

Benefits and Drawbacks of Using Social Media to Grieve Following the Loss of Pet

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ABSTRACT

As social media becomes more deeply embedded into our daily lives, researchers are examining how previously private disclosures and interactions are manifesting in semi-public spaces. This study evaluates how sites like Facebook may help users grieve following the loss of a family pet. Through an empirical study of Facebook users, we evaluate survey responses (N=396) and users' actual Facebook posts related to pet loss (N=190) to better understand how individuals use (or do not use) social media as part of the grieving process. We find that users weigh several benefits and drawbacks before making these sensitive disclosures on Facebook, including whether they think posting will mitigate or perpetuate their emotional pain, the privacy of the experience vs. the public nature of sharing, and whether their disclosures will be met with support or dismissal (i.e., disenfranchised grief). We conclude by discussing implications for theory around grief and social support, as well as the design of social media interfaces that support grieving processes for the loss of a loved one.

CCS Concepts

Human-centered computing → Collaborative and social computing → Collaborative and social computing theory, concepts and paradigms → Social content sharing Applied computing → Law, social and behavioral sciences → Psychology

Keywords

Grieving; Grief; Social Media; Facebook; Social Support; Privacy; Disclosure; CMC.

1. INTRODUCTION

With the increasing ubiquity of social media platforms for connecting and interacting with others, we have seen many previously private behaviours move into more public spaces. This is likely due, in part, to social media's tools and affordances, which blur the distinction between public and private spaces and create a wide array of opportunities for sharing content with a large audience [3]. Over the past decade, researchers have identified both positive and negative outcomes associated with these shifts in personal disclosures, ranging from how they facilitate increased

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access to social resources [8, 18] to how they make some users more vulnerable to harassment [34].

Researchers have also begun analyzing how social media affects the grieving process. For instance, researchers have considered how users navigate social spaces after a friend dies [7] and how interfaces may be designed to facilitate the grieving process [26] through features that enable loved ones to be memorialized [3, 27]. Finally, researchers have evaluated how platforms like Facebook may help the grieving process by enabling users to express emotional distress and receive support from their network [5].

This paper considers how Facebook users navigate complex decisions around disclosing information about the death of a family pet. Such disclosures are highly sensitive and personal in nature, with the grieving process typically conducted in private [38]. Yet, social media offers those grieving new avenues for potentially sharing these sensitive disclosures with others. As a result, social media users may have competing motivations for sharing or withholding this information from others, based on the emotional state they are in during the aftermath of their pet's death, the potential benefits of interacting with friends and others who might have gone through similar experiences, and those who might be able to offer social, emotional, or tangible resources.

The current study unpacks the process of mediated grieving by looking at how people utilize Facebook as part of their grieving process, as well as evaluating why some users choose to keep their grief private. By analyzing qualitative responses to questions about why participants chose to post or not post to Facebook after a family pet died, as well as evaluating the characteristics of Facebook posts related to their pets, we identify users' decision-making process around sharing such disclosures, and we categorize emergent themes in Facebook posts around death, grieving, and social support. We find that disclosure decisions are based on several factors, including perceptions of how supportive one's social network will be, concerns about the private nature of grief norms regarding only sharing positively valenced content, and fears that their grief would be dismissed (i.e., *disenfranchised grief*). We conclude by discussing avenues for designers to be more cognizant of factors affecting online disclosures and interactions, and to address a growing pushback against some automated features that re-share or remind users of content previously posted of which they might not want to be reminded.

This study contributes to theory and design by helping to clarify where new technologies fit into the grieving process. Whereas other research has looked at how communities of grieving unfold after someone's death, we describe the more personal disclosure decisions individuals must make when dealing with the loss of a pet—who are often treated as a family member by their owners

[12]. These disclosure decisions are complicated and reflect the tensions between public and private spaces online; in this way, the study extends existing work on how social media's affordances blur distinctions between public and private

2. RELATED WORK

2.1 Death, Grieving, and Support

Grief is a natural response to the loss of a loved one, and how we experience grief depends on multiple factors, such as the nature of the relationship with the individual who passed, the duration of decline, and the intensity of the experience [16]. For nearly 50 years, Kübler-Ross's [23] five-stage model of grief has served as a foundation for many theorists studying the process of grief and bereavement. These stages are: 1) Denial—individuals attempt to reject reality or adhere to false perceptions, 2) Anger—lashing out in frustration or pain, 3) Bargaining—attempting to regain control and change the situation, 4) Depression—a state of intense sadness, and 5) Acceptance—recognizing the new reality and attempting to move on with one's life. Each stage can be experienced independently, mutually, or may be skipped altogether. More recently, researchers have argued that grieving is neither linear nor finite, and have highlighted other characteristics of "healthy" grieving, including recognizing the loss, remembering the deceased, and reinvesting in other activities [31].

