	0,307189542
33	0,375	1,142857143	0,286885246
34	0,732142857	4	0,34
35	1,054945055	2	0,925
36	0,6	1,1	0,528571429
37	0,626865672	1,428571429	0,533333333
38	0,685185185	0,666666667	0,6875
39	0,391304348	0,4	0,390243902
40	0,352941176	0	0,413793103
41	0,35	0	0,388888889

	\bar{x} Messages N=500	\bar{x} Messages N=64	\bar{x} Messages N=336
42	0,105263158	0	0,117647059
43	0	0	0

Birthday

	\bar{x} Messages N=500	\bar{x} Messages N=64	\bar{x} Messages N=336
0	5,742	13,9375	3,947247706
1	2,046	2,421875	1,506880734
2	1,742	1,75	1,344036697
3	1,919678715	1,841269841	1,602298851
4	1,77016129	1,838709677	1,502304147
5	1,422764228	1,409836066	1,283062645
6	1,475510204	1,62295082	1,296037296
7	1,425925926	1,557377049	1,310588235
8	1,45	1,440677966	1,370546318
9	1,421052632	1,118644068	1,329326923
10	1,733766234	1,321428571	1,413793103
11	1,393333333	1,87037037	1,232323232
12	1,962962963	5,769230769	1,85
13	1,377723971	0,96	1,377410468
14	1,306905371	0,673913043	1,32173913
15	1,509383378	0,533333333	1,570121951
16	1,736842105	0,666666667	1,762658228
17	1,682352941	0,324324324	1,726072607
18	1,616099071	0,647058824	1,719723183
19	0,751633987	1,366666667	0,663043478
20	0,87804878	0,821428571	0,667953668
21	0,564575646	0,555555556	0,540983607
22	0,626984127	0,833333333	0,557017544

	\bar{x} Messages N=500	\bar{x} Messages N=64	\bar{x} Messages N=336
23	0,550847458	0,75	0,400943396
24	1,106481481	5,217391304	0,943005181
25	0,466321244	0,6	0,439306358
26	0,36627907	0,944444444	0,337662338
27	0,489795918	0	0,414814815
28	0,634920635	0,272727273	0,486956522
29	0,447619048	0,222222222	0,28125
30	0,306818182	0,25	0,2375
31	0,310810811	0,5	0,264705882
32	0,224137931	0	0,226415094
33	0,260869565	0	0,209302326
34	0,303030303	0	0,322580645
35	0,583333333	0	0,545454545
36	1,05	3	1,111111111
37	0,631578947	0,5	0,705882353
38	1,533333333	1	1,642857143
39	0,7	1	0,777777778
40	1,285714286	0	1,5
41	1,4	0	1,4
42	0,666666667	0	0,666666667

Anniversary of Death

	\bar{x} Messages N=500	\bar{x} Messages N=64	\bar{x} Messages N=336
0	6,332	13,9375	5,165137615
1	1,31	2,421875	1,144495413
2	1,186	1,75	1,100917431
3	1,189516129	1,841269841	1,094688222
4	1,236252546	1,838709677	1,149184149
5	1,222680412	1,409836066	1,195754717

	\bar{x} Messages N=500	\bar{x} Messages N=64	\bar{x} Messages N=336
6	1,322851153	1,65	1,275779376
7	1,218415418	1,583333333	1,164619165
8	1,13876652	1,465517241	1,090909091
9	1,230248307	1,137931034	1,244155844
10	1,303738318	1,396226415	1,290666667
11	1,510739857	2,02	1,43902439
12	3,491442543	6,25	3,113573407
13	1,416879795	1,021276596	1,470930233
14	1,462765957	0,704545455	1,563253012
15	0,47592068	0,585365854	0,461538462
16	0,489552239	0,769230769	0,452702703
17	0,429906542	0,352941176	0,43902439
18	0,400662252	0,785714286	0,361313869
19	0,571942446	1,708333333	0,464566929
20	0,43866171	0,958333333	0,387755102
21	0,349019608	0,652173913	0,318965517
22	0,420600858	1,052631579	0,364485981
23	0,451162791	0,947368421	0,403061224
24	2,242105263	7,058823529	1,768786127
25	0,309090909	0,857142857	0,258278146
26	0,446808511	1,416666667	0,356589147
27	0,328244275	0	0,358333333
28	0,344827586	0,375	0,342592593
29	0,326923077	0,25	0,333333333
30	0,386363636	0,333333333	0,390243902
31	0,324324324	0,6	0,304347826
32	0,3	0	0,321428571
33	0,434782609	0	0,465116279
34	0,27027027	0	0,294117647
35	0,352941176	0	0,387096774

	\bar{x} Messages N=500	\bar{x} Messages N=64	\bar{x} Messages N=336
36	1,551724138	3	1,4444444444
37	0,166666667	0,5	0,136363636
38	0,133333333	1	0,071428571
39	0,166666667	1	0,090909091

