

# I Said Your Name in an Empty Room: Grieving and Continuing Bonds on Facebook

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## ABSTRACT

In response to the death of a close friend or relative, bereaved individuals can use technology as part of the grieving process. We present a study that analyzes the messages of the friends and family of the deceased to their Facebook profile before and after their passing. Our analysis reveals that mourners use profiles as a way to maintain a continuing bond with the deceased, as well as a way to accomplish specific front stage bereavement communication, such as sharing memories, expressing sorrow and providing social support. These observations may improve the design of social networking technologies so that they remain useful, sensitive tools for the bereaved.

## Author Keywords

Death, grief, language, Facebook, memorialized

## ACM Classification Keywords

H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

## General Terms

Design, Theory

## INTRODUCTION

*The bitterest tears shed over graves are for words left unsaid and deeds left undone.* –Harriet Beecher Stowe

The loss of a loved one is perhaps the most difficult experience a person can face. When people suffer this kind of loss they often come together to share their grief, express their emotions, and to console one another. Over time, mourners must also learn to live without the deceased, either learning to let go or finding a new place in their life for their lost one.

These grieving activities are now complicated by the presence of Social Networking Sites (SNS) that have

profiles of members who have passed away. Recent work has begun to examine the use of profiles in SNS contexts for grieving [1] and more generally with the sensitive and respectful design of technology around death and dying [2]. In the present work we examine the language of the posts before and after the death of Facebook users in an effort to explore two important issues for the grieving process in the networked age.

The first is the expressing and sharing of grief and emotion on profiles of recently deceased individuals, and we refer to these as memorialized profiles. Here we draw on Goffman's notion of front and back stage communication [8]. The second concerns the relationship with the deceased, and here we draw on Continuing Bond Theory [4], which argues that individuals in the grieving process hold the deceased in loving memory, maintaining an inner representation of the deceased long after they have passed. This view stands in contrast to the dominant model that mourner's must "let go" in order to move on with their life.

We focus on language patterns in the profile posts for several reasons. Most importantly, language has repeatedly been shown to reveal social dynamics and psychological states of speakers [7], from depression to personality traits. Second, language analysis adheres to calls for research on death and technology to be sensitive and respectful to mourners and to the deceased's memory [6]. Analyzing extant posts on memorialized profiles is non-invasive - users are not questioned or otherwise contacted by researchers. As such, we believe that this approach can provide important insights into why people post to memorialized profiles that can build on theory and improve design while being non-invasive and sensitive to users.

**A Dramaturgical Analysis of Mourning on Facebook**

Goffman (and others, see [8]) conceptualized social life with the metaphor of drama, with individuals acting out their roles on a social stage in their day-to-day life. Some of these roles are enacted *front stage* and constitute performances designed for public expression, and others are *back stage* performances acted out in private. In [8], the authors examine the American funeral in terms of front and back stage, observing that while grief is traditionally a

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backstage emotion, individuals can experience a great deal of relief when this emotion is brought to the forefront as a part of religious and cultural practices. Such practices offer people a place to come together to publicly express their grief, to console one another, and to share stories about the deceased. After these ceremonies, this front stage expression of emotion and support becomes more difficult because ceremonies are tied to a specific time and place.

The emergence of memorialized profiles has created new spaces for the front stage aspects of grieving. For example, recent work suggests that group commemoration “is an important aspect of bereavement, and different technologies are used for this purpose” [5]. In our increasingly mobile society, social networking sites should provide an online space that is not bounded by space or time for grieving individuals to come together.

If people use posts to memorialized profiles for front stage grieving, then relative to their pre-death posts, we should expect posts to include more language related to expressing sorrow and grief [8]. Less obviously, we should also expect more socially oriented language that reflects the seeking and offering of support associated with public grieving [2]. Finally, we should see more sharing of positive memories or narratives of the deceased, reflected in a higher verb to noun ratio, which is indicative of narrative rather than expository writing [7], more past tense verbs and more positive emotion words.

### Continuing Bonds or Letting Go?

Social networking sites offer an opportunity to communicate with loved ones who have passed away, as well as with other mourners. Previous work suggests that technology can provide the means to evoke a highly vivid and realistic online presence of the deceased, reminiscent of when they were alive [1,4].

This ability to write directly to a digital representation of the deceased opens up new opportunities in relating with lost ones and managing grief. Therapeutic approaches to managing this grief take two contrasting approaches. The dominant model for the last century argues that the mourner must come to grips with the loss by letting go of the deceased. People should move on from the death of a loved one by detaching themselves emotionally. Failure to do so is viewed as pathological grief.