Ultimately, the grieving process is difficult, and individuals must learn to cope with the accompanying stresses [33]. Fortunately, additional research has suggested that these stressors can be managed through receiving support and having positive interactions with others [11]. Being social creatures, humans actively seek out fulfilling relationships; our desire to be connected motivates us to build relationships and cultivate networks [16]. During a period of grief, these networks serve as important sources for receiving social and emotional support. Social support is a dynamic process where an individual receives help, advice, and a sense of community from others, whereas emotional support refers to receiving comfort or empathy during a time of stress [28]. Both types of support function as a means to work through the grieving process and assure individuals that they are not isolated. Typically, we think of our support network as our family and friends, but it can also expand to include acquaintances and even strangers [16].

2.2 Computer-Mediated Support and Grief

Researchers in computer-mediated communication (CMC) have long considered how computing systems can facilitate support across geographically disparate people with similar interests or experiences (e.g., [32]). Over the years, several studies have highlighted how social media use—and in particular directed interactions with friends through social media—increase perceptions of social and emotional support, as well as access to tangible resources [8, 18, 37].

In recent years, CMC researchers have begun examining grief in the context of social media and of the loss of human loved ones. For example, Mitchell et al. [27] investigated how "virtual memorials" created by parents grieving the loss of a child provide a "new social value" for the one who has passed by immortalizing them online. Such virtual memorialization shifts the grieving process from what was once a private experience to a more public one. Egnoto et al. [16] note that because individuals maintain relationships online, it may be a natural progression to extend these activities to the experience of loss through participation in online memorials—allowing people to, in some small way, still connect with the deceased. Gray's [17] work on digital legacy extends this

idea, suggesting that social media platforms can "invoke the social presence of the dead."

Because it serves as the largest friend network, it is not surprising that Facebook has received significant attention regarding how grief manifests on the site, as well as the ways users negotiate site features to remember and provide support to those who are grieving following the death of a loved one. The majority of studies examining grieving on Facebook have analyzed memorialization pages, including unofficial pages created by friends, as well as profiles converted into Memorialization Accounts following a user's death (e.g., [6, 7, 9, 14, 16, 19, 25, 27, 30]). Researchers have found that public expressions of grief are increasingly common, with memorialization pages providing an outlet for users to share memories, express their sadness, access information (e.g., about a wake or funeral), and interact with others who knew the deceased.

2.3 Pet Loss and the Grieving Process

In this paper, we consider how individuals navigate the loss of a family pet within social media contexts. Pets are often treated as family members [12], and their death "creates a grief reaction that is in many ways comparable to that of the loss of a family member" [10]. Owners may experience numbness or disbelief, preoccupation with the loss, and reminiscing about their pet's life [2]. One study found that 86% of pet owners experienced at least one symptom of grief following the death of their dog or cat [41]. The degree of attachment between an owner and their pet is significantly correlated to the severity of the owner's grief [41]; when there is high attachment but low levels of support, an individual is prone to more intense grief [21].

Even though owners experience a similar grieving process following the loss of a pet compared to the loss of a human loved one, researchers have found that, traditionally, grief around the loss of a pet is trivialized or ignored in research, even though it can significantly affect owners' physical and mental health [10]. Pet owners may experience "disenfranchised grief", where their grieving process is not recognized by others or is otherwise not consistent with established norms around how one should grieve following the death of a loved one [15]. Because of concerns about how others may respond, pet owners may choose to remain silent or not seek support from their social network following the loss of a pet. Yet, support networks are crucial to an individual's grieving and recovery process after the death of a loved pet [39]. Most pet owners report a significant emotional attachment to their pet [10, 12, 38, 41]. When pet owners feel a lack of support and understanding from their network, they may experience more intense and prolonged grief [21].

2.4 Evaluating Pet-Loss Grief on Facebook

As noted above, researchers are actively engaged in trying to unpack how the grief process unfolds on social media by evaluating technical and structural changes being made to social media platforms to facilitate grieving, as well as the social practices of users who want to remember a lost loved one. That said, we have yet to see any work specific to pet-loss grief, which manifests in similar ways to human loss and causes pet owners significant physical and mental distress. Because pet-loss grief is often treated as "inferior" to human-loss grief, pet owners make difficult decisions around using public forums as a means to share their grief and seek support. In some ways, we believe that pet death-related grief may be more difficult to navigate in social media contexts than the more "socially acceptable" public disclosures about grief due to the loss of a human.

In this paper, we address the following research questions to understand how the social and technical attributes of Facebook encourage or dissuade users from expressing their grief following the loss of a family pet:

RQ1: How do users decide whether or not to share content about the death of a family pet on Facebook?

RQ2: What role does sharing about a pet's death on Facebook play in owners' grieving process?

Our analyses contribute to the current understanding of social media's role in the grieving process and provide design recommendations to facilitating grieving and support processes following the loss of a pet.

3. METHOD

To address the research questions outlined above, we conducted a mixed-methods study during the summer of 2016 of adult Facebook users who experienced the passing of a family pet within the previous 18 months (January 2015- July 2016).

3.1 Recruitment and Data Collection

A challenge for researchers studying specific subsets of the population—in this case, Facebook users who had lost a pet in a specified time period—is recruitment. In order to obtain data from enough participants to ensure diversity and reach theoretical saturation, we recruited participants through Mechanical Turk (MT), word-of-mouth via social media posts, and a random sample of 2,500 employees at the lead author's university. Participants were invited to participate in the study if they were: 18 or older, an active Facebook user, and had experienced the death of a family pet during 2015 or 2016.

