



“I hate you. I love you. I’m sorry. I miss you.”

Understanding Online Grief Expression Through Suicide Bereavement Letter-Writing Practices

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When bereaved individuals seek online support in response to the suicide of a loved one, their expressions of grief take many forms. Although the intense grief expressions individuals bereaved by suicide commonly share in private therapeutic settings can be helpful in healing from traumatic loss, these same expressions may potentially cause harm to others when shared in a public online support community. In this study, we present a qualitative analysis of letters posted on the r/SuicideBereavement subreddit, and comments replying to those posts, to explore what diverse expressions of grief additionally demand of platform design. We find that letter posts contain potentially harmful grief expressions that, in this community, generate mutual support among community members. Informed by our findings, this study considers the design challenges for online platforms as they simultaneously support users receiving support and healing through sharing certain grief expressions, while also supporting users who will be harmed by exposure to those grief expressions. Taking inspiration from offline therapy modalities, we consider the design implications of creating specialized online grief support spaces for diverse grief expressions.

CCS Concepts: • **Human-centered computing** → **Empirical studies in collaborative and social computing**; **Computer supported cooperative work**; **Empirical studies in HCI**.

Additional Key Words and Phrases: online networks, social media, bereavement, suicide

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1 INTRODUCTION

When Kelly attends the memorial service for her cousin who has completed suicide, she begins her eulogy by sharing that she hates her cousin because of his selfishness in taking his life. The crowd gathered in the small chapel gasps. While Kelly continues to curse at her cousin, crying at the chancel, Kelly’s mother rushes to interrupt and escort Kelly out to the hallway. Kelly’s mother chastises her daughter. “Respect the dead,” Kelly’s mother scolds in a whisper, “we need to get you some serious help if you think what you just did in there is okay.”

Later that week, Kelly is in a broad-ranging loss support group with which her mother has connected her. Following a normal practice in the group, the facilitator invites each member to write a letter to their deceased loved one. When it is Kelly’s turn to share, she stands in the circle of chairs in the gymnasium and discloses at length the details of her cousin’s death, the graphic and gory description of how he took his life. After the meeting, the facilitator approaches Kelly, saying, “We are here to

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support you in any way we can. But. Can you please tone it down in the future? Sharing so many details might traumatize the other members..."

That night, feeling invalidated in every space she has gone to share the intensity of her grief, Kelly finds a website where she can anonymously post, a space that is specifically designated to support people who have lost someone to suicide. She posts the same letter that she shared in the bereavement group, fearful of her post being deleted by a moderator or being bullied by commenters. Instead, three others comment on her post within minutes, thanking her for sharing her story and offering support. That night is the first night that Kelly has been able to sleep for more than a few hours at a time since her cousin's suicide.

After a socially stigmatized traumatic loss, such as the loss of a loved one to suicide [20], people seeking to express their grief encounter challenges in finding support offline [45]. In part, these challenges stem from community responses to intense expressions of grief commonly shared following a traumatic loss [69].

Social Networking Sites (SNS) such as Reddit are optimized to support sharing our life experiences within communities (subreddits) of people with common interests or backgrounds. One type of life experience that SNS provide community spaces for is grief. SNS provide communal spaces to memorialize loved ones and receive support from community members [9, 25, 26].

Though Kelly's story is a hypothetical illustrative anecdote, Kelly's story is not uncommon. Online spaces are increasingly emerging as spaces where people bereaved in traumatic ways can share the intimate details and emotions related to their loss without facing the stigma commonly present after expressing those details and emotions to family, friends, and even general grief support communities [41, 42, 4]. In this hypothetical, intense anger is part of Kelly's meaning-making process. However, her authentic grief processing threatens the social norms she encounters in public spaces, causing her grief expressions to be vilified and policed by her family and community members [69].

Online communities have been identified as mutually supportive spaces for grief [3]. However, determining the types of grief expression that receive mutual support in online communities, and whether there are limits to that mutual support, necessitates further research. Without a more comprehensive understanding of the dynamics of mutual support in response to diverse grief expressions, it is difficult for HCI researchers and practitioners to determine effective design interventions to support a diversity of grieving users.

This study expands social computing research on grief by focusing on grief expressions in response to losing a loved one to suicide. In this study, we ask: what might diverse expressions of grief additionally demand of platform design?

To begin to answer this question, we present the findings of a qualitative analysis conducted on letters posted on the r/SuicideBereavement subreddit — letters individuals have written to their deceased loved ones. Our analysis focuses on patterns in the content of letter posts, the content of comments on letter posts, and the dialog interactions between posters and commenters. This study focuses on letters as a case of authentic expression of grief in which honest and vulnerable details of loss are processed and shared [60, 63].

We find letter posts are a case of online content that include *inappropriate* grief expressions: graphic stories of death, and intense feelings of anger at the deceased.¹ Yet, instead of being policed as previous scholarship might have us expect [68, 24], the grief expressions in letter posts generate multiple types of supportive comments and generate mutual support in reply chains.

¹We reference *inappropriate* grief expressions as a descriptive term to designate expressions of grief that in previous literature have been linked to grief policing [69, 68, 70, 23]. As researchers, we do not prescribe a binary between the expression of *appropriate* and *inappropriate* grief. We hope this study can help social computing continue to nuance and move beyond binaries in understanding online grief expressions.

In our Discussion, we explore the implications of our findings for platform design and future research. We consider the design challenges for platforms as they simultaneously support users sharing *inappropriate* grief expressions, while also supporting users who will be harmed by exposure to *inappropriate* grief expressions. Taking inspiration from offline therapy modalities, we suggest that one path forward is for HCI researchers and practitioners to create specialized online grief support spaces, organized by different types of grief expressions. We conclude by considering the implications of implementing specialized spaces organized by types of grief expressions, considering the challenges that grief expressions present for platform design more broadly.

2 RELATED WORK

To establish a common background for terminology and grief support outside of the computing context, we first introduce prior research on letter sharing in bereavement therapy settings. We additionally introduce the terminology of *inappropriate* grief expression, *appropriate* grief expression, and *grief policing*, which we borrow from psychology scholarship to inform our analysis.

Then, to contextualize the contribution of this study in social computing research, we turn to related work in: suicide bereavement support and SNS, grief and bereavement research in social computing research, and research on the design challenges of user exposure to sensitive content on SNS.

2.1 Background

2.1.1 Letter writing and continuing bonds. Writing letters to a deceased loved one as a coping mechanism during the grief process is a well-documented therapeutic activity frequently used in clinical settings [60, 63, 50].² We chose to focus on letter posts in our analysis due to previous psychology scholarship identifying letter sharing as a case of an intimately personal practice that has been demonstrated to provide cathartic healing to grieving individuals and has been seen to establish stronger group cohesion in small-group grief support settings [50]. Due to our interest in the relationship between mutual support and grief expressions, we chose to study an established therapeutic intervention that has been demonstrated to benefit group cohesion [50].

The practice of letter writing consists of two stages in small-group grief support: writing the letter and sharing the letter [50]. On the one hand, letter writing is a personal exercise, allowing the person grieving to speak honestly and vulnerably to their deceased loved one. On the other hand, letter sharing is also a social exercise of sharing honesty and vulnerability with a group. The sharing of letters requires a space where trust has been established with a group. The necessity of a baseline of group trust is why letter writing is more often deployed in small-group specialized grief support and less so in larger, more generalized support groups [50].

Although letter writing in a one-on-one therapy setting is a useful therapeutic practice, we focus on letters that are shared socially in a group. We are interested in socially shared letters due to our interest in letter posts in an online community, a social and public practice. Letter sharing in open online communities, even pseudonymous communities like r/SuicideBereavement, is unexpected due to the practice normally done in small-group grief support [50]. At the outset of this study, our research interest in letters also stemmed from this subversion of expectations — we encountered a grief expression known for its small-group need for a safe and trusted space, here shared widely and publicly in a pseudonymous online platform (e.g., Reddit).

²Of note, there is a substantial corpus of research across disciplines that analyzes suicide letters written by a person in advance of their suicide [34, 55]. Though there are suicide letters posted on the r/SuicideBereavement subreddit, we are specifically interested in letters addressed by the bereaved to the deceased.

As a therapeutic intervention, letter sharing in clinical groups allows the bereaved to authentically and safely express intense grief, make meaning of their grief by externalizing it into creative writing, and continue their bonds with their deceased loved one [31, 63, 2, 31, 72]. Research has found that letter-writing creative interventions can help facilitate the resolution of traumatic grief by giving individuals the ability to continue bonds with their deceased loved one by sharing content that would be stigmatized in more public grief settings [44, 39, 69].