Continuing Bond theory offers an alternative approach by arguing that maintaining a relationship with the deceased is beneficial to the grieving process. Death disrupts but does not need to end a personal relationship. A continuing relationship with the deceased represents a different kind of relationship situated in entirely changed circumstances.

Directly addressing a deceased individual in Facebook wall posts provides users with a novel way to work out one's new relationship with those who have died, either letting

them go or continuing the bond. Indeed, previous work [6] suggests that many messages posted on deceased members' Facebook walls were addressed directly to the deceased individual.

One way to determine if these messages are directed at the deceased in an effort to let go or to continue the bond is to examine the level of psychological distancing in the language of the posts. Distancing, or detachment, is apparent in a well-validated linguistic device called *verbal non-immediacy*, in which individuals that are psychologically detaching themselves from a tragic event tend to use more articles and long words but fewer self-reference, words indicating discrepancy from reality (e.g., *would, could*), and present-tense verbs [2,7].

If these messages directed at the deceased are part of letting go, we should see increased non-immediacy in posts that come after death relative to prior. In contrast, if the messages are part of continuing the bond with the deceased, we should see more immediacy in their language.

## METHODS

### Profiles

Posts were collected from the Facebook walls of eleven deceased Facebook users. All of the profiles were “Facebook friends” of one of the authors. This convenience sample consisted of 10 males and 1 female, ranging in ages from 17-32. All of the individuals died suddenly, including one homicide, several accidents and suicides.

### Post collection and analysis

Wall posts collected from the 11 profiles included posts up to one year prior to death and all posts after death up to April, 2010. Post-death time periods ranged from several weeks up to 3 years. Using a computer program written specifically for preprocessing the profiles, all items such as comments, notes, Facebook gifts, quizzes, status updates and recent activity were removed, leaving only individual wall posts in the corpus. The total number of posts collected was 3592.

These wall posts were analyzed using the Linguistic Inquiry and Word Count (LIWC) program, a text analysis program that counts and categorizes each word according to a dictionary of approximately 70 linguistic and psychological dimensions that have been extensively pre-tested. LIWC output provides the percentage of words for pre-death and post-death wall posts falling within a given word category (see [7]). For instance, the words “sad” and “grief” would both increase the percentage of negative emotion terms present in a given text. The average word count per post was 39.9 ( $SD = 89.72$ ).

The data from LIWC were translated into several indices matching the predictions above (see [2,7]). The *Sorrow/Grief Index* indicates how many sad-related words were used (e.g., cry, grief, hurt) and was the LIWC *negemo* dimension. The *Social Orientation Index* indicates how

often posts contained terms related to friends, family, sharing, talking and personal pronouns and was the LIWC social dimension. The *Positive Memory Index* indicated the level of story telling about the past and was calculated as the sum of the ratio of verbs to nouns, with a higher index indicating more narrative content, past-tense verbs and positive emotion terms (e.g., happy, joy). Finally, the *Non-Immediacy Index* measured psychological distancing and was based [2]’s established formulation of summing the number of articles (e.g., a, the) and six letter words (i.e., words six letters or longer) and subtracting first person singular (e.g., “I” “me”), discrepancy words (e.g., would, should) and present tense verbs (see also [7]).

The statistical analysis employed mixed models to account for interdependencies between posts addressed to the same profile holder, with post nested within profile holder. When poster was included as a random effects factor the results reported below were upheld.

**RESULTS & DISCUSSION**

**Front Stage Grieving**

We expected several dimensions of language to reflect front stage grieving in the posts after a death. The descriptive data for each of the indices related to front stage grieving are presented in Table 1.

First, and most obviously, we expected and found that post-death posts contained more words related to grief and sorrow  $F(1,1350.9) = 185.0, p < .001$ . Comments such as “*Still can't believe your gone... have so much I wanna tell you and it hurts to know your not there =( Miss you buddy,*” illustrate this index, and reflect perhaps the most important front stage grieving function of publicly expressing sorrow.

Second, the *Social Orientation Index* revealed a more collective orientation after the profile holder's passing than before,  $F(1,2779.6)=283.2, p < .001$ . Posters referred to other people more in their posts, consistent with the supportive aspects of front stage grieving. For example “*I was thinking about you... and then stupid facebook told me to send you a message.... but i guess writing this on your wall means that someone will read it... and know that they aren't alone in their sorrow..... i miss you so much... peace.*”

Third, the *Positive Memory Index* was higher in the post-death posts than pre-death,  $F(1,434.9)=50.4, p < .001$ , suggesting that post-death posts contained more emotionally positive narratives about the past, as in the following: “*Can't stop thinking about u right now! Or ever actually. Even tho my heart is broken I can't help but laugh at the memories I have with u...like u running out to the pool in ur speedo! Hahah everyone was cracking up! And as usual it was you who made us all laugh! I miss u! This is still sooo unreal. In my heart forever .*”