To collect data for this study, we used a multi-pronged approach that enabled us to capture a combination of Facebook users' meta-cognition about why they used (or did not use) social media to grieve their loss and their actual social media grieving behaviours. First, a web-based survey prompted participants to disclose the name of their pet (to personalize follow-up questions) and the month/year the pet passed. Participants were asked whether or not they posted on Facebook about their loss, as well as their rationale for why they did or did not post.

Second, we leveraged the Facebook API to build an application that collected activity data from participants' Facebook Timelines. We collected all Timeline posts (text and photos) and comments on the posts that were made during the month users specified the pet had died, as well as the prior and following month to account for recall errors and interactions that might have occurred leading up to or following a pet's death. For each post and comment, we also collected the following metadata: Facebook object id, the content of the post, the Like/Reactions count, the date of creation, any media attachments, and the privacy settings of the post. We used the PHP Software Development Kit (SDK) to develop the application and collect the data, while a MySQL backend was used to store the data collected. The web-based survey redirected users to the application and used the data entered in the application (date the pet died and pet name) to help users customize a tribute to their pets.

3.2 Procedure

Participants could initially join the study through a number of different entry points. MT participants found the study via a HIT solicitation; some participants clicked on a link the authors disseminated via social media or email; others were referred to the study by clicking on a post generated by our Facebook application commemorating the pet loss of one of their Facebook friends who

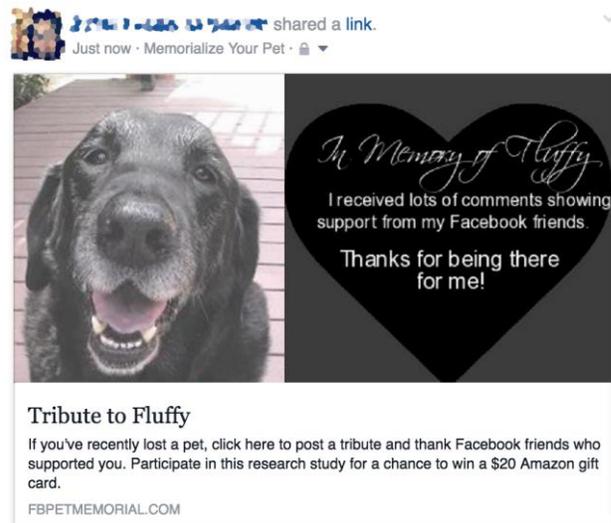


Figure 1. Sample Tribute from Facebook Application (stock photo).

previously participated in our study. All potential participants were screened for eligibility prior to enrolling in the study.

Study participants first completed the web-based survey. We asked participants if (yes/no) and how (e.g., post, picture, private message, etc.) they posted about the death of their pet on Facebook. The open-ended follow-up questions, which were dependent on their response and analyzed in the present paper, were "Why did you choose to [not] post about (pet name) on Facebook?" Participants were then automatically directed to the Facebook application installation page and asked to add the Facebook application by accepting the application permissions and logging into their Facebook accounts.

From the users' perspective, the Facebook application was a tool to memorialize their pet and thank their friends for the support received when the pet passed away. The home page of the application included the following description:

Remember and celebrate your pet. Find out how many of your Facebook friends offered you their support following your loss. Share with your Facebook friends to thank them for their support and write a tribute to memorialize.

From a developer's perspective, we used the pet's name and month of death to identify and present potential photos or text updates about their pet they had posted on Facebook. We also created a count based on keywords found in post comments (e.g., "sorry for your loss"), Likes, and Reactions on the posts as a whimsical (not scientific) measure of social support during the time of their loss. Participants could then select one or multiple photos or upload their own to create a personalized pet tribute that included the photo(s) juxtaposed to a heart image that encapsulated the text shown in Figure 1.

3.3 Ethical Considerations

Several controversies have shed light on the importance of ethical research practices when collecting behavioural data from social media (e.g., [29]). To address ethical questions related to this study, which used a researcher-created Facebook application to collect users' posts and interactions in the time surrounding their pet's death, we first carefully crafted the IRB document of informed consent to clearly explain to participants that they would be asked to install a Facebook application that collected the various types of

data we described above. Second, the Facebook store reviewed and approved the application as complying with their Terms of Service. Third, we referenced the privacy settings on posts and did not include public posts to ensure that participants' identities would not be discoverable through search engines. Fourth, we excluded any data irrelevant to the loss of the pet prior to our analysis. Finally, we manually removed any personally identifiable information from the results presented in this paper to protect participants' identity.

3.4 Data Analysis Approach

This paper presents qualitative analyses of users' rationale for sharing or not sharing content on Facebook following their pet's death, as well as the Facebook posts we were able to identify that were directly related to their pet. First, we exported the survey data from the three participant groups and cleaned the data to remove duplicates and cases with missing data. This resulted in 210 survey responses for why participants chose not to post about the death of their pet and 186 responses for why participants did post about their pet's death on Facebook (N=396). Next, we identified Facebook posts about participants' pets and linked them to the respective survey responses. Three research assistants reviewed all of the Facebook posts collected through the application and identified 190 posts across 50 users that were related to the loss of pets.