Arising in the 1990s as a response to traditional psychiatric understandings that healthy grief is grief that is moved on from quickly, the now widely accepted *Continuing Bonds* model of grief tells us that, rather than healthy bereavement necessitating the cessation of one's relationship with the deceased, healthy bereavement includes the relationship with the deceased continuing in an adapted form [40]. The adapted forms of a person's ongoing relationship with their deceased loved one may include holding onto items of the deceased, visiting the same places that the two people had previously visited together, and praying or speaking with their deceased loved one as the intended recipient [40]. One practice utilized in clinical settings to intentionally facilitate the healthy continuation of bonds is for the bereaved to write a letter to their deceased loved one.

2.1.2 Inappropriate grief expression, appropriate grief expression, and grief policing. As we continued to analyze our data, we encountered sensitive content in posts that were unexpectedly graphic and gruesome in their detailed descriptions of death. When considering the graphic stories in the posts, we were reminded of psychology scholarship that connects similar graphic stories to grief policing at memorial services [23]. We were especially reminded of Walter et al.'s description of *inappropriate* and *appropriate* grief expressions [69, 68].

In the wake of someone's death, people often gather in groups to mourn their loss — sometimes giving rise to grief expressions that are publicly policed when they break established social norms. Walter et al., among others, have demonstrated that memorial services and other group mourning settings follow social norms that dictate how grief should be appropriately expressed [68, 69, 70, 23]. Previous research by Walter et al. has found that the expression of too much emotion by an acquaintance of the deceased at a funeral will often be policed by close family members [70]. Walter et al. have additionally found that an individual's complete lack of emotional expression at a funeral will also lead to them being ostracized, gossiped about, or seen as suspect by others [68]. Walter et al. call this ostracization, gossiping, and being seen as suspect by others as responses to *inappropriate* grief expression.

Although called by different names, most commonly *grief policing*, other researchers such as Foote have found that certain content in expressions of grief is policed in connection to the content of their grief expression [23]. Foote references details of violence, the sex life of the deceased, or harm that the deceased may have caused during their life, as grief expressions that are policed. Our study focuses on grief policing in response to *inappropriate* grief expression, which we understand as the phenomenon of the social enforcement of validating certain public expressions of grief and stigmatizing others.

2.2 Related Work

2.2.1 The suicide pandemic and suicide bereavement support on online communities. Suicide is a growing societal epidemic driving many bereaved people to grieve online. In 2020, suicide was the 10th leading cause of death in the United States [54, 65] — on average, 132 people in the United States die by suicide daily, adding up to an average of 48,344 killed by suicide each year. In the United States, suicide is the 2nd leading cause of death for ages 10-34 and the 4th leading cause of death for ages 35-54. A staggering number of people lose a loved one to suicide every year, with an estimated 54% of the US population bereaved by someone in their circle of friends or family

completing suicide [54, 65]. Suicide is not limited to the US or Western context, with suicide rates rising annually around the world [71].

In Western healthcare contexts, suicide bereavement typically requires specialized therapeutic support, often provided in individual and group therapy contexts. Groups specifically designed to support suicide bereavement help provide a safe space to process emotions and trauma that more general therapeutic grief contexts may not be equipped to handle. In comparison to what clinical literature considers average types of loss, suicide bereavement requires specialized care because it is more likely to (1) generate an existential crisis of meaning [18, 7, 52], (2) break down the assumptive world that the bereaved previously thought they could count on [37, 38], (3) force the bereaved to grapple with unanswered questions thereby leading to intense psychological destabilization [7, 52], and (4) ask the bereaved to relive graphic trauma and intense negative emotion as part of their grieving journey [5, 72].

Young et al. additionally highlight the isolating impact of not being able to authentically display grief in response to suicide in public due to the social stigma attached to a loved one taking their own life [72]. When possible, in clinical settings, people bereaved by suicide are provided specialized spaces to grieve because many experience additionally overwhelming guilt, confusion, rejection, shame, and anger, in addition to the inevitable grief, sadness, and disbelief typical of all types of loss. Specialized spaces can be either spaces in which a patient works one-on-one with a therapist, or spaces in which a patient processes their grief in a group led by a trained clinician. Though clinical support can be a vital lifeline when possible, due to decreasing funding and clinician bandwidth, specialized offline support for suicide bereavement cannot keep up with the growing demand for specialized spaces to receive support and resources.

Recent research shows that social media platforms have begun to fill this gap [41, 42, 43]. Forums and groups on platforms such as Reddit and Facebook allow grieving users to find additional support beyond offline settings such as counseling or in-person support groups [41, 42, 43]. Social media can act as a critical space for bereaved people to express their grief, share their mourning with others, and seek mental health support or resources within a community setting [48, 14]. Virtual community support also has the potential to complement in-person support by providing the safety of anonymity, connection with other griever from many different backgrounds and locations, and unique multi-media formats for storytelling [5]. SNS can allow individuals to make meaning of their loss and continue bonds with the deceased and others who have experienced a similar loss [48, 58].

Social computing research has found that online practices are a contemporary form of expressing continuing bonds with their deceased loved one [6, 60]. One example of expressing continuing bonds is the posting of a eulogy on an online memorial page [9]. Early studies on social media memorialization highlight the potential of the internet (and Facebook in particular) as a new and emerging avenue for the continuation of online identities and continuing bonds. To our knowledge, outside of She et al.’s research on *backstage grief* [59], continuing bonds have predominantly been studied in social computing literature through analyzing social media posts on online memorial pages (e.g., a Facebook memorialization page) — a limitation in social computing grief research to date.

2.2.2 Grief and bereavement research in social computing. HCI researchers and practitioners have described bereavement practices as part of a larger community focus on technology and mortality [15]. Much of this previous research has studied memorialization, remembrance, grief, and ritual practices that social media platforms facilitate [49]. Research in the area of technology and mortality has been diverse, with studies into digital heirlooms (e.g., [51]), account management (e.g., [33]),

communal rituals (e.g., [67]), online memorials (e.g., [32]), post-mortem data management (e.g., [11]), and privacy (e.g., [1]), among others.

Prior work on grief has examined ways in which the bereaved manage and express their grief in online spaces. Researchers have examined (1) how individuals orient to new online grief spaces [10], (2) how complicated grievers use online technology to cope [4], (3) how the digital expression of continuing bonds promotes and impedes bereavement adjustment in Prolonged Grief Disorder [59], (4) how the disclosure of grief can promote reciprocal disclosure in an online community [3], and (5) how the memorialization of social media accounts can help the bereaved continue their bonds with the deceased in positive ways [27]. Much of this previous scholarship has called for additional studies of diverse types of grief not previously studied. We begin to fill this gap by contributing an empirical study on suicide bereavement expression, focusing on a specific form of grief expression in letter sharing.

Of note, this study takes inspiration from previous grief-focused social computing research that has connected the *grief work hypothesis* to SNS [56]. The grief work hypothesis situates grief counseling and therapy as a way of working through loss. Social computing scholarship has expanded this hypothesis to SNS, finding evidence that grief work occurs online similarly to offline grief work. This recent literature suggests that the healing and coping benefits of grieving [36] can occur when users engage in grief work online [56]. Drawing from the conclusions of this scholarship, our study assumes that the grief work that users engage with through sharing grief expressions serves a healing and beneficial purpose for the users who are expressing grief.

2.2.3 Grief policing online: user exposure to sensitive content on SNS. Though grief policing research has predominately been conducted in offline memorial contexts, grief policing also occurs online. Social computing research, most notably by Gach et al., has expanded on offline grief policing literature by examining grief policing practices on social media [24]. Gach et al. find that, in response to celebrity deaths, social media communities may police individuals' expressing grief in ways that are either (1) incommensurate with their relationship to the deceased or (2) incommensurate with the 'proper' level of emotional response that is expected.

In online communities, as explored by Gach et al., grief is typically policed as a function of established social norms. However, grief is also policed by moderation and algorithms. Some extreme grief expressions, such as images of a dead body, can result in potential harm, retraumatization [3], or grief cycling [4] of users. One can imagine a social media website with no content filter exposing a small child to such an image and causing life-long trauma. To protect users, platforms construct guidelines for what content is allowed to be posted and what content is not allowed to be posted [30]. Applied to grief content, manual and algorithmic moderation police grief expression actively, seeking to protect users from illegal or harmful content.