Calendar Year

	\bar{x} Messages N=500	\bar{x} Messages N=64	\bar{x} Messages N=336
04/15	0,946	0,25	1,04587156
03/15	1,232	0,921875	1,277522936
02/15	1,35	0,796875	1,387614679
01/15	1,63	1,53125	1,626146789
12/14	1,376	1,71875	1,318807339
11/14	1,508	2,953125	1,286697248
10/14	1,252	1,578125	1,199541284
09/14	1,122	1,234375	1,100917431
08/14	1,208	0,921875	1,243119266
07/14	1,23	1,390625	1,201834862
06/14	1,302	1,625	1,231651376
05/14	1,23	1	1,25
04/14	1,388	1,65625	1,325688073
03/14	1,444	1,65625	1,357798165
02/14	1,939393939	2,793650794	1,581018519
01/14	2,981404959	4,114754098	2,817966903
12/13	1,967741935	3,103448276	1,805896806
11/13	2,86636971	6,150943396	2,424242424
10/13	2,18957346	2,591836735	2,136729223
09/13	2,387254902	4	2,172222222
08/13	1,631443299	3,652173913	1,359649123

	\bar{x} Messages N=500	\bar{x} Messages N=64	\bar{x} Messages N=336
07/13	1,64171123	4,565217391	1,231707317
06/13	1,846796657	4,833333333	1,451104101
05/13	1,896551724	5,769230769	1,404530744
04/13	2,777439024	11,56756757	1,659793814
03/13	2,369636964	12,24242424	1,162962963
02/13	3,089655172	16,26666667	1,569230769
01/13	2,093283582	7,074074074	1,53526971
12/12	2,963265306	16,13043478	1,599099099
11/12	2,212121212	9,4	1,530805687
10/12	2,302884615	8,333333333	1,731578947
09/12	2,776595745	7,277777778	2,3
08/12	3,817647059	11,05882353	3,013071895
07/12	2,411764706	9,714285714	1,573770492
06/12	2,107142857	6,5	1,58
05/12	4,89010989	6,272727273	4,7
04/12	3,2	8,9	2,385714286
03/12	3,298507463	14,14285714	2,033333333
02/12	2,907407407	10,66666667	1,9375
01/12	6,282608696	9,2	5,926829268
12/11	2,558823529	4	2,310344828
11/11	1,05	0,5	1,111111111
10/11	4,947368421	20,5	3,117647059
09/11	7,375	37	3,142857143

Appendix

1. Codebook

Codebook Web memorial *gedenkseiten.de*

Alexandra Lux

Scope of Work

This study aims to examine the content of Web memorials. In addition to general demographics, the present study is in particular interested in the temporal patterns on Web memorials in the German speaking area.

How do memorial websites in the German speaking area differ in relation to demographics and temporal pattern?

RQ1: Which kind of profiles can be found on Web memorials in the German speaking area?

RQ2: What are influencing factors contributing to activity on Web memorials in the German speaking area?

RQ3: What are characteristics of temporal patterns of user behavior that can be found on Web memorials in the German speaking area?

Timeframe

The website of interest shows its first memorial profile to be published on 23.08.2011 at 10:44 am. Since this work is focused on temporal patterns of messages on Web memorials, only profiles that were in existence for at least one year on February 17th 2015, were considered for investigation. This results in a timespan of profiles that were published between 23.08.2011 and 17.02.2014 (n= 10861).

Sample

1000 random numbers between 1 and 10861 were generated using numbers. Profiles belonging to celebrities or groups of victims (e.g. passengers of flight MH370) were later omitted.

[note: coded profiles n=500]

V1_Coder

1= Coder1

2= Coder2

3= Coder3

V2_Consecutive Profile Number

V3_Randomized Profile Number

V4_Name of the Deceased (open)

Demographics

V5_Gender

1 = female

2 = male

999 = n/a

V_6 Date of Birth

DD/MM/YYYY

V7_Date of Death

DD/MM/YYYY

V8_Age Total

V9_Cause of Death

1 = Accident

2 = Suicide

3 = Homicide

4 = Heart Disease

5 = Cancer

6 = Other Sickness

7 = Stillborn

999 = n/a

V10_Date of Account Opening

DD/MM/YYYY

V11_Account Clicks Since Opening

Profile Content

V12_ Number of Pictures

Content of Pictures

Variables 13a through 13h are coded as follows:

0 = not applicable

1 = applicable

V13a_Artistic

Pictures are considered artistic, if they contain obvious altering. Artistic pictures often also contain and/ or are based on private/ family pictures.

V13b_After Death

This variable subsumes pictures taken after the person who the Web memorial is dedicated to died. It may contain images of a commemoration ceremony funeral, urn, casket, graveside, etc.

V13c_Symbolic

Images containing symbols associated with death and mourning. In particular these images may contain flowers, angels, rainbows, etc.

V13d_Private/ Family

V13e_News Coverage

Pictures taken of for example newspaper article surrounding the death. This can especially be found in the case of a homicide or accidents.

V13f_Obituary/ Death Notice

V13g_Place of Death/ Accident

(e.g. crash site of an accident)

V13h_Deceased/ Dead Body

Images that explicitly show the deceased. Pictures that show certain body parts, such as hold the deceased hand, also apply to this category.

V14_Total Number of Remembrance Candles

V14a_Date of Remembrance Candle Messages (in chronological order from first to last) A new row is to be used for each date of a message; the previous variables (1-14) are copy pasted.

DD/MM/YYYY

Codebook Appendix

The following shows examples of variables 13a-13h.

V13a_Artistic



V13b_After Death



V13c_Symbolic



V13d_Private/ Family



V13e_News Coverage



V13f_Obituary/ Death Notice



V13g_Place of Death/ Accident



V13h_Deceased/ Dead Body