Next, we conducted a thematic content analysis [4] using open coding to identify emerging themes. Two authors focused on survey responses, while the other two authors coded the Facebook posts. For the survey responses, coders independently coded all why post/why not post comments based on the rationales participants provided in their responses. Then, the coders met to discuss and merge all of their themes, allowing multiple themes to be applied to each response if their codes did not match. The initial sets of codes were combined through axial coding [36] into four overarching themes each for the "why I posted" and "why I didn't post" responses. For the Facebook posts, the coders independently reviewed 30% of the corpus to derive emergent themes that could be coded. After a round of comparison, they agreed on a seven-factor coding scheme and used this set of codes on the full dataset. We discuss the primary themes to emerge from these analyses below.

4. FINDINGS

4.1 Descriptive Statistics

Across the 396 participants who completed the survey and provided a written response regarding why they had chosen to post or not post about their pet's death to Facebook, they overwhelmingly reported they were very close to their pet. They were asked to use a slider scale ranging from 1 (Not at all close) to 5 (very close) to indicate perceived closeness, and the average value selected was 4.59 ($SD=.72$). Those who posted to Facebook about their pet's death reported being significantly closer to their pet ($M=4.79$, $SD=.45$) than those who said they did not post ($M=4.40$, $SD=.86$), $t(310)=-5.67$, $p<.001$. We explore possible reasons for this difference in our analysis of users' reasons for not posting about their pet below.

4.2 Why People Do or Do Not Post about Pet's Death

For the 210 participants who provided a rationale for why they chose *not* to post about the death of their pet, four primary themes emerged, which we discuss below.

4.2.1 Private Preference vs. Public Disclosures

The most prominent reason included within 44% of responses referenced participants' personal privacy preferences combined

with the perception that Facebook is "too public" a space for posting such personal information: 40% of responses indicated that the death of the pet was a personal and private matter that should only be shared with close family and friends or considered themselves to be more private people who did not share any personal information with their Facebook friends, for example, "Because it was a very personal and emotional time for us, and I preferred to mourn privately."

The sense of personal privacy over the loss of the pet was often combined with the sentiment that Facebook was a public forum, which was not appropriate for sharing such private and personal matters. For instance, 14% of all responses alluded to the perception of Facebook being decidedly non-personal. Interestingly, a number of participants used strong language, such as equating Facebook to "the world," or saying that posting would "broadcast" their personal grief to "everybody." For example: "I really had no plans to tell the whole world that my beloved pet died."

Only one participant acknowledged that Facebook provided a mechanism for posting to limited audiences, but they said the effort of using advanced settings was not worth the benefits of sharing: "I know that facebook allows you to select how much people see, but that seems like a lot of busy work when I'd rather think about my lost pet."

In summary, participants who chose not to post about the death of their pet often felt that the matter itself was private, they valued their privacy, and that Facebook was an inappropriate public forum for such privacy preferences.

4.2.2 Coping with a Traumatic Experience

The loss of a pet proved to be a traumatic experience for many, with 34% of respondents saying the experience was too traumatizing to post on Facebook or that doing so would only remind them of their pain. In most cases, the death itself was traumatizing, but in others, how the pet died (through unnatural causes) was particularly difficult for participants who chose not to post about their loss:

It was a very traumatic experience. He had to be euthanized after repeated aggression and I felt exceptionally guilty. I felt a great deal of shame and although the loss was gut-wrenching, I was afraid of criticism about the difficult decision we had to make.

In 9% of responses, participants specifically stated they did not post because they did not want Facebook to remind them of the tragedy. Participants explained that reminders could come in the form of seeing it on their Facebook page, receiving notifications from friends when posting condolences, or as annual reminders from Facebook itself: "I was sadly grateful he was gone and not suffering anymore. I didn't need any pop-ups in a year reminding me of his passing or the hard times leading up to his death."

To many, avoiding the pain associated with the loss of their pet was a key way that they coped. Therefore, posting about the death was not an option.

4.2.3 Sharing as a Violation of Social Norms

Approximately 21% of participants felt that sharing about the death of a pet on Facebook seemed inappropriate. Various social norms dictated these decisions. For instance, some felt their Facebook friends were not the right audience for sharing such information, noting that Facebook is for "business and networking purposes" or sharing "positive things." Others felt the timing of the loss was not conducive to sharing, such as during holidays: "It was too personal for me, and it was in the middle of holiday season."

In general, a number of participants felt that Facebook was not an appropriate place for sharing sad news, or they did not want to make people “sad while scrolling through their news feeds.”

4.2.4 *Perceived Lack of Social Support*

Another 11% of the responses indicated that participants did not feel the need to post because others did not know their pets, did not care about them, or would respond negatively to their loss. For example: “The people on my personal Facebook really do not care about cats. Basically I’m known as the cat girl, and I did not want to get mad at someone because they said/typed something stupid/offensive.”