Research by Lustig et al. nuances the distinction between appropriate and inappropriate content exposure by introducing the concept of *bittersweet content* — content without a clear-cut distinction between good or bad affective user experiences [47]. Extrapolating from Lustig et al., it is a strong possibility that grief expression may fall into a bittersweet-like category — content may simultaneously be both healing and harmful for an individual. Additionally, the variable experiences of grief journeys suggest that grief content may be healing for one user and profoundly harmful for another.

This study expands previous research on grief policing and user exposure to sensitive content by providing a case of content that is traditionally policed (e.g., stories of death are often socially policed by users and actively policed via manual or algorithmic moderation) that, in this case, generates mutual support. Expanding Lustig et al.'s considerations of bittersweet content, we find that letter posts subvert the expectations of what types of content are good for users and what

types of content are harmful, leading to open questions about how platforms can be designed to tolerate and support nuanced user content exposure.

3 ETHICS AND RESPONSIBILITY

With the understanding that all research includes ethical considerations [53], before describing our methods, we believe it is essential to name the ethical considerations we applied during our study design and as we conducted the study.

First, we note that this study was conducted in partnership with the moderator leadership of the community. Although we recognize that this leadership group does not speak for the community as a whole, having their approval provided a vital point of contact to ensure a baseline of consent.

Second, we note that the lead researcher has participated in this community for several years in both an operational posting capacity and a passive capacity. This pre-existing relationship helps demonstrate investment in the community's well-being and longevity of engagement.

Third, we note that all usernames, comments, and posts mentioned in the following sections are paraphrased or modified to preserve user pseudonymity while maintaining the content's integrity. While quotation marks are used throughout our findings for stylistic reasons, no quote is a direct traceable quote that might be easily connected to a specific user. Finally, recognizing that ethical decisions are implicit in how we share the content of this study with our research community, we note that we take steps in the write-up of this paper to protect readers from unnecessary harm. For example, we have refrained from including explicit written content about the act of suicide within this paper. Additionally, before submission, three third-party "sensitivity readers" reviewed the paper to ensure the familiarity bias of the research team to the research did not cause us to miss graphic descriptions that could cause harm.

4 METHODS

To explore to what end support is provided to different types of grief expressions in r/SuicideBereavement, we conducted a qualitative content analysis of letter posts and comments on those posts retrieved from a single online community on the Reddit platform: r/SuicideBereavement. r/SuicideBereavement is self-described as a community "For those who have lost a loved one to suicide" and "A supportive space for anyone bereaved by suicide."

Informed by our own prior experience with the space, and confirmed through a preliminary scan of the subreddit, we noticed a form of post that appeared distinct from all other posts: letters from bereaved posters addressed to their deceased loved ones. As we outline in more detail in our Background section, we chose to focus on letter posts in our analysis due to previous psychology scholarship identifying letter sharing as a case of an intimately personal practice that has been demonstrated to provide cathartic healing to grieving individuals and has been seen to establish stronger group cohesion in small-group grief support settings [50].

Given the therapeutic benefits documented in the clinical literature [50], the potentially new ways that letters were manifesting publicly in online communities compared to their traditionally private therapeutic use spaces, and the call from social computing literature to examine additionally diverse forms of grief expression online [4], we chose to focus on letter posts instead of posts more generally. This focus on letter posts was also intended to expand social computing knowledge of (1) expressions of grief in response to suicide and (2) a specific, therapeutically important, and seemingly unique form of grief expression not previously studied in social computing scholarship.

The following section describes our research site, data collection, and data analysis methods in detail.

4.1 Reddit as Research Site

This research draws on posts and user information collected manually from the r/SuicideBereavement subreddit. As with all Reddit communities, members (*Redditors*) of this community post posts that other members can comment on, to which other commenters and the original poster can then reply. Individuals also engage with posts via an upvote/downvote system that impacts the order in which posts and comments are listed. The upvote/downvote system affects a user's individual 'Karma' score based on the number of upvotes their posts receive. Posters are pseudonymous — identified only via a chosen username. This community has many users, and multiple posts are made daily.

Reddit was selected as our study site because previous research shows it is a primary SNS location where people share mental health and grief-related experiences and information and provide and seek emotional support [46]. Among SNS, Reddit is a uniquely effective mental health and grief support space due to its social norms of community-based support and pseudonymity [13]. Mental health support on Reddit has been described as high quality relative to other social media platforms. As summarized by [13], "even though redditors are not compensated for their actions... feedback ranges from emotional and instrumental, to information and prescriptive advice... an important contrast to social media like Twitter, where sharing health information is most times a broadcast or an emotional outburst."

Previous linguistic analysis of mental health support on Reddit has demonstrated various emotional expressions in posts and comments, such as extreme expressions of anger. Reddit is a space where the self-disclosure of various emotional expressions leads to community support [56, 57].

One set of features on Reddit that aid the platform in facilitating support are the formal and informal norms and rules enforced by volunteer moderation groups [22]. Summarized by [22], "behavior on Reddit is formally governed in three ways: (1) a user agreement and content policy similar to any website's terms and conditions — (2) a set of formalized sitewide values created by redditors themselves, called Reddiquette, and (3) rules for individual subreddits, set by moderators and typically found in sidebars, though not always present. Moderators can remove posts or ban users, and users have the ability to report rule violations."

In mental health and grief support communities on Reddit, rules set by moderators typically include expectations for supportive interaction, along with expectations of which content is allowed and which content is not. Moderators typically remove posts or ban users that break expectations for supportive interaction or include content that is not allowed [13].

The r/SuicideBereavement subreddit is a grief support community with a volunteer moderator team and a clear set of posted rules for engagement. In the About Community section of the subreddit homepage, the following is clearly displayed:

DO NOT POST ACTIVELY SUICIDAL CONTENT HERE, OR YOU WILL BE PERMANENTLY BANNED. NO EXCEPTIONS. People are here to grieve, be respectful. **This is a supportive space for only those bereaved by suicide.**

The list of community rules follow. Rules include: (1) be supportive, (2) only people bereaved by suicide are allowed to post or comment, and (3) no blaming and no covert incitement of suicide. Links for resources and suggested parallel subreddits are included on the sidebar of the subreddit, along with a poem referencing healing from grief. The subreddit's rules are focused on providing mutual support, limiting posters to a specific subgroup (people bereaved by suicide), and limiting harm. The focus of the subreddit's rules suggests that r/SuicideBereavement is a community focused on support of sensitive topics that may be susceptible to harm caused by malicious actors or traumatizing content.

4.2 Data Collection

This study examines letter posts written by a bereaved person to their deceased loved one.

We collected our dataset of letter posts in March 2022. We examined 5 relevant posts for common features to develop a search strategy. We identified these relevant posts by searching for the term 'letter' in the r/SuicideBereavement subreddit using Reddit's built-in search function and then manually selecting posts that met our study design's criteria: letters written by the bereaved addressed directly to the deceased. The prevailing common feature was that letters were written in the second-person, a contrast to most non-letter posts, which were commonly written in the first- or third-person.

Next, we created an overly inclusive dataset by searching for the term 'you.' This search returned 786 posts, posted over multiple years. Two members of the research team then independently read through all 786 posts, manually tagging posts that fit the following inclusion criteria:

- Posts must be over 50 words
- Posts must be written as a letter
- Posts must be authored by the poster and directed at their deceased loved one

Because of our interest in the interactions between posters and commenters, researchers additionally excluded posts with less than two comments. After independently tagging posts for inclusion or exclusion, the research team met to compare tagging and reach a consensus about what posts would be included. During the initial comparison process, the research team had a 94 percent rate of agreement from their independent tagging of which posts to include and which posts to exclude from the final dataset. For the posts without agreement, the research team met and discussed whether or not the post should be included and came to a consensus. All posts where there was no initial agreement were posts in which researchers differed in whether they thought the post was directed at a deceased loved one or a general *you* — directed at the world at large, God, or someone else. Through discussion about the intended recipient of these posts, the research team reached a final consensus about whether each post fit the inclusion criteria.

Our filtering process resulted in a final dataset of 189 posts that included 652 comments. We then copied these posts and all related comments into a spreadsheet on a cloud server for analysis by the research team. To most effectively analyze the content of posts, the content of comments, and the dialogs between posters and commenters, we organized our spreadsheet into three tabs: a tab including only posts, a tab including only comments, and a tab including posts connected with their comments. The tab containing only posts and the tab containing only comments were randomized prior to analysis.