Taken together, the data are strongly supportive of the notion that the posts on memorialized profiles function as

Index	Pre-Death		Post-Death	
	M	SE	M	SE
Sorrow/Grief	.78	.27	3.83	.26
Social Orientation	20.69	1.31	34.23	1.27
Positive Memory	12.85	.61	17.51	.55

**Table 1. Mean (M) and Standard Error (SE) percent of words per index**

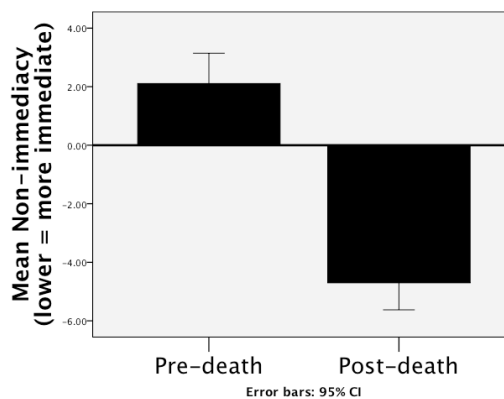
front stage grieving, much like the kind of communication observed at more traditional grieving events, such as funerals [8].

**Continuing Bonds**

Did people posting to memorialized profiles evidence non-immediate language indicative of distancing themselves from the deceased in an effort to let go? Or did they show increased immediacy indicative of a continuing bond with the deceased? As Figure 1 shows, the language of posts after a death were significantly more immediate than prior to death  $F(1,2834.1)=28.3, p < .001$ , a pattern that supports the Continuing Bonds Theory.

The fact that language was much more immediate after death suggests that posters were not psychologically distancing themselves, as would be expected if the posts were part of a letting go process. These data provide powerful support for how people can learn to have a new kind of relationship with a loved one that has passed on, and that memorialized profiles can provide an important venue for continuing that bond.

This post “*gym isnt same without the toughest training partner being there...but dont worry im gona win mr pittsburgh for ya and put that 1st place trophy in ur trophy room bro!*” is illustrative of how posters maintained a close



**Figure 1. Mean level of non-immediacy per post before and after death**

and intimate relationship with the deceased, an observation consistent with other recent work taking a qualitative approach [1]. If people are choosing to “let go” of the deceased, they do not appear to be using Facebook posts to do so.

### DESIGN IMPLICATIONS

Our analysis suggests some important design insights for memorialized posts, including a need for connecting personally, for collective support, and a forum for sharing stories. Here we propose a number of design ideas for consideration.

First, instead of using one wall for posting it may be useful to include spaces in the profile for different purposes. One space could be dedicated to creating an environment where people are encouraged to remember and share stories about the deceased, ideally fostering a greater sense of community and facilitating the need for group commemoration.

Another space could involve a more personal setting for people to post messages directly to the deceased in a private space. Although the present data evidence a clear desire to maintain a strong continuing bond with the deceased, it is not clear that continuing the bond needs to be done in a private venue or if there is value to continuing the bond in a front stage space.

Other spaces could be dedicated to images sharing, for condolences directed to the family, and information about formal services that could facilitate the social support and communal commemoration aspects of the bereavement process. Users will know where to look for the sort of support they need or wish to offer, be it information about a memorial service or to engage with stories from others.

Importantly, however, any design implications must be considered carefully and in concert with the users of memorialized profiles. As recent controversies make clear [3], users have understandably strong feelings about memorialized profiles and the rules that govern them. Any design changes must be informed by research in the area and principles of laid out by [6] on respectful and sensitive design around technology and death.

### LIMITATIONS

This study was subject to several important limitations. First, the results are based on a convenience sample and further, the sample consisted of premature deaths. These sample restrictions limit the generalizability of the results; those who die from chronic illness, for example, would be expected to have very different profile posts. Second, while this kind of computerized text analysis, in which words are categorized based on pre-defined dictionaries, can provide useful insights into overall statistical trends in large amounts of language, further content analysis with human

coding is required to confirm these interpretations of the findings. Importantly, however, the present results are consistent with other qualitative work that involved close readings of the posts, such as [1]’s observation that posters often use language that is direct and psychologically close to the deceased. This kind of convergent evidence across methods is valuable for advancing our understanding of posts to memorialized profiles.

### CONCLUSION

Our analysis of the language of Facebook posts indicate that mourners use memorialized profiles as a way to maintain a continuing bond with the deceased, as well as a way to accomplish specific front stage bereavement communication, such as sharing memories, expressing sorrow and providing social support. These observations may improve the design of social networking technologies so that they remain useful, sensitive tools for the bereaved.

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