Others expressed that any sympathy they did receive on Facebook would simply be insincere: “I’d rather have real comfort than a bunch of people just hopping on a bandwagon and faking it.”

Because these participants did not anticipate any positive responses from posting about the death of their pet on Facebook, they chose to refrain from doing so.

4.3 **Why People Post About Their Pet’s Death**

In contrast, 186 participants provided rationale for why they chose to post about the death of their pet. The four emergent themes are discussed below.

4.3.1 *Sharing the Sad News with Others*

The most prominent reason within 49% of all responses was that Facebook helped facilitate sharing this information with their friends. In 26% of cases, participants explained that others knew and cared about their pet, so they felt that it was respectful to let them know about the pet’s passing so that they could also grieve:

“Many of my friends had known [pet name] and were very attached to him. I wanted all those who knew him over the years to know about his passing, and allow them to grieve in their own way.”

In another 16% of responses, participants admitted that posting on Facebook was an easy way to disseminate the news without having to recount the loss through repeated individual messages: “It was the easiest way for me to share that [pet name] had passed—it was the quickest (and emotionally easiest) way to let a wide audience know.”

Another 6% of responses explained that participants had frequently shared about the life of their pet on Facebook, so it felt appropriate to share about the pet’s death as well. Interestingly, unlike participants who did not want to share their loss with “the world,” these participants often used more intimate terms, such as “friends,” “family,” and “social circle” when describing why they chose to share about their loss.

4.3.2 *The Importance of a Pet as Part of the Family*

Another prominent reason within 42% of the responses was related to the importance of the pet in relation to one’s life. Unlike the reasons for why individuals did not post about the loss of their pet, rationales for why participants shared included direct references to the pet’s name and an emotional explanation of the pet’s place in the family: “I had grown up with her since I was 8 years old and losing her created a hole in my heart that can never be filled. My friends and family all knew and loved her... As well as they all knew what she meant to me.”

Because of the significance of the relationship between pet and owner—with pets repeatedly described as important members of the family unit—these participants felt it was a meaningful and appropriate life event to share with friends: “I loved [pet name] as a part of my family, my life. He was my dear. I share these types of

losses with my friends on Facebook so they know some of what’s going on in my life.”

Due to the significant role these pets played in their lives, these participants felt compelled to share about their loss with others.

4.3.3 *Commemorating the Life of Their Pet*

Another 29% of the responses indicated that participants wanted to commemorate the lives of their pets or to post a tribute in their memory. Sometimes the tribute was sharing news about the death of the pet, so that others understood the importance of the loss. For instance, one participant acknowledged that Facebook has served as a “virtual scrapbook” for their family: “My Facebook has become kind of a virtual scrapbook of our family’s life and it would have been incomplete for that to have happened and not recorded it.”

Other times, participants wanted to commemorate good memories of the life they spent with their cherished pet: “I wanted to express what an amazing dog she was with all those who knew and loved her.”

4.3.4 *Finding Support and Coping with Grief*

The desire of sharing one’s feelings, being at ease, and receiving emotional support was evident in 29% of the comments. Some turned to Facebook because they had no other outlet for support: “I was extremely sad and really had no one to grieve to about it so I kind of went to Facebook for a place to vent/grieve and talk to people to try and find comfort.”

Others found comments from others to be a source of comfort and described feeling supported when reading notes of concern from their network. Finally, some participants drew on the support of other pet lovers to provide empathy and support over their loss: “A lot of my FB friends have cats and I knew they would understand about losing a pet and would empathize on how hard it was to have her put down due to her ailments.”

Overall, we saw a distinct difference between the levels of emotion support participants believed that they would receive from their Facebook networks. Generally, those who did not post felt others did not care or would not be supportive, while those who did post found support in their peer network.

4.4 **How Pet Death Disclosures Unfold on Facebook**

From the Facebook data collected via the memorialization application, we identified 190 Facebook posts specifically about the loss of a pet posted by 50 unique study participants. We discuss the five primary themes emerging from these posts below.

4.4.1 *Announcing the Illness or Death of a Pet*

Unsurprisingly, a large proportion (42%) of the posts were “announcements” participants made on their Timelines to let their network know the changing status of their pet, including updates about illness, recovery, deciding to put the pet “to sleep,” and once the pet had died. These messages seemed to help posters with the grieving process. If a pet was sick, these posts were often accompanied by a request for support or prayers. Others invited their friends to come visit their pet before he or she died.

For those of you who know (and love) my big sweet [pet name], it’s clear that he’s nearing the end. He’s had a rough summer but a long and happy life. If anyone out there wants to see him before he leaves us, let me know. He still loves visitors and treats!

Some users documented their pet’s final weeks and months by sharing frequent updates with their network. One participant shared daily updates for the month leading up to her dog’s death, adding

hashtags to signal her dog's time left was limited: "I'm giving [pet name]'s new soft neck cone some bunny ears—it feels good to be humorous with our precious pup after this past week... #PreciousMemories #SavoringEveryMoment"

When a pet had passed, owners often shared posts that highlighted how their pet made their lives better and told stories with friends who may also have known the pet.