4.3 Data Analysis

Our analysis consisted of three stages: (1) a content analysis of posts, (2) a content analysis of comments, and (3) a content analysis of conversations between posters and commenters.

4.3.1 Analysis of posts. Our first stage of analysis, focusing on categorizing the content of opening posts, used a methodology informed by constant comparison method [28]. Thematic analysis methods additionally informed our coding practices [8]. First, each research team member read and open-coded the same 25 posts. We chose 25 posts to begin with as similar studies conducting a content analysis on social media posts have found similar numbers of data points to begin to explore emerging codes [21]. When open coding posts, researchers focused on coding for the content of the posts. The research team then met to discuss the results of their open coding, comparing codes and memos and beginning to develop a shared codebook. Following the discussion of the first 25 posts, the codebook included 13 codes. The research team then read another group of 25 posts,

open coding and iteratively noting the overlaps and differences from the codes included in the first iteration of the codebook. The research team then met to compare the open coding of the second group of 25 posts to the first draft of the codebook, adding codes when necessary. The second research group discussion ended with a codebook of 19 codes. We continued to follow this process, adding 25 additional posts at a time until we reached thematic saturation, at which no new significant codes were generated. One additional reason that the research team sought thematic saturation, instead of coding the entire dataset, is that the team was aware of the emotional toll reading graphic stories of suicide was taking on the team and sought to minimize that harm. In all, the research team coded 100 posts and reached thematic saturation. Prior to axial coding, the initial codebook included 25 codes.

The research team then engaged in a process of axial coding. Over multiple meetings and discussions, the research team compared and discussed the relationships between codes, condensing codes where appropriate. As axial coding continued, the research team identified 5 main categories of content in posts: marking anniversaries, celebratory stories, making requests, graphic stories, and complex feelings of anger. Informed by previous reading the research team had done in preparation for this study [69, 68], when discussing and comparing the relationships between these categories, the research team saw two themes in content that matched with categories in that previous scholarship: *appropriate* expressions of grief and *inappropriate* expressions of grief [69, 24]. To determine which categories fell into *appropriate* and *inappropriate* grief expression categories, we extrapolated from criteria presented by [69] and [24]. Throughout the analysis, the research team treated *appropriate* expressions of grief and *inappropriate* expressions of grief as not mutually exclusive.

To validate a common understanding of the categories that the research team had determined, two members team then independently coded an additional 30 posts for the 5 categories of content and the 2 categories of *appropriate* and *inappropriate*. Validation was especially important in this study because of the subjective nature of what can be considered *appropriate* and *inappropriate*. This validation step also helped the research team ensure that no significant categories of content in posts were missed. The research team had a 100 percent percentage of agreement for the 5 categories of content. The research team had a 86.67 percentage of agreement for which posts fell into the 2 categories of *appropriate* and *inappropriate*. The high percentage of agreement between research team members led us to believe that our coding was consistent and reproducible. For posts where researchers differed, we discussed and came to a consensus.

4.3.2 Analysis of Comments. Our second stage of analysis focused on the content of comments. Following the same methods as our coding process analyzing the content of posts, the research team began by taking a subset of comments ($n=200$) to independently open code, with at least 2 members of the research team coding any single comment. The research team then met to discuss the coding, constructing a codebook that included 20 codes. We then independently read another 200 comments, open coding and iteratively noting the overlaps and differences from the codes included in the first iteration of the codebook. The research team then met to discuss changes or additions to the codebook. In all, the research team coded all 652 comments and, through iterative comparison via multiple meetings and discussions, and reached a consensus on a final codebook for characterizing the content of comments. The research team coded all comments, compared to only a subset of posts, as comments were substantially less of an emotional burden for the research team, commonly containing positive messages of support. Our final codebook included the content categories: support offered directly from responses, offers for direct support outside of the thread, and offers of support on behalf of the entire community.

4.3.3 Analysis of Dialogs. After completing our analysis of the categories of content in opening posts and comments, we returned to our 189-thread dataset of posts linked to their comments. We began a new coding process that focused on moments of dialog where single posters and commenters engaged in more than 3 interactions (we counted a single interaction as one reply) within a reply chain. Of our 189 threads, we identified 43 threads in which a single poster and a single commenter engaged in more than 3 interactions. In those 43 threads, we identified 54 independent dialogs (a single post can contain multiple reply chains between a poster and a commenter). These 54 dialogs were moved into a new spreadsheet for analysis.

We decided to focus on interactions in conversations between a single poster and a single commenter since very few conversations occurred between more than two individuals in a single reply chain, thus allowing for more effective parity in our comparison. While limiting our analytical focus to interactions between a single poster and a single commenter is a limitation of this study, the prevalence of these interactions suggests that a preference for one-on-one dialog and the functional differences of larger conversations may be topics worthy of future study.

Our coding process for the 54 instances of dialog examined interactions between the content of letter posts and comments on those posts. Where possible, we noted how the type of post content related to the type of supportive comment responding to it. Additionally, coding at this stage focused on patterns of support between posters and commenters (e.g., how posters and commenters express support for one another through back-and-forth dialog within a reply chain).

Coding the 54 reply chains followed the same coding process as the content of posts and the content of comments. First, the research team read and open coded a subset of 25 reply chains, with at least 2 members of the research team coding a single reply chain. The team then met to discuss the open coding, creating an initial codebook of 12 codes. The research team then open coded the remainder of the 54 reply chains, iteratively comparing our coding and memos to the initial codebook. We then discussed the second round of open coding, adding codes where appropriate. The team then engaged in axial coding, leading to a final codebook that identified four levels of support being offered between the poster and the commenter in reply chains. The categories of the final codebook were: mutually supportive, unilaterally supportive towards the letter poster, unilaterally supportive towards the commenter, and unsupportive.

5 FINDINGS

Following Walter et al.'s distinction between *appropriate* and *inappropriate* grief expressions, we found that letter posts include *inappropriate* grief expressions. While *inappropriate* grief expressions are seen in comparable SNS spaces to generate policing of grief [24], in letter posts we see that posters receive a variety of offered support and a high frequency of mutually supportive exchanges.

5.1 Characterizing the Content of Letter Posts

Letter posts include examples of both *appropriate* and *inappropriate* grief expressions. Some types of content in posts we identified fall into categories of *appropriate* grief expression that would not normally be grief policed [69, 68]. These types of content are (1) marking anniversaries with posts and mourning, (2) honoring the deceased by posting celebratory stories of their life, and (3) making requests of the deceased.

Other types of content in posts we identified fall into categories of *inappropriate* grief expression that would normally be policed and not receive support. These types of posts are posts (1) telling graphic stories of their loved one's death, and (2) expressing feelings of intense anger at the deceased. Looking at the content of posts allows us to see that people sharing letters are seeking and receiving support through sharing both *appropriate* and *inappropriate* grief expressions.

In reference to our coding — categories of content were not mutually exclusive, and, in most cases, multiple offerings are conveyed in a single response. Roughly half of the posts contained content that we coded as falling under one of the *inappropriate* categories.

5.1.1 *Appropriate expressions of grief.*

Marking anniversaries. Posters wrote letters marking the day, month, or year anniversary of their loved one's passing. Anniversary letters commonly included a specific reference in their title. For example, posts that marked anniversaries were almost always titled something akin to "We lost you yesterday" or "It's been one year and I still can't forgive you." Posts marking an anniversary were regularly accompanied by a retelling of the story of their loved one's death from the perspective of the bereaved — letting the deceased know how they found out, where they were when they found out, and how it affected them.

Celebratory stories of life. Posters shared stories celebrating their deceased loved one's life. Many posters who told this type of story tried to create a holistic picture of a deceased person, sharing their struggles but also centering a specific positive memory that the bereaved shared with the deceased.

For example, one poster shared an extended story of a trip they and the deceased took to the mountains. The story detailed how strenuous the hike was and how much the two laughed over a beer after they finished. Another poster shared a story of how their loved one would come to every one of their basketball games and lead the crowd in creative cheers whenever they scored a basket. A third poster told a humorous story of when they gave birth to their daughter and how that day was the happiest day of their life.

Making requests. Other posts made requests of the deceased, most commonly asking for explanations or forgiveness for not doing enough to help keep them alive. For example, one poster asked the deceased to visit them in their dreams to explain why they decided to die instead of coming to them for help. Another poster asked their deceased loved one to forgive them for not telling them they loved them as frequently as they should have.