Today our beloved [pet name] passed away. We knew that it was only a matter of time given his heart condition. He was given to my parents when he was 2 and he was our family member for almost 12 years. He loved treats car rides and his ears being rubbed. He will be missed so much!

4.4.2 *Pets Are an Important Part of the Family*

In line with the open-ended responses explaining why they chose to share their pet's death with their network, another common theme in Facebook posts was how owners described their pet as a member of their family. These posts often referenced how long the pet had been in the family and, if that time was short, how much the pet had impacted their lives in that short time. For instance: "Though I only got to have you in my life for 7 short years I am so blessed that I got to be your mom. To experience the most unconditional beautiful love you gave me and everyone you met."

Posts that described the pet as a family member were often richly descriptive and filled with anecdotes. The grief they expressed was bittersweet, highlighting how missed the pet would be while also describing someone who had enriched their lives.

4.4.3 *Reminiscing About the Pet Who Died*

In the weeks following the death of a pet, many participants shared messages reflecting that they were still coming to terms with the pet's death. The grieving process for some was lengthy, and participants shared posts both to memorialize their pet and reiterate their grief to others who may have gone through similar grieving processes with their own pets.

Posts that were specifically reminiscing about a pet (with or without references to longing to see the pet again) were quite common and were almost always paired with one or more pictures of the pet. "First day we got this lil asshole. Now he's gone to a better place..." [picture of dog], or: "Awww I miss sharing my (bigger) bed with awkward dog! <3 you Indy!! #bt" [picture of dog]."

4.4.4 *Thanking Others for Their Support*

Many users shared posts that expressed their appreciation of the support they had received from their networks after announcing the loss of a pet. The support participants referred to came in various forms ranging from offline emotional support, to uplifting comments on Facebook, to thanking others who made a positive impact on the pet's last days, such as a veterinarian who went above and beyond to treat a pet. Family friends, veterinarians, and coworkers were often thanked for their support.

We got this very thoughtful card from [the vet] today. Daisy Mae was so much more than a dog and while i know they send everyone a card its nice that they recognize losing our pets is losing family. I miss her!

4.4.5 *Accepting the Loss and Moving On*

While not as common, we saw a few posts that highlighted how people emerged from the grieving process, typically by getting a new pet. Some participants' posts indicated their pets were in a "better place," "heaven," or "crossed over the Rainbow Bridge." These posts were more hopeful in nature and showed that despite the loss that had just been experienced, there was belief that the pet

was "better off." These posts often described how much their pet had suffered from an illness or referenced how the pet had joined another pet that had previously died.

It is with a sad and heavy heart that Mark and I have decided to cross [pet name] over to be with his older brother with the help of Lap of Love on Monday....We will miss you...you will be with your brother who will be there waiting for you...I told him you were coming.

We also identified seven posts where participants' updates suggested they had moved to the final stage of grieving—acceptance—signaled by donating the deceased pet's food and toys or getting a new family pet. In some cases, the person specifically said in their update that the new pet was not a replacement for the one that passed but wanted other pets to have a companion; in others, they spoke of how they had not thought they were ready to move on until they saw the new pet. "I didn't know how badly I missed having ferrets until this sweet girl gave me kisses in a parking lot minutes after meeting me."

In summary, we found many links between participants' motivations for sharing and the content of their posts, as well as indications of how Facebook may help individuals through the latter stages of the grieving process, as seen in their comments that expressed both sorrow and celebration of the lives of the pets that they had lost.

5. DISCUSSION

The present study extends the existing literature on death and social media to consider how Facebook users negotiate decisions around sharing information about a loss or keeping that information private as well as specific risks and benefits they believe will result from public expressions of grief. Research has established how important and meaningful pets are to their owners, as well as the emotional toll pet owners experience following their pet's death [2, 10, 41]. These findings can help researchers to better understand how and why people make disclosure decisions following the loss of a family pet—and how to improve this process to minimize negative experiences.

Therefore, we argue that looking at how the grieving process unfolds following the loss of a pet should provide useful insights into the loss of any meaningful companion, human or animal. Below, we unpack these findings by focusing on how participants' responses and posts inform (1) existing theories of grief and support in mediated settings, (2) tensions created by the blurring of public and private spaces on social media, and (3) how fears of disenfranchised grief affect disclosure decisions.

5.1 Manifestations of Grief on Facebook

One way to evaluate the findings presented above is to consider how they fit into existing theories of grief and coping. First, when considering the grieving process, and in particular the five stages of grief described in the literature [23], we observed that many of these stages were absent within the 190 Facebook posts we analyzed. Denial is a largely invisible process in which posting about the reality of their pet's death would have negated the process. We did not detect anger within any of the Facebook posts and very little bargaining (e.g., asking for prayers for sick pets). Overall, the majority of posts reflected the last two phases of grief: depression, as highlighted in posts referencing the sadness felt due the pet being gone, and acceptance, which manifested in the weeks or months after losing the pet and were often signaled in posts announcing a new pet. Whether this finding is specific to pets or is consistent with other forms of grieving should be examined in future research

When looking at why individuals chose to post or not about the death of their pets, we identified links to theories on coping and post-traumatic stress [1, 22, 24] and to related work on the grieving process. For example, avoidance of reminders and intrusive thoughts about a negative event are two key dimension of post-traumatic stress response [1, 22]. These were themes that frequently emerged as a reason why some individuals did not want to post about the death of their pets. In contrast, some participants used Facebook as a means of widely disseminating news of the pet's passing, so that they would not have to repeatedly recount the loss. These behaviours align with coping theory [24], which suggests that when individuals experience a stressful event (primary appraisals), they make secondary appraisals for what, if anything, is within their control to do about the situation. In this case, some participants felt that control was best maintained by not posting while others felt that posting was the best way to mitigate the pain of their grief—not because it garnered support but because it was easier. We will relate this better understanding of human responses to social media grief over pet loss to our later design implications about giving social media users options to determine how social media can best support their grieving processes.

5.2 Private Disclosures in Public Spaces

One of the key characteristics of social media platforms is that they blur distinctions between public and private spaces and make it more difficult to assess one's audience for a given disclosure [3]. For some users, the focus on information diffusion is seen as a boon, allowing users to make requests for support to a wide audience with the thought that someone will be able to help. For others, concerns around privacy—who will see a post, the private nature of a disclosure—leads them to withdraw or self-censor [13, 35, 40]. These studies suggest self-censorship, as a form of boundary management, may have some negative consequences, such as feeling a loss of authentic self [40]. They have also shown that, if given the opportunity to share with more targeted audiences (e.g., via advanced privacy settings), some Facebook users prefer disclosure over self-censorship [35].

Within our data, we saw participants wrestle with tensions between the private nature of grief and support-based benefits of sharing disclosures about a pet's death. Comments about privacy—both the privacy of the event and more generally the lack of privacy on Facebook—were the most prevalent theme among participants who chose not to post on Facebook about the death of their pets. This finding highlights a methodological contribution of our work related to the importance of studying attitudes that are not observable through behavioural data. Many Facebook users still felt that the grieving process was an intimate experience that should only be shared with close friends and family members. This personal privacy preference was magnified by the fact that many also saw Facebook as a public forum—as opposed to close-knit network.

On the other hand, participants who shared their grief on Facebook described a sense of community and support from their social network and described how sharing such a personal experience helped them through tough times. Nearly one-third of participants explicitly noted network support as a reason for widely sharing news about their pet on Facebook, noting that these interpersonal disclosures and conversations helped them cope with the loss. These findings are in line with broader studies about Facebook and social capital (which describes the processes through which individuals obtain resources from their network), which have highlighted the ability to request and offer support as a primary reason for making disclosures on the site [8, 18, 37].

5.3 Disenfranchised Grief on Facebook

Our most concerning finding was evidence that some participants have experienced disenfranchised grief [15], and that this perception underlies their decisions to not share news of their pet's death with their social network. Whether they do not want to violate social norms around “positive only” disclosures on Facebook or they believe they will not receive support from their Facebook friends, these participants believed that sharing their pet's death on Facebook would be a negative experience. At the same time, these participants expressed significant grief over their loss and a desire to reach out to others, suggesting they wanted an outlet through which to connect with network members. This was especially the case for individuals who treated their pets as if they were their children, which other Facebook users may not understand. For example, one participant opined:

I know firsthand how most people don't care. ...I watched a friend recently post the story of what happened to her pet each day (little bits) over a 2 week period...And someone told her she was being ridiculous and would do best to think of other healthy things instead. It embarrassed her. I sent her a support message after I saw it happen. That's why I keep it to myself. I don't need to give other dismissive, uncaring people that luxury of interfering with or trying to control how I grieve over a lost family member, even if a furry member.

Disenfranchised grief appears to be further complicated when one's pet was outside “normal” pet types. While many people can empathize with the loss of a cat or dog because they have shared experiences with the person grieving, owners of birds, ferrets, fish, hamsters, and other pets may choose not to share their grief because of concerns they are over-reacting [38]. Several participants who owned these types of pets commented that they did not share the news because “no one would care” about their pet's death. Importantly, this sentiment does not negate their grief; rather, these concerns about a lack of network support hamper the grieving process by preventing supportive exchanges.

Although our analysis of the comments posted by the Facebook friends of our participants did not detect negative posts, previous work analyzing grieving in online spaces found that death was often a topic prone to sarcasm, humor, or derision on social media. When looking at how Twitter users respond to mass tragedies such as shootings or natural disasters, Glasgow and colleagues [20] found that users not directly impacted by the event react differently based on the context of the tragedy. Other researchers have noted that those who choose to share sensitive content online risk negative feedback, both from strangers as well as through others who may vocalize their emotions in negative ways. For example, Marwick and Ellison [25] describe two types of interlopers seen posting on Facebook memorialization pages: “grief tourists,” who post messages expressing sorrow but were not friends with the deceased, and trolls, who are less common but deliberately try to disrupt the grieving process by posting inflammatory or otherwise negative comments.