Though letter posts make specific requests to the deceased, they seldom make resource requests to the subreddit community. This comes as a surprise because previous literature finds that posters in general online grief support communities ask for medication advice, resources to help them navigate finding a therapist, and suggestions for specific online websites to help them process their grief [4, 27]. Conversely, letter posts rarely addressed the community at all. Most posts were without an introduction or conclusion addressed to the community, such that the letter almost always made up the entirety of the post.

5.1.2 *Inappropriate expressions of grief.*

Graphic stories of death. Letters commonly depicted the graphic way in which their loved one took their own life. For example, one poster told the story of the moment they discovered the corpse of their loved one. Their description included the state of the room, the weapon used, the position they found their loved one in, and other graphic details.

Another poster described how their new boyfriend suspiciously did not text back for days. After checking in with their boyfriend's family, the poster learned the timeline of his last days alive, including the specifics of how and where he died. In rigorous detail, the poster describes both the story of their discovery of the boyfriend's death on social media and the timeline and narrative details of his death that his family reported.

Complex feelings of intense anger. Letters commonly expressed intense emotions addressed to the deceased, including intense anger. For example, one mother expressed intense anger at her deceased husband for taking his life in a space where their daughter would discover his body. Another poster blamed their loved one for the secrets that they kept and felt enraged that their loved one had used them as "nothing more than a tax write-off." A further poster expressed rage at the immense guilt their wife had left them with, citing that some of her last words were calling the poster a "horrible person" and "the reason for all of my hurt."

Interestingly, even stories that predominantly celebrated the life of the deceased, which one would not expect to exclude anger, sometimes included a brief sentence describing their hatred or disgust for their loved one 'choosing' suicide. For example, several posters began or ended their story of the life of their loved one with statements about how they 'hated' their loved one for taking their own life without first seeking psychiatric help. Other posters began their letters by disclosing to the deceased the guilt they feel for simultaneously loving their loved one and hating their loved one for taking their own life. Expressions of anger can reframe otherwise celebratory content, speaking to the complex feelings present in traumatic grief for which posters seek support.

Sometimes intense anger at the deceased was expressed alongside intense sorrow or gallows humor. For example, one poster reported that they wished the deceased could be resurrected for a moment so that they could hug them, cry on their shoulder, tell them how much they loved them, and then "swiftly kick their butt." Intense emotions were almost always paired with one another in contradictory ways. As one poster aptly wrote in a sign-off to a letter addressed to their loved one: "I hate you. I love you. I'm sorry. I miss you."

5.2 Characterizing Comments

Regardless of the content of letter posts, commenters offer a variety of support. We find no clear patterns about what types of post content receive the most comments or the greater number of unique commenters. In other settings, *inappropriate* grief expressions might be given less support [69, 24]. Still, in this space, we see that both *inappropriate* and *appropriate* grief expressions receive a variety of support. The lack of discrimination against posts including *inappropriate* grief leads us to conclude that commenters provide support to letter posts regardless of the type of content. In this section, we characterize the variety of offered support: support offered directly from responses, support offered on behalf of the community as a whole, and support promised to be offered by people via private messages.

Surprising the research team, our analysis revealed no instances of hate speech or other antagonistic behavior directed at a poster from a commenter. Since this is an anonymous online mental health support community — a type of community shown in previous research to be susceptible to hate speech [57] — we expected to see examples of unsupportive comments in our coding. However, our coding instead found that comments were nearly entirely supportive. There are many reasons why there could be a lack of trolling or aggressive comments. For example, it could be that these types of comments do exist on letter posts, but our sample size may not have been sufficiently large enough to capture posts with them. It could also be the case that automatic or manual moderation effectively removed harmful comments before we collected posts. However, it may additionally be the case that letter posts or grief expressed in response to suicide generally engenders a more supportive pattern of comments than in other mental health support contexts. Methodologically, the categories of offered support are not mutually exclusive. In some cases, multiple offerings are conveyed in a single comment. However, more commonly, a single offering was conveyed in a single comment.

5.2.1 Support offered directly in responses. Support offered directly from the responses of commenters is by far the largest category in terms of types of support and frequency of expression. Support offered includes: (1) messages of comfort, (2) messages of reassurance, (3) messages of gratitude, (4) offers for direct support outside of the thread, (5) offers of support on behalf of the entire community, and (6) reciprocal sharing of the commenter's own experience through narrative.

Messages of comfort. Commenters offered comfort by: (1) expressing sympathy for the experience of the poster, validating the experience of the poster, (2) sending love, peace, strength, and healing to the poster and their loved ones (including the deceased), and (3) encouraging the poster to keep living (in instances where the poster expressed suicidality caused by their grief).

For example, one poster shared a letter written to a deceased family member who completed suicide on their favorite shared holiday. In the post, the poster asks the deceased, "How can I still enjoy this day when your death took all of those good times we shared away from me." The first commenter on the thread comforted them by saying that nothing can take away their shared positive memories even though it might be a difficult day.

One can imagine that messages of comfort might make the poster feel heard and supported. Additionally, messages of comfort might make the commenter feel that they are giving the kind of support they would have liked to receive, or able to provide the support that they once received and found helpful.

Messages of reassurance. In addition to offering comfort, commenters also offered reassurance to posters on numerous topics in multiple ways. The three overarching forms of reassurance provided were that: (1) feelings will shift over time, (2) the commenter had been there before and it gets better, and (3) the bereaved poster is not alone in their grieving.

Sometimes these types of reassurance coincide in posts. In one thread, a poster writes a letter to their loved one asking, "Why did you leave me all alone?" A first commenter tells the poster, "You are not alone, and you are loved." A second commenter adds, "I also lost my loved one a week after you lost yours. I hope it helps to know that you are not alone in this." The poster then responds that they find "great comfort" in knowing others are experiencing "the same hurt."

Receiving messages of reassurance may be helpful to the poster by making them feel that they are not the only one who has been through similar grief or loss. Providing messages of reassurance may be useful to the commenter by allowing them to feel that they can use their own experience to reassure others in similar situations whose loss is fresh.

Messages of gratitude. Beyond offering support, we also found a recurring theme of gratitude within comments. Commenters expressed gratitude by thanking the poster for sharing their story. The majority of gratitude messages noted that the commenter was grateful because the poster's story or feelings resonated with their own story of grief in some way, and made them feel less alone or helped them process their own emotions of grief or loss. Messages of gratitude can help posters feel validated that sharing a vulnerable piece of themselves added value to the community.

Sharing their own narrative experience. Commenters responded to letter posts by reciprocally sharing their own story of loss. This offering was the most frequent response that commenters gave, co-occurring with the other offerings. For example, in one thread, the poster wrote a letter depicting the exact location where they discovered the deceased and how that discovery changed everything in their life. A commenter responds by expressing sympathy about the poster's loss and then details their own story of discovery and the changes in their life afterward. The reciprocal sharing of stories is a beneficial practice in offline narrative therapy support groups [50], demonstrating that the therapeutic space is safe for people to connect on the intimate details of their respective losses.

The sharing of narrative experience in response to letter posts may signal that the letter post is a safe space for people to connect on the details of their losses.

5.2.2 Offers for direct support outside of the thread. In addition to offering support in their replies, commenters sometimes offered direct support outside of the thread by talking via direct messages, emails, and other SNS outside the Reddit platform. Commenters regularly offered to talk in direct messages or other spaces beyond the post to give further comfort, reassurance, and more individualized support. For example, they offered statements like "My inbox is open if you need to talk," "Don't hesitate to reach out in my DMs," and "Feel free to message me directly if you want to talk." The prevalence of offers for direct support outside of the thread may signal that additional private spaces are needed to provide individualized support and supplement support that can be provided in public posts.

5.2.3 Offers of support on behalf of the entire community. Some commenters offered support on behalf of the entire community rather than sharing their own gratitude or reassurances. For example, commenters remind posters, "This sub is here for you whenever you want to post." Support on behalf of the entire community also took the form of communal comfort, exemplified by one commenter who wrote: "Glad you posted here cause you know we all know what it feels like." One can imagine that receiving offers of support on behalf of the community may make them feel welcomed and part of a larger whole, potentially combating the isolation often felt in suicide bereavement. That commenters are offering support on behalf of the entire community may additionally signal that community members have a sense of belonging that they feel comfortable invoking in order to support letter posters.