5.4 Implications for Design

Facebook's affordances, especially providing increased visibility, shareability, and persistence of content, have changed the nature of online interactions [3, 25]. When considering these affordances in combination with shifting norms around public disclosure, it is not surprising to see users sharing content that has traditionally been associated with smaller, more private exchanges. One process that has been receiving more attention from researchers and designers in recent years has been the grieving process, with recent research

from the ACM community describing how users memorialize their friends on Facebook and similar sites [5–7, 25] and how UI researchers design new tools to help users through the loss of loved ones [26].

Interaction tools may provide users with new ways to express sympathy to a friend or request social/emotional support from their network during a tough time; for example, Ellison and colleagues [18] found that even quick interactions on Facebook, such as by “Liking” an update, were associated with greater perceived access to social resources. On the other hand, these same features and affordances can be counterproductive when it comes to loss and grieving. Numerous Facebook features (e.g., *On This Day*; see Figure 2) and popular applications (e.g., Timehop) use the persistence of content to provide users with flashbacks about posts from the same day in previous years. While these tools have fueled popular sharing behaviours like #TBT (throwback Thursday), they may also remind users about negative events, such as losing a loved one.

Little is known about the processes around making sensitive disclosures, such as those around the grieving process following the death of a loved one. Grief is traditionally expressed in private spaces because it evokes strong emotional responses [15]; therefore, grieving in public spaces makes grievers vulnerable to negative feedback. Therefore, decisions around whether to make such disclosures public can be difficult and present unique challenges to designers. Below we describe two simple design recommendations to help provide users with a supportive space for them to grieve while minimizing the likelihood that features will be perceived as insensitive.

5.4.1 Opt-in only reminders

One reason for not sharing news of a pet’s death in our dataset was that participants did not want to be reminded of their loss in the future. Facebook’s *Year in Review* and *On This Day* features serve as technology-mediated memory mechanisms and remind users of content they previously shared on the site. Simple awareness of the existence of tools that would potentially remind a user of content published at a particular time is enough to hinder some users from posting about negative events. One way that users can enjoy the social support provided by their Facebook networks and avoid being reminded of their loss in the future is to add a “opt-in to be reminded” button so that users can select content they’d prefer not seeing again in the future. This type of feature runs contrary to the commonly held belief that people would only share content they want to see again (i.e., the positivity bias in social media sharing) and helps encourage users to share a wider range of life experiences, rather than just focusing on the “good” times.

5.4.2 Adding a new life event option

While Facebook currently offers *Life Event* options for commemorating the loss of the life of a human loved one (see Figure 3), as well as for announcing a new pet, there is no *Life Event* for the loss of a pet. With the Facebook application we developed for this study, we had hoped to provide users with a mechanism to celebrate and commemorate the life of their pet and their position as a valued family member. In general, participants appreciated the application’s sentiment, and some contacted us to thank us for the feature. For example, one participant emailed us after completing the survey, saying, “Thanks for the link. I really miss my dog and I thought he deserved a better pic. Keep it up. It’s a good idea.” Therefore, we recommend adding the option to commemorate one’s pet through Facebook’s *Life Events* feature.



Figure 2. Screenshot from Facebook’s announcement of *On This Day* feature in 2015.

5.5 Limitations

A primary goal of this study was to use survey and Facebook data to better understand how the grieving process unfolds in social media. However, there are some limitations to these data. First, the large discrepancy between the number of participants who indicated they had posted content to the site and the number of posts we were able to identify raises questions about our process for collecting data as well as participants’ accuracy of recall. We purposefully only collected data immediately prior to and after the month participants said their pet died to meet ethical standards for data collection; it may be that users remembered posting but it fell outside the time range for which we had data. Second, when evaluating the Facebook update data, we found that while some posts included clear signals for time order (e.g., “We put our cat [pet name] to sleep today...”), for many posts it was unclear whether the post was in the immediate aftermath or sometime later. Knowing *when* a post was made is especially important for understanding how Facebook interactions may help individuals move through the stages of grief. Third, this study was limited to Facebook disclosures and the grieving process might unfold differently on other online platforms; future researchers should explore this further. Finally, individual differences not captured in the study may reveal further differences in the grieving process.

6. CONCLUSION

This study evaluated Facebook users’ motivations to publicly share disclosures of grief following the death of a pet versus keeping those disclosures off social media. We find that pet-related grief is particularly complicated, with decisions to share or not share largely determined by perceptions of support and privacy related to the event. For some, a feeling of disenfranchised grief and concerns over the loss being trivialized may prevent them from sharing their grief and seeking support from their network. Such decisions to self-censor preclude using the platform to reach out to one’s extended network—as well as missing out on opportunities to facilitate supportive resources through offline and online channels. Fears of a negative response will likely lengthen the grieving process because it reduces opportunities to lean on one’s network and move through the stages of grief.

To help users who have lost a loved one reach the acceptance stage of grief, we have suggested two design changes to Facebook’s interface to minimize user concerns while still providing them with



Figure 3. Facebook's current Life Event categories.

a beneficial space to commemorate the life of their loved one. These changes, in combination with a deeper understanding of how new technologies influence the grieving process and perceptions around privacy, provide first steps in the process of improving opportunities for experiencing and sharing emotional disclosures in a wide range of online communities.

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