5.3 Characterizing Support in Interactions between Posters and Commenters

Posters and commenters engage in supportive interactions, the majority of which consist of people providing mutual support to one another. Mutually supportive interactions are seen in all types of posts, regardless of post content (e.g., both posts that include marking of anniversaries *and* posts that include the telling of graphic stories have instances of mutual support). Posts including grief expressions that are *appropriate*, *inappropriate*, or a combination of the two all facilitate mutually supportive interactions the majority of the time.

While grief policing literature suggests that *inappropriate* grief expressions impede supportive connections between the person expressing grief and people in their immediate community [69], in letter posts we see that *inappropriate* grief expressions instead facilitate mutual support. Crucially, the mutual aspect of the support being provided signals that sharing *inappropriate* grief expressions can create spaces where posters provide support to others. Providing support to others is an important part of group bereavement support that allows for the reclamation of agency by caring for other people expressing similarly traumatic grief. The high frequency of mutual support compared to other forms of support suggests that online communities can function as a space that allows people to express *inappropriate* grief. In turn, it allows people to not only receive comments of support, but also build supportive interactions through the mutual sharing of *inappropriate* grief.

In this section, we characterize four types of supportive interactions we identified between posters and commenters within post interactions: (1) mutually supportive, (2) unilaterally supportive towards the letter poster, (3) unilaterally supportive towards the commenter, and (4) unsupportive. During our analysis, we also considered a neutral category, consisting of dialogues that did not discuss grief or support. We only saw one instance of this category, a short conversation about the latest fashion trends in Europe. Due to the single instance, we elected to exclude it.

Broadly, posts with mutual support interactions received more engagement than posts including any other supportive interaction categories. These posts typically had more comments and replies,

with more participants in the thread. Posts including mutual support interactions typically included the largest number of unique users posting.

During analysis, we found that in the majority of posts, the type of supportive interaction established by the first commenter persisted through the rest of the thread. For example, a mutually supportive conversation rarely transformed into an unsupportive conversation as it went on. Similarly, when a conversation began as an unsupportive interaction, it rarely transformed into a mutually supportive conversation. Because of the general persistence of types of interactions within posts, the category of a single supportive interaction was accounted for as mutually exclusive (e.g., an interaction was exclusively coded as mutually supportive if the majority of it fit within that category, even if the final response in the thread would otherwise be characterized as unilaterally supportive of the letter poster).

5.3.1 *Mutually supportive.* In mutually supportive interactions, users respond to one another by referencing their own grief experiences while sharing words of support. Responses primarily focus on empathizing with the poster's struggles to reassure them that they are not alone. In this context, commenters express that the opening post "really resonates with me" and go on to highlight similarities between their story and the poster's post. In mutually supportive interactions, conversations always bring in both the poster's and commenter's grief experiences.

A typical mutually supportive interaction involves a commenter saying, "I'm so sorry you're going through this. I recently lost a loved one, and I feel everything you're saying. You are not alone. Sending you strength and peace." The poster responds, "Thank you for commenting. I'm sorry about your loss too. It's hard to believe now, but I hope we can both heal in time." Mutually supportive interactions involve both users offering support to one another, saying "I'm sorry you're in this situation. I know how much it hurts." We frequently saw both commenters and posters extending offers to connect via direct message, with language like, "I'm here if you want to talk."

Additionally, individuals frequently express gratitude for each other's posts, saying "Thank you for sharing your story," and sending wishes for mutual healing. When individuals offer mutual support, they share portions of their own stories of grief or loss. When sharing portions of their own story with grief, individuals introduce them to normalize the poster's feelings by reassuring them that "I've been through this too" and that "Your hurt will lessen over time, like mine has."

In mutually supportive interactions, the person giving vs. receiving support changes throughout the conversation. A comparable exchange of giving and receiving of support within letter sharing in offline clinical groups has been found to create positive outcomes — reciprocal sharing of support for similar types of loss allows for group members to make meaning of their own story of grief and also continue their bonds with the deceased healthily and proactively. Previous clinical research has found that reciprocity of sharing in suicide bereavement support groups provides additional benefits relative to support groups for other types of grief [50]. Most notably, due to the intense isolation typically experienced after losing a loved one to suicide, mutual sharing of support can lead to the vital therapeutic benefit of resisting that isolation.

5.3.2 *Unilaterally supportive: towards the letter poster.* In instances of unilateral support towards the letter poster, commenters focus on offering supportive attention to the grief experience of the poster without incorporating their own grief experience. For instance, a commenter may express gratitude for a poster sharing their story without sharing their own story in return. We refer to these exchanges as *unilaterally supportive towards the letter sharer* because, as a result of the commenter not sharing their own experiences, the poster receives, but does not subsequently provide the commenter support.

Though this type of supportive interaction does not include the same reciprocity of sharing as mutually supportive interactions, posters are still given a high level of support. Perhaps comparable

to small-group narrative therapy practices of holding space for the group to focus their attention on supporting the person who has just shared a story of their grief [31], the complete focus of the commenter on the poster may provide a space where the poster can feel validated and acknowledged without the expectation of providing support for the commenter.

5.3.3 Unilaterally supportive: towards the commenter. Though rarer than the previous type, in some instances, unilateral support is given by the poster to the commenter instead. A typical *unilaterally supportive towards the commenter* interaction looks as follows: In response to a letter post, a commenter thanks the poster for sharing and expresses that they have experienced the same feelings of anger towards their loved one, detailing their story of how they are wrestling with their own grief journey. In response, the poster replies by expressing sympathy for the loss of the commenter but does not elaborate on their own experience or any of the content of their letter. This conversation of the commenter processing their own story and the poster responding with support may continue over multiple cycles.

We refer to these exchanges as unilaterally supportive towards the commenter because, as a result of the commenter sharing their own experiences, the poster becomes the caregiver providing support to the commenter and no longer invokes their own grief experience. In contrast to a mutually supportive interaction, in which the poster responds to a commenter by elaborating on their own grief and providing support to the grief shared by the commenter, in unilaterally supportive towards the commenter interactions, the poster responds in support but does not elaborate on their own grief.

As is the case in suicide bereavement support groups, becoming the caregiver may benefit the letter poster, putting them in a position of authority and agency as they provide support for someone else struggling with a similar loss [68]. Providing care for a commenter may also provide perspective for the letter poster, allowing them to relate their own experience to the experience of others. Though there may be benefits to support from the poster to the commenter unilaterally, one can imagine that interaction may also cause harm. For example, the unreciprocated sharing of grief by the commenter may signify a common trauma response to suicide, abdicating personal agency to subsume a caregiver role [72].

5.3.4 Unsupportive. While rare, we also observed instances where commenters refocused an interaction entirely on their own experience without acknowledging or supporting the poster. Unsupportive interactions differ from unilateral support towards the commenter, where the commenter's sharing of their grief experience is coupled with other forms of support, in that they include sharing the commenter's experience without any acknowledgment of the letter post or letter poster. Unsupportive interactions were by far the shortest type of interaction: when posters replied, they almost always responded with a simple acknowledgment of the comment but no deep engagement with the grief experience shared by the commenter. There is also almost always a disconnect between the content of what is shared in the letter and the content of what is shared in the comment. Unsupportive instances should not be confused with abusive, aggressive, or harmful dialogues, of which we found none. A typical unsupportive interaction goes as follows: a poster shares a letter depicting the graphic death of a loved one. A commenter then responds by telling a story of how much they miss their loved one. The poster responds, "Thank you for sharing." If the commenter responds again, the poster rarely continues the conversation.

Though the impact of an unsupportive interaction may be the poster not engaging with or supporting the commenter's experience, there are possible supportive reasons the commenter is posting their experience without directing support towards the poster. A commenter may think they are joining with the experience of the letter poster, expressing empathy through showing the story of their own grief. A commenter may also be trying to remove the pain from the poster by

moving the attention to their own pain. Of course, the commenter could also be so deep into their own throes of grief that they do not recognize that they are not sharing explicit support in their comment. The mutual sharing of experiences may additionally be an unstated social norm that most, but not all, commenters pick up on. Based on the frequent support we saw in response to *inappropriate* grief expressions, it appears that *inappropriate* grief expressions are not a barrier to supportive interactions.

5.4 Interpreting Findings

In summary, we find that letter posts contain *inappropriate* grief expressions (e.g., graphic stories of death and intense anger at the deceased). Yet, instead of being policed as previous scholarship might have us expect, letter posts generate multiple types of supportive comments and generate mutual support in reply chains. We find that letter posts in r/SuicideBereavement are a case of subverted expectations about how otherwise policed grief content is expressed online, expanding considerations for what types of grief expressions are mutually supported by community members in online grief support communities.

6 DISCUSSION

This study contributes to social computing literature by considering ways that different types of grief expressions, such as *inappropriate* grief expressions, may subvert expectations about healing and harmful content shared in online grief support communities, and thereby require nuanced design strategies.

Due to the mutual support we found in posts containing *inappropriate* grief expressions, it may be tempting for HCI researchers and practitioners to prioritize designing additional platform support for *inappropriate* grief expressions going forward. However, design must consider the very real possibility that supporting content, such as graphic stories of death, can cause unintended harm without sufficient nuance. After all, previous literature has shown that exposure to types of graphic content can cause harm when users cannot consent to be exposed to that content [66].

Social media platforms such as Facebook and Twitter use Not Safe for Work (NSFW) filters and auto-moderation that block and remove graphic imagery, in part because of trauma that can be caused by exposure to graphic images such as dead bodies [19]. Although, to our knowledge, previous CSCW literature has not evaluated harm when users are exposed to graphic stories of suicide and extreme anger at deceased loved ones, other studies suggest that visceral content such as graphic imagery can cause harm to grieving users if design features are not put in place to support users [62]. *Inappropriate* grief content such as graphic stories of death, similar to other graphic content, may cause harm to members of a bereavement community if features are not put in place that consider both the needs of users sharing graphic content and the users exposed to graphic content.

With this in mind, we consider: how does one design for users seeking healing through sharing certain authentic grief expressions while also being sensitive to users who would be harmed by exposure to those grief expressions? Drawing from offline group therapy strategies of delegating discrete spaces for different types of grief expressions, our discussion considers one potential path forward for addressing conflicting user needs: the establishment of specialized online community grief spaces organized around types of grief expressions. In the following sections, we weigh design challenges in creating specialized grief spaces around diverse expressions of grief. By considering the avenue of specialized spaces as a potential intervention, we identify broader design challenges for grief support online and identify pertinent future research directions.

6.1 Specialized Spaces of Support: Considering Supportive Design for Diverse Grief Expressions

When creating online spaces where people express grief in response to suicide, designers must account for the possibility that *inappropriate* grief expressions (such as graphic narratives and intense anger) may help facilitate community support and individual healing. As in the hypothetical case of Kelly, online communities may be some of the only outlets where people's grieving expressions are not met with stigma or judgment [3]. There is an opportunity for online spaces to be central supportive environments for grief expressions that are typically stigmatized. Intentional support of these *inappropriate* grief expressions on SNS can help the bereaved access healthy emotional catharsis. By supporting the sharing of expressions that break established social grief norms, SNS can serve a supportive and healing role in supporting people undergoing intense periods of loss and grief. The question then becomes how to design for people seeking support through *inappropriate* grief expressions without unintentionally creating spaces of harm for others.

Interestingly, practices of sharing *inappropriate* grief expressions for therapeutic support are also present in specialized small-group grief support groups.³ Specialized small-group grief support spaces are intentionally built to provide a space for grieving individuals to share *inappropriate* grief that would otherwise be stigmatized [68]. In some instances, these spaces are intentionally constructed to be a safe space to share graphic, intense, or otherwise *inappropriate* grief expressions without the fear of the stigma that may be experienced by expressing them to a broader public [69, 72]. For example, some clinical support groups are intentionally constructed to be a space for people grieving sudden loss that leads to unexpected verbal outbursts [16]. Critical to the success of these therapeutic spaces is the presence of a trained professional and the space's existence as a discrete and separate space from other public grieving spaces in the users' lives [31].

When considering future design for platforms, one option is to imagine further specialized online communities — either new spaces in existing online communities or new online communities entirely. Much like a therapy support group focused on supporting people working through rage at their deceased loved one, specialized online grief support spaces could potentially provide more effective support for specific types of grief expressions. More effective support, in this case, is support that provides safety for people needing to express *inappropriate* content and also provides safety for people needing to be shielded from *inappropriate* content. However, finding the balance when considering constructing more specialized spaces is fraught with design challenges and tradeoffs.

The concept of building multiple types of grieving spaces online has been previously suggested in social computing literature [59], albeit suggested as spaces separated by public-facing vs. private-facing grief needs. In the following section, we suggest that another strategy for designing multiple spaces for grief is to delineate supportive community spaces based on the needs of grief expressions. We add to existing scholarship by considering design challenges social computing researchers and designers may encounter when designing for multiple specialized spaces for grief delineated by grief expressions.

6.1.1 Challenges to designing specialized spaces for inappropriate grief expression support. Although the construction of specialized spaces is a possible way to more effectively support grieving individuals, in practice, there are several design challenges in building systems that effectively

³We distinguish general grief support groups, which often are larger and provide support for a wide variety of grief, from specialized grief support groups, which often are smaller and are moderated by a trained professional using specialized therapeutic interventions. Examples of specialized grief support groups are: cancer support groups, complicated grief support groups, ambiguous loss support groups, abuse survivor support groups, and so on. We draw from established literature that delineates the support provided by general grief support groups from specialized grief support groups [17].

provide multiple spaces for distinct types of grief. We highlight two of those design challenges below.

What would the scope of specialized spaces be based on? One challenge when considering supportive design for specialized spaces is how to scope and parse out the specialized spaces in the first place. If new spaces are created for different types of grief or diverse expressions of grief needs, how should designers draw the boundaries between them? What are the metrics of distinction between the character of the different spaces to provide the most effective support? For example, is it effective for graphic stories of death to be included in the same space that supports anger at the deceased? Is it more effective to distinguish spaces between the two? Who should determine those distinctions, and on what should they base their decisions?

A diversity of grief expressions might be expressed within a single online grief support community. For example, we find that both expressions of the anniversary celebration and graphic stories of death, two expressions that may require very different support features, are shared in r/SuicideBereavement. Unlike in-person individual or small-group therapy, in which the trained therapist can attune the space to the specific expressions of the grieving individual, providing individualized attention in an online public space is not feasible. The level of granularity at which specialized spaces should be parsed out is an open and vital question for grief support design going forward.

One potential option for the scope of specialized spaces for supporting grief expressions is to separate spaces based on grief models. For example, Baglione et al. [4] argued that complicated grief in the digital age consists of five stages: Fog, Isolation, Exploration, Immersion, and Stabilization. One can imagine online communities scoped around grief expressions that pertain to each stage in this model. For example, in the Fog stage of grief, a bereaved person often requests support for logistics, such as the best way to handle the deceased's paperwork and arrange the funeral. In contrast, in the Exploration stage, a bereaved person often begins to post one's own story online, such as posting letters. Each stage in the five-stage model of complicated grief has distinct patterns of grief expressions. Platforms could scope specialized online grief support communities to match with pre-established models. One benefit of scoping specialized communities to match with pre-established grief models is that models often have demonstrated strategies for specialized support. Platforms can leverage these demonstrated strategies for moderator practices or connecting community members to proper resources.

How to design for a moving target like grief? Even if spaces are designed with a perfect level of granularity to attend to a specific type of expression of grief, the malleable and unpredictable nature of individual grief journeys present a persistent moving target for design. Although the difficulty of designing for the unpredictability of grief has been explored in previous research [59, 4], the challenge is worth returning to as we consider building specialized spaces for grief support.

For example, a subreddit focused on supporting graphic stories of death may face challenges in simultaneously supporting people expressing graphic stories on the first day of losing their loved one and people expressing graphic stories a decade after their loss. These two users may require different support depending on the recency of their loss, even if they share the same type of grief expression. An individual poster's needs might also vary radically on a day-to-day basis, perhaps needing a single space to accommodate many specific needs and different grief expressions within 24 hours following a crisis. Future design should consider how the needs of people sharing the same grief expression may vary between people. Additionally, future research should consider how grief expressions may change quickly for an individual and how to support a user throughout an entire journey of grief over time.

6.2 Implications for Moderation

Throughout this study, we have drawn inspiration from small-group therapy settings and have commented on the importance of a trained clinician to facilitate those spaces. In online communities such as Reddit, supportive facilitation work is conducted by volunteer moderators. Imagining specialized spaces in online communities to support diverse types of grief expression requires considering moderation challenges for those online communities.

Previous scholarship has found that moderator volunteers are crucial to the success of prominent commercial social platforms, such as Reddit [22]. Moderators in online support communities perform managerial tasks behind the scenes, such as content moderation, fact-checking, and norm-setting. Moderator work ensures the health and vibrancy of social platforms and is essential for maintaining supportive online communities [35]. When designing specialized spaces for diverse types of grief expression, one should consider the implication of more specialized grief spaces on moderator labor.

In r/SuicideBereavement, moderators are volunteers who apply for the position. However, no therapeutic certification or training qualification is required to serve as a moderator in this space. The lack of a required certification or qualification for moderators is a major difference between the facilitators in offline support groups and the facilitators in online support communities on Reddit. Grief support groups are most successful when facilitated by trained experts [70]. As the type of grief becomes more specialized in a clinical setting, the level of expertise a facilitator requires also becomes more specialized. For example, a cancer center running an outpatient support group for people who have lost a loved one to brain cancer would require the facilitator to have completed certain training and education to demonstrate their ability to meet the nuanced needs of bereavement due to brain cancer.

Moving towards increasingly specialized spaces may require moderators with additional training to prevent unintended harm in a community most effectively. For instance, if r/SuicideBereavement were to create a sub-community that focuses on supporting grief expressions of graphic stories of death, volunteer moderators may not be equipped to navigate the emotional toll of moderating such a space. While the supportive interactions we found in our analysis suggest that moderation in r/SuicideBereavement is effective, clinical scholarship warns us that untrained grief support facilitators can cause unintentional harm to community members as well [12]. When considering the unintentional harm that untrained moderators in grief support spaces may cause to themselves or community members, one path may be to provide training that moderators must complete before moderating grief support spaces. Training could be adapted from existing training programs, such as online certification programs from the American Academy of Grief Counseling organization, and given to moderators when onboarded to a community [61]. One can imagine a platform such as Reddit funding these trainings to support their at-risk users more effectively. The question of training raises multiple thorny questions, such as: At what point do moderators need to be trained? To what degree? Are there some grief support spaces where untrained moderation is enough?

While these are open questions that future research should examine more comprehensively, one solution previous scholarship has suggested is for platforms to integrate professional resources such as helplines (e.g., during crisis interventions [56]) to support moderators themselves. Helplines are a common resource provided to online community members seeking grief support. One can imagine similar support for moderators: a platform providing professional support on-call for moderators navigating an emotional reaction to exposure to difficult content or in moments when a moderator encounters difficult content moderation choices. One can also imagine a packaged list of hotlines and other supports offered to moderators when they start, to support their emotional wellbeing.

7 FUTURE RESEARCH DIRECTIONS

Keeping the above challenges in mind, our findings point to several future research considerations.

Examining variances in grief expression, in addition to grief in response to types of loss. First, future work should explore the design of platform features that can account for diverse grief expressions, expanding on features that already account for diverse types of grief. For example, when looking at a list of the top grief support subreddits, one sees communities separated by type of loss (e.g., r/PetLoss, r/Widowers, r/OverdoseGrief), with platform features (e.g., search features) that support navigating within those communities. Our findings suggest that people create supportive interactions not only through a common type of loss (e.g., connecting over a suicide), but also through a common type of grief expression (e.g., connecting over their shared rage at their respective loved ones). By prototyping and validating specialized spaces varying in grief expressions and loss types, social computing research can determine guidelines for platforms detailing effective ways to organize their online community support groups.

Exploring distinctions between private and public grief expression needs. This study has focused on public grief expression in an online community. However, as [59] remind us, grief expression also occurs online in private ways. Future research should secondly consider distinctions between the needs of private and public processing of grief expression online. [59] has examined differences between private and public online bereavement needs by considering differences in backstage and frontstage grief processing. Letter writing is a strange case of a private practice that is externalized when shared. Following [59], one can imagine two levels of design support being needed — support for the backstage writing of letters in private online spaces, and subsequent support for the frontstage sharing of letters. Both levels are part of the process of letter sharing, and both may require distinct design support. Future research can expand on [59] by examining grief expression practices with a clear private and public component. For example, one can imagine a follow-up qualitative interview study with community members on r/SuicideBereavement sharing letters, exploring their backstage motivation for posting and their frontstage experience of support.

Exploring design for consensual content exposure. Finally, future research should explore design strategies for consensual content exposure in online community settings with potentially harmful grief expressions. Designing for consent is of increasing interest to social computing as social computing seeks to embody feminist sexual consent practices into research and technology design [64]. For example, Strengers et al. have adapted the FRIES model of sexual consent (Freely given, Reversible, Informed, Enthusiastic, and Specific consent) to HCI practice and design by contributing a TEASE process guideline to HCI research practices (Traffic lights, Establish ongoing dialogue, Aftercare, Safewords, and Explicate soft/hard limits) [64]. In instances such as the expression of *inappropriate* grief in online communities, what might it look like to center consent at the heart of design?

One possible future study could be to prototype the application of the TEASE process guideline to the technical features of online community platforms. For example, Reddit could operationalize Traffic Lights in r/SuicideBereavement by flagging posts with either a green, yellow, or red light, based on the intensity of grief expression. Traffic light tagging could be used in conjunction with NSFW tags and blurred graphic images, two features already implemented on Reddit, to expand customization of what content users will encounter when clicking on a post.

One potential path forward for automatically tagging and responding to types of expressions of grief is using a validated affect dictionary with word embeddings to tag and filter graphic stories. Recent scholarship has demonstrated that advances in computational linguistics research allow for the establishment of a “grief lexicon,” and has built a transfer learning-based methodology to

build it [56, 57, 14]. Additional scholarship has suggested that applying lexicon-based machine learning to grief-based online communities can be used to judge community health after a crisis, such as a mass shooting [29]. Expanding lexicon-based models to account for different types of grief *expressions* specifically, could help designers assess patterns in community expression of grief over time, potentially leading to targeted interventions on a community-by-community level.

8 LIMITATIONS

One noted limitation of this study was our intentional focus on letters. We focused on letters due to the use of letter writing in clinical bereavement settings. However, it may be the case that other styles of writing receive similar support to what we observed. Future research may want to examine appropriate and inappropriate expressions of grief more generally. Further, our analysis of comments analyzes a subset of overall comments by focusing on direct replies to the poster. While focusing on direct replies to the poster more effectively scoped to our research questions, by not analyzing all comments, some insight may have been lost. Future research could expand this study by conducting a network analysis or content analysis of all comments.

Additionally, as with any data collection process, the research team determined the inclusion criteria of what was considered a letter post and may not have captured all relevant posts. The systematic process of manual tagging of posts as a letter or not, coupled with the strong percentage of agreement between researchers when independently coding for letter posts, makes us confident that our tagging was consistent. However, a limitation is that other identifiers for relevant posts could have been added to expand our inclusion criteria and search terms.

A final limitation to this study's generalizability is that we did not analyze the correlation between community support of posts expressing *inappropriate* vs. posts expressing *appropriate* grief expressions. Our analysis focused on letter posts as a case of a post that receives support while expressing potentially harmful content. However, it may be the case that there are patterns in the level of support of letter posts that contain *inappropriate* vs. *appropriate* grief expressions. This study did not distinguish correlations of support comparing the two types of grief expressions. Future research should compare correlations between support provided in letter posts expressing *inappropriate* grief expressions and posts expressing *appropriate* grief expressions.

9 CONCLUSION

SNS and other community-based technologies allow for the public online expression of grief following a traumatic loss, such as the suicide of a loved one. Grief policing occurs offline and online when an individual's grief expression breaks social norms and becomes marked as *inappropriate* grief expression. Subverting that expectation, we find that in letter posts on r/SuicideBereavement *inappropriate* grief expression facilitates supportive comments and mutually supportive interactions between community members. Through a content analysis of posts, comments, and interactions, this study has found that on r/SuicideBereavement letter posts are a case of mutually supportive interactions on an online grief support community being facilitated by content including *inappropriate* grief expressions. This paper has explored what supporting diverse *inappropriate* grief expressions online might look like, and the implications and challenges that supporting diverse grief expressions, including *inappropriate* grief expressions, present design.

This paper has identified that future work would be well served to explore design tradeoffs in grief expressions that may be healing for one community member but cause harm to others. Specifically, we suggest that exploring features supporting specialized grief spaces is a prudent next step to more effectively serving the diverse grief expression needs of bereaved community members online.